Section 1: 10-K (10-K)

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K
(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the FISCAL YEAR ended December 31, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number	Registrant; State of Incorporation; Address; and Telephone Number	I.R.S. Employer Identification No.
333-21011	FIRSTENERGY CORP. (An Ohio Corporation) 76 South Main Street Akron, OH 44308 Telephone (800)736-3402	34-1843785

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Registrant	Title of Each Class	Name of Each Exchange on Which Registered
FirstEnergy Corp.	Common Stock, $0.10 par value per share	New York Stock Exchange

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☑ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer ☑

Accelerated Filer ☐

Non-accelerated Filer ☐

Smaller Reporting Company ☐

Emerging Growth Company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐ No ☑

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and ask price of such common equity, as of the last business day of the registrant’s most recently completed second fiscal quarter.

$17,109,706,919 as of June 30, 2018

Indicate the number of shares outstanding of each of the registrant’s classes of common stock, as of the latest practicable date:

CLASS	AS OF JANUARY 31, 2019
Common Stock, $0.10 par value	530,152,175

Documents Incorporated By Reference

DOCUMENT	PART OF FORM 10-K INTO WHICH DOCUMENT IS INCORPORATED
Proxy Statement for 2019 Annual Meeting of Shareholders of FirstEnergy Corp. to be held May 21, 2019	Part III

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GLOSSARY OF TERMS

The following abbreviations and acronyms are used in this report to identify FirstEnergy Corp. and its current and former subsidiaries:

AE	Allegheny Energy, Inc., a Maryland utility holding company that merged with a subsidiary of FirstEnergy on February 25, 2011, which subsequently merged with and into FE on January 1, 2014
AESC	Allegheny Energy Service Corporation, a subsidiary of FirstEnergy Corp.
AE Supply	Allegheny Energy Supply Company, LLC, an unregulated generation subsidiary
AGC	Allegheny Generating Company, formerly a generation subsidiary of AE Supply that became a wholly owned subsidiary of MP in May 2018
ATSI	American Transmission Systems, Incorporated, formerly a direct subsidiary of FE that became a subsidiary of FET in April 2012, which owns and operates transmission facilities
BSPC	Bay Shore Power Company
CEI	The Cleveland Electric Illuminating Company, an Ohio electric utility operating subsidiary
CES	Competitive Energy Services, formerly a reportable operating segment of FirstEnergy
FE	FirstEnergy Corp., a public utility holding company
FELHC	FirstEnergy License Holding Company
FENOC	FirstEnergy Nuclear Operating Company, a subsidiary of FE, which operates NG's nuclear generating facilities
FES	FirstEnergy Solutions Corp., together with its consolidated subsidiaries, FG, NG, FE Aircraft Leasing Corp., Norton Energy Storage L.L.C., and FGMUC, which provides energy-related products and services
FES Debtors	FES and FENOC
FESC	FirstEnergy Service Company, which provides legal, financial and other corporate support services
FET	FirstEnergy Transmission, LLC, formerly known as Allegheny Energy Transmission, LLC, which is the parent of ATSI, MAIT and TrAIL, and has a joint venture in PATH
FEV	FirstEnergy Ventures Corp., which invests in certain unregulated enterprises and business ventures
FG	FirstEnergy Generation, LLC, a wholly owned subsidiary of FES, which owns and operates non-nuclear generating facilities
FGMUC	FirstEnergy Generation Mansfield Unit 1 Corp., a wholly owned subsidiary of FG, which has certain leasehold interests in a portion of Unit 1 at the Bruce Mansfield plant
FirstEnergy	FirstEnergy Corp., together with its consolidated subsidiaries
Global Holding	Global Mining Holding Company, LLC, a joint venture between FEV, WMB Marketing Ventures, LLC and Pinesdale LLC
Global Rail	Global Rail Group, LLC, a subsidiary of Global Holding that owns coal transportation operations near Roundup, Montana
GPU	GPU, Inc., former parent of JCP&L, ME and PN, that merged with FE on November 7, 2001
JCP&L	Jersey Central Power & Light Company, a New Jersey electric utility operating subsidiary
MAIT	Mid-Atlantic Interstate Transmission, LLC, a subsidiary of FET, which owns and operates transmission facilities
ME	Metropolitan Edison Company, a Pennsylvania electric utility operating subsidiary
MP	Monongahela Power Company, a West Virginia electric utility operating subsidiary
NG	FirstEnergy Nuclear Generation, LLC, a wholly owned subsidiary of FES, which owns nuclear generating facilities
OE	Ohio Edison Company, an Ohio electric utility operating subsidiary
Ohio Companies	CEI, OE and TE
PATH	Potomac-Appalachian Transmission Highline, LLC, a joint venture between FE and a subsidiary of AEP
PATH-Allegheny	PATH Allegheny Transmission Company, LLC
PATH-WV	PATH West Virginia Transmission Company, LLC
PE	The Potomac Edison Company, a Maryland and West Virginia electric utility operating subsidiary
Penn	Pennsylvania Power Company, a Pennsylvania electric utility operating subsidiary of OE
Pennsylvania Companies	ME, PN, Penn and WP
PN	Pennsylvania Electric Company, a Pennsylvania electric utility operating subsidiary
Signal Peak	Signal Peak Energy, LLC, an indirect subsidiary of Global Holding that owns mining operations near Roundup, Montana
TE	The Toledo Edison Company, an Ohio electric utility operating subsidiary
TrAIL	Trans-Allegheny Interstate Line Company, a subsidiary of FET, which owns and operates transmission facilities
Transmission Companies	ATSI, MAIT and TrAIL
Utilities	OE, CEI, TE, Penn, JCP&L, ME, PN, MP, PE and WP
WP	West Penn Power Company, a Pennsylvania electric utility operating subsidiary

The following abbreviations and acronyms are used to identify frequently used terms in this report:

AYE DCD	Allegheny Energy, Inc. Amended and Restated Revised Plan for Deferral of Compensation of Directors	MGP	Manufactured Gas Plants
AYE Director's Plan	Allegheny Energy, Inc. Non-Employee Director Stock Plan	MATS	Mercury and Air Toxics Standards
ACE	Affordable Clean Energy	MISO	Midcontinent Independent System Operator, Inc.
ADIT	Accumulated Deferred Income Taxes	mmBTU	One Million British Thermal Units
AEP	American Electric Power Company, Inc.	Moody's	Moody's Investors Service, Inc.
AFS	Available-for-sale	MVP	Multi-Value Project
AFUDC	Allowance for Funds Used During Construction	MW	Megawatt
ALJ	Administrative Law Judge	MWD	Megawatt-day
AMT	Alternative Minimum Tax	MWH	Megawatt-hour
ANI	American Nuclear Insurers	NAAQS	National Ambient Air Quality Standards
AOCI	Accumulated Other Comprehensive Income	NDT	Nuclear Decommissioning Trust
Apple®	Apple®, iPad® and iPhone® are registered trademarks of Apple Inc.	NEIL	Nuclear Electric Insurance Limited
ARO	Asset Retirement Obligation	NERC	North American Electric Reliability Corporation
ARP	Alternative Revenue Program	NGO	Non-Governmental Organization
ARR	Auction Revenue Right	Ninth Circuit	United States Court of Appeals for the Ninth Circuit
ASC	Accounting Standard Codification	NJBPU	New Jersey Board of Public Utilities
ASLB	Atomic Safety and Licensing Board	NMB	Non-Market Based
Aspen	Aspen Generating, LLC, a wholly-owned subsidiary of LS Power Equity Partners III, LP	NOAC	Northwest Ohio Aggregation Coalition
ASU	Accounting Standards Update	NOL	Net Operating Loss
Bankruptcy Court	U.S. Bankruptcy Court in the Northern District of Ohio in Akron	NOPR	Notice of Proposed Rulemaking
Bath County	Bath County Pumped Storage Hydro-Power Station	NOx	Nitrogen Oxide
BGS	Basic Generation Service	NPDES	National Pollutant Discharge Elimination System
bps	Basis points	NPNS	Normal Purchases and Normal Sales
BNSF	BNSF Railway Company	NRC	Nuclear Regulatory Commission
BRA	PJM RPM Base Residual Auction	NRG	NRG Energy, Inc.
BV-2	Beaver Valley Unit 2	NSR	New Source Review
CAA	Clean Air Act	NUG	Non-Utility Generation
CBA	Collective Bargaining Agreement	NYISO	New York Independent System Operator
CCR	Coal Combustion Residuals	NYPSC	New York State Public Service Commission
CDWR	California Department of Water Resources	OCA	Office of Consumer Advocate
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980	OCC	Ohio Consumers' Counsel
CFL	Compact Fluorescent Light	OEPA	Ohio Environmental Protection Agency
CFR	Code of Federal Regulations	OSHA	Occupational Safety and Health Administration
CO2	Carbon Dioxide	OMAEG	Ohio Manufacturers' Association Energy Group
CONE	Cost-of-New-Entry	OPEB	Other Post-Employment Benefits
CPP	EPA's Clean Power Plan	OPEIU	Office and Professional Employees International Union
CSAPR	Cross-State Air Pollution Rule	OPIC	Other Paid-in Capital
CSX	CSX Transportation, Inc.	OTTI	Other-Than-Temporary Impairments
CTA	Consolidated Tax Adjustment	OVEC	Ohio Valley Electric Corporation
CWA	Clean Water Act	PA DEP	Pennsylvania Department of Environmental Protection

D.C. Circuit	United States Court of Appeals for the District of Columbia Circuit
DCPD	Deferred Compensation Plan for Outside Directors
DCR	Delivery Capital Recovery
DMR	Distribution Modernization Rider
DPM	Distribution Platform Modernization
DSIC	Distribution System Improvement Charge
DSP	Default Service Plan
DTA	Deferred Tax Asset
E&P	Earnings and Profits
EDC	Electric Distribution Company
EDCP	Executive Deferred Compensation Plan
EDIS	Electric Distribution Investment Surcharge
EE&C	Energy Efficiency and Conservation
EGS	Electric Generation Supplier
EGU	Electric Generation Units
ELPC	Environmental Law & Policy Center
EMAAC	Eastern Mid-Atlantic Area Council of PJM
EmPOWER Maryland	EmPOWER Maryland Energy Efficiency Act
ENEC	Expanded Net Energy Cost
EPA	United States Environmental Protection Agency
EPRI	Electric Power Research Institute
EPS	Earnings per Share
ERISA	Employee Retirement Income Security Act of 1974
ERO	Electric Reliability Organization
ESOP	Employee Stock Ownership Plan
ESP IV	Electric Security Plan IV
ESTIP	Executive Short-Term Incentive Program
Facebook®	Facebook is a registered trademark of Facebook, Inc.
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
FE Tomorrow	FirstEnergy's initiative launched in late 2016 to identify its optimal organizational structure and properly align corporate costs and systems to efficiently support a fully regulated company going forward
FES Bankruptcy	FES Debtors' voluntary petitions for bankruptcy protection under Chapter 11 of the U.S. Bankruptcy Code with the Bankruptcy Court
Fitch	Fitch Ratings
FMB	First Mortgage Bond
FPA	Federal Power Act
FTR	Financial Transmission Right
GAAP	Accounting Principles Generally Accepted in the United States of America
GHG	Greenhouse Gases
GWH	Gigawatt-hour
IBEW	International Brotherhood of Electrical Workers
ICE	Intercontinental Exchange, Inc.
ICP 2007	FirstEnergy Corp. 2007 Incentive Plan
ICP 2015	FirstEnergy Corp. 2015 Incentive Compensation Plan
PCRB	Pollution Control Revenue Bond
PJM	PJM Interconnection, L.L.C.
PJM Region	The aggregate of the zones within PJM
PJM Tariff	PJM Open Access Transmission Tariff
PM	Particulate Matter
POLR	Provider of Last Resort
POR	Purchase of Receivables
PPA	Purchase Power Agreement
PPB	Parts per Billion
PPUC	Pennsylvania Public Utility Commission
PSD	Prevention of Significant Deterioration
PTC	Price-to-Compare
PUCO	Public Utilities Commission of Ohio
PURPA	Public Utility Regulatory Policies Act of 1978
R&D	Research and Development
RCRA	Resource Conservation and Recovery Act
REC	Renewable Energy Credit
Regulation FD	Regulation Fair Disclosure promulgated by the SEC
RFC	ReliabilityFirst Corporation
RFP	Request for Proposal
RGGI	Regional Greenhouse Gas Initiative
RMR	Reliability Must-Run
ROE	Return on Equity
RPM	Reliability Pricing Model
RSS	Rich Site Summary
RSU	Restricted Stock Unit
RTEP	Regional Transmission Expansion Plan
RTO	Regional Transmission Organization
RWG	Restructuring Working Group
S&P	Standard & Poor's Ratings Service
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SB221	Amended Substitute Senate Bill No. 221
SBC	Societal Benefits Charge
SEC	United States Securities and Exchange Commission
SERTP	Southeastern Regional Transmission Planning
Seventh Circuit	United States Court of Appeals for the Seventh Circuit
SF6	Sulfur Hexafluoride
SIP	State Implementation Plan(s) Under the Clean Air Act
SO2	Sulfur Dioxide
SOS	Standard Offer Service
SPE	Special Purpose Entity
SRC	Storm Recovery Charge

IIP	Infrastructure Investment Program
IRS	Internal Revenue Service
ISO	Independent System Operator
JCP&L Reliability Plus	JCP&L Reliability Plus IIP
kV	Kilovolt
kW	Kilowatt
KWH	Kilowatt-hour
KPI	Key Performance Indicator
LBR	Little Blue Run
LCAPP	Long-Term Capacity Agreement Pilot Program
LED	Light Emitting Diode
LIBOR	London Interbank Offered Rate
LMP	Locational Marginal Price
LOC	Letter of Credit
LS Power	LS Power Equity Partners III, LP
LSE	Load Serving Entity
LTIIPs	Long-Term Infrastructure Improvement Plans
MAAC	Mid-Atlantic Area Council of PJM
MATS	Mercury and Air Toxics Standards
MDPSC	Maryland Public Service Commission
SREC	Solar Renewable Energy Credit
SSA	Social Security Administration
SSO	Standard Service Offer
SVC	Static Var Compensator
Tax Act	Tax Cuts and Jobs Act adopted December 22, 2017
TDS	Total Dissolved Solid
TMDL	Total Maximum Daily Load
TMI-2	Three Mile Island Unit 2
TO	Transmission Owner
TTS	Temporary Transaction Surcharge
Twitter®	Twitter is a registered trademark of Twitter, Inc.
UCC	Official committee of unsecured creditors appointed in connection with the FES Bankruptcy
UWUA	Utility Workers Union of America
VEPCO	Virginia Electric and Power Company
VIE	Variable Interest Entity
VRR	Variable Resource Requirement
VSCC	Virginia State Corporation Commission
WVDEP	West Virginia Department of Environmental Protection
WVPSC	Public Service Commission of West Virginia

PART I

ITEM 1. BUSINESS

The Companies

FE was incorporated under Ohio law in 1996. FE's principal business is the holding, directly or indirectly, of all of the outstanding equity of its principal subsidiaries: OE, CEI, TE, Penn (a wholly owned subsidiary of OE), JCP&L, ME, PN, FESC, AE Supply, MP, PE, WP, and FET and its principal subsidiaries (ATSI, MAIT and TrAIL). In addition, FE holds all of the outstanding equity of other direct subsidiaries including: FirstEnergy Properties, Inc., FEV, FELHC, Inc., GPU Nuclear, Inc., AESC and Allegheny Ventures, Inc.

FE and its subsidiaries are principally involved in the transmission, distribution and generation of electricity. FirstEnergy's ten utility operating companies comprise one of the nation's largest investor-owned electric systems, based on serving over six million customers in the Midwest and Mid-Atlantic regions. FirstEnergy's transmission operations include approximately 24,500 miles of lines and two regional transmission operation centers. AGC, JCP&L and MP control 3,790 MWs of total capacity.

FirstEnergy's revenues are primarily derived from electric service provided by its utility operating subsidiaries (OE, CEI, TE, Penn, JCP&L, ME, PN, MP, PE and WP) and its transmission subsidiaries (ATSI, MAIT and TrAIL).

Regulated Utility Operating Subsidiaries

The Utilities' combined service areas encompass approximately 65,000 square miles in Ohio, Pennsylvania, West Virginia, Maryland, New Jersey and New York. The areas they serve have a combined population of approximately 13.3 million.

OE was organized under Ohio law in 1930 and owns property and does business as an electric public utility in that state. OE engages in the distribution and sale of electric energy to communities in a 7,000 square mile area of central and northeastern Ohio. The area it serves has a population of approximately 2.3 million.

OE owns all of Penn's outstanding common stock. Penn was organized under Pennsylvania law in 1930 and owns property and does business as an electric public utility in that state. Penn is also authorized to do business in Ohio. Penn furnishes electric service to communities in 1,100 square miles of western Pennsylvania. The area it serves has a population of approximately 0.4 million.

CEI was organized under Ohio law in 1892 and does business as an electric public utility in that state. CEI engages in the distribution and sale of electric energy in an area of 1,600 square miles in northeastern Ohio. The area it serves has a population of approximately 1.6 million.

TE was organized under Ohio law in 1901 and does business as an electric public utility in that state. TE engages in the distribution and sale of electric energy in an area of 2,300 square miles in northwestern Ohio. The area it serves has a population of approximately 0.7 million.

JCP&L was organized under New Jersey law in 1925 and owns property and does business as an electric public utility in that state. JCP&L provides transmission and distribution services in 3,200 square miles of northern, western and east central New Jersey. The area it serves has a population of approximately 2.7 million. JCP&L also has a 50% ownership interest (210 MWs) in the Yard's Creek hydroelectric generating facility.

ME was organized under Pennsylvania law in 1917 and owns property and does business as an electric public utility in that state. ME provides distribution services in 3,300 square miles of eastern and south central Pennsylvania. The area it serves has a population of approximately 1.2 million.

PN was organized under Pennsylvania law in 1919 and owns property and does business as an electric public utility in that state. PN provides distribution services in 17,600 square miles of western, northern and south central Pennsylvania. The area it serves has a population of approximately 1.2 million. PN, as lessee of the property of its subsidiary, The Waverly Electric Light & Power Company, also serves customers in the Waverly, New York vicinity.

PE was organized under Maryland law in 1923 and under Virginia law in 1974. PE is authorized to do business in Virginia, West Virginia and Maryland. PE owns property and does business as an electric public utility in those states. PE provides transmission and distribution services in portions of Maryland and West Virginia and provides transmission services in Virginia in an area totaling approximately 5,500 square miles. The area it serves has a population of approximately 0.9 million.

MP was organized under Ohio law in 1924 and owns property and does business as an electric public utility in the state of West Virginia. MP provides generation, transmission and distribution services in 13,000 square miles of northern West Virginia. The area it serves has a population of approximately 0.8 million. MP is contractually obligated to provide power to PE to meet its load obligations in West Virginia. MP owns or contractually controls 3,580 MWs of generation capacity that is supplied to its electric utility business, including a 16% undivided interest in the Bath County, Virginia pumped-storage hydroelectric generation facility (487

MWs) and its connecting transmission facilities owned through AGC, which was organized under Virginia law in 1981 and became a wholly owned subsidiary of MP in May 2018.

WP was organized under Pennsylvania law in 1916 and owns property and does business as an electric public utility in that state. WP provides transmission and distribution services in 10,400 square miles of southwestern, south-central and northern Pennsylvania. The area it serves has a population of approximately 1.5 million.

Regulated Transmission Operating Subsidiaries

ATSI was organized under Ohio law in 1998. ATSI owns high-voltage transmission facilities, which consist of approximately 7,800 circuit miles of transmission lines with nominal voltages of 345 kV, 138 kV and 69 kV in the PJM Region.

TrAIL was organized under Maryland law and Virginia law in 2006. TrAIL was formed to finance, construct, own, operate and maintain high-voltage transmission facilities in the PJM Region and has several transmission facilities in operation, including a 500 kV transmission line extending approximately 150 miles from southwestern Pennsylvania through West Virginia to a point of interconnection with VEPCO in northern Virginia.

MAIT was organized under Delaware law in 2015. MAIT owns high-voltage transmission facilities, which consist of approximately 4,240 circuit miles of transmission lines with nominal voltages of 500 kV, 345 kV, 230 kV, 138 kV, 115 kV, 69 kV and 46 kV in the PJM Region.

Service Company

FESC provides legal, financial and other corporate support services at cost, in accordance with its cost allocation manual, to affiliated FirstEnergy companies. In addition, pursuant to the FES Bankruptcy settlement agreement discussed below, FE will extend the availability of shared services to the FES Debtors until no later than June 30, 2020, subject to reductions in services if requested by the FES Debtors.

Legacy CES Subsidiaries

On March 31, 2018, FES and FENOC announced that, in order to facilitate an orderly financial restructuring, they filed voluntary petitions under Chapter 11 of the United States Bankruptcy Code with the Bankruptcy Court. As a result of the bankruptcy filings, FirstEnergy concluded that it no longer had a controlling interest in FES and FENOC as the entities are subject to the jurisdiction of the Bankruptcy Court and, accordingly, as of March 31, 2018, FES and FENOC were deconsolidated from FirstEnergy's consolidated financial statements. Since such time, FE has accounted and will account for its investments in FES and FENOC at fair values of zero. FE concluded that in connection with the disposal, FES and FENOC became discontinued operations.

AE Supply was organized under Delaware law in 1999. AE Supply previously provided energy-related products and services primarily to wholesale customers. AE Supply also owns and operates the 1,300 MW Pleasants Power Station. As part of the FES Bankruptcy settlement agreement, discussed below, AE Supply will transfer the Pleasants Power Station and related assets to FG, while retaining certain specified liabilities, subject to the terms and conditions of an asset transfer agreement entered into December 31, 2018, which is subject to approval by the Bankruptcy Court. Also, subject to the terms of the asset transfer agreement, FG acquired the economic interests in Pleasants as of January 1, 2019, and AE Supply will operate Pleasants until the transfer.

Substantially all of FirstEnergy's subsidiaries' operations that previously comprised the CES reportable operating segment, including FES, FENOC, BSPC and a portion of AE Supply (including the Pleasants Power Station), are presented as discontinued operations in FirstEnergy's consolidated financial statements resulting from the FES Bankruptcy and actions taken as part of the strategic review to exit commodity-exposed generation.

Operating Segments

FirstEnergy's reportable operating segments are comprised of the Regulated Distribution and Regulated Transmission segments.

The **Regulated Distribution** segment distributes electricity through FirstEnergy's ten utility operating companies, serving approximately six million customers within 65,000 square miles of Ohio, Pennsylvania, West Virginia, Maryland, New Jersey and New York. This segment also controls 3,790 MWs of regulated electric generation capacity located primarily in West Virginia, Virginia and New Jersey. Regulation of our retail distribution rates is generally premised on providing an opportunity to earn a reasonable return of and on prudently incurred invested capital to provide service to our customers through the use of both base rate proceedings and other cost-based rate mechanisms, including recovery riders and trackers. The segment's results reflect the costs of securing and delivering electric generation from transmission facilities to customers, including the deferral and amortization of certain related costs.

As of December 31, 2018, FirstEnergy's regulated generating portfolio consists of 3,790 MWs of diversified capacity within the Regulated Distribution segment: 210 MWs consist of JCP&L's 50% ownership interest in the Yard's Creek hydroelectric facility in New Jersey; and 3,580 MWs consist of MP's facilities, including 487 MWs from AGC's interest in the Bath County hydroelectric

facility in Virginia that MP partially owns, and 11 MWs of MP's 0.49% entitlement from OVEC's generation output. MP's other generation facilities are located in West Virginia.

The **Regulated Transmission** segment provides transmission infrastructure owned and operated by the Transmission Companies and certain of FirstEnergy's utilities (JCP&L, MP, PE and WP) to transmit electricity from generation sources to distribution facilities. The segment's revenues are primarily derived from forward-looking formula rates at the Transmission Companies as well as stated transmission rates at JCP&L, MP, PE and WP. Both the forward-looking formula and stated rates recover costs that the regulatory agencies determine are permitted to be recovered and provide a return on transmission capital investment. Under forward-looking formula rates, the revenue requirement is updated annually based on a projected rate base and projected costs, which is subject to an annual true-up based on actual costs. The segment's results also reflect the net transmission expenses related to the delivery of electricity on FirstEnergy's transmission facilities.

The **Corporate/Other** segment reflects corporate support not charged to FE's subsidiaries, interest expense on FE's holding company debt and other businesses that do not constitute an operating segment. Additionally, reconciling adjustments for the elimination of inter-segment transactions and discontinued operations are included in Corporate/Other. As of December 31, 2018, approximately 70 MWs of electric generating capacity, representing AE Supply's OVEC capacity entitlement, was included in continuing operations of the Corporate/Other reportable segment. As of December 31, 2018, Corporate/Other had approximately $7.1 billion of FE holding company debt.

On March 31, 2018, as a result of actions taken as part of the strategic review to exit commodity-exposed generation, as discussed below, FirstEnergy deconsolidated FES and FENOC. Also on March 31, 2018, substantially all of FirstEnergy's operations that previously comprised the CES reportable segment, including FES, FENOC, BSPC and a portion of AE Supply, are presented as discontinued operations in FirstEnergy's consolidated financial statements. During the third quarter of 2018, the Pleasants Power Station was also reclassified into discontinued operations as a result of the FES Bankruptcy settlement agreement. The financial information for all periods has been revised to present the discontinued operations within Reconciling Adjustments. The remaining business activities that previously comprised the CES reportable operating segment were not material and, as such, have been combined into **Corporate/Other** for reporting purposes.

Utility Regulation

Regulatory Accounting

FirstEnergy accounts for the effects of regulation through the application of regulatory accounting to the Utilities, AGC, and the Transmission Companies since their rates are established by a third-party regulator with the authority to set rates that bind customers, are cost-based and can be charged to and collected from customers.

The Utilities, AGC, and the Transmission Companies recognize, as regulatory assets and regulatory liabilities, costs which FERC and the various state utility commissions, as applicable, have authorized for recovery/return from/to customers in future periods or for which authorization is probable. Without the probability of such authorization, costs currently recorded as regulatory assets and regulatory liabilities would have been charged/credited to income as incurred. All regulatory assets and liabilities are expected to be recovered/returned from/to customers. Based on current ratemaking procedures, the Utilities, AGC, and the Transmission Companies continue to collect cost-based rates for their transmission and distribution services; accordingly, it is appropriate that the Utilities, AGC, and the Transmission Companies continue the application of regulatory accounting to those operations. Regulatory accounting is applied only to the parts of the business that meet the above criteria. If a portion of the business applying regulatory accounting no longer meets those requirements, previously recorded regulatory assets and liabilities are removed from the balance sheet in accordance with GAAP.

State Regulation

Each of the Utilities' retail rates, conditions of service, issuance of securities and other matters are subject to regulation in the states in which it operates - in Maryland by the MDPSC, in Ohio by the PUCO, in New Jersey by the NJBPU, in Pennsylvania by the PPUC, in West Virginia by the WVPSC and in New York by the NYPSC. The transmission operations of PE in Virginia are subject to certain regulations of the VSCC. In addition, under Ohio law, municipalities may regulate rates of a public utility, subject to appeal to the PUCO if not acceptable to the utility. Further, if any of the FirstEnergy affiliates were to engage in the construction of significant new transmission facilities, depending on the state, they may be required to obtain state regulatory authorization to site, construct and operate the new transmission facility.

The following table summarizes the key terms of distribution rate orders in effect for the Utilities.

Company	Rates Effective	Allowed Debt/Equity	Allowed ROE
CEI	May 2009	51% / 49%	10.5%
ME[1]	January 2017	48.8% / 51.2%	Settled[2]
MP	February 2015	54% / 46%	Settled[2]
JCP&L	January 2017	55% / 45%	9.6%
OE	January 2009	51% / 49%	10.5%
PE (West Virginia)	February 2015	54% / 46%	Settled[2]
PE (Maryland)	November 1994	48% / 52%	11.9%
PN[1]	January 2017	47.4% / 52.6%	Settled[2]
Penn[1]	January 2017	49.9% / 50.1%	Settled[2]
TE	January 2009	51% / 49%	10.5%
WP[1]	January 2017	49.7% / 50.3%	Settled[2]

[1] Reflects filed debt/equity as final settlement/orders do not specifically include capital structure.
[2] Commission-approved settlement agreements did not disclose ROE rates.

Federal Regulation

With respect to their wholesale services and rates, the Utilities, AE Supply, and the Transmission Companies are subject to regulation by FERC. Under the FPA, FERC regulates rates for interstate wholesale sales, transmission of electric power, accounting and other matters, including construction and operation of hydroelectric projects. FERC regulations require JCP&L, MP, PE, WP and the Transmission Companies to provide open access transmission service at FERC-approved rates, terms and conditions. Transmission facilities of JCP&L, MP, PE, WP and the Transmission Companies are subject to functional control by PJM and transmission service using their transmission facilities is provided by PJM under the PJM Tariff. See "FERC Regulatory Matters" below.

The following table summarizes the key terms of rate orders in effect for transmission customer billings for FirstEnergy's transmission owner entities:

Company	Rates Effective	Capital Structure	Allowed ROE
ATSI	January 1, 2015	Actual (13 month average)	10.38%
JCP&L	June 1, 2017	Settled[1]	Settled[1]
MP	March 21, 2018[2]	Settled[1]	Settled[1]
PE	March 21, 2018[2]	Settled[1]	Settled[1]
WP	March 21, 2018[2]	Settled[1]	Settled[1]
MAIT	July 1, 2017	50% / 50% (hypothetical)[3]	10.3%
TrAIL	July 1, 2008	Actual (year-end)	12.7% (TrAIL the Line & Black Oak SVC) 11.7% (All other projects)

[1] FERC-approved settlement agreements did not specify.
[2] See FERC Actions on Tax Act below.
[3] Effective January 2019, converts to lower of actual (13 month average) or 60%.

Federally-enforceable mandatory reliability standards apply to the bulk electric system and impose certain operating, record-keeping and reporting requirements on the Utilities, AGC, AE Supply, and the Transmission Companies. NERC is the ERO designated by FERC to establish and enforce these reliability standards, although NERC has delegated day-to-day implementation and enforcement of these reliability standards to eight regional entities, including RFC. All of FirstEnergy's facilities are located within the RFC region. FirstEnergy actively participates in the NERC and RFC stakeholder processes, and otherwise monitors and manages its companies in response to the ongoing development, implementation and enforcement of the reliability standards implemented and enforced by RFC.

FirstEnergy believes that it is in compliance with all currently-effective and enforceable reliability standards. Nevertheless, in the course of operating its extensive electric utility systems and facilities, FirstEnergy occasionally learns of isolated facts or circumstances that could be interpreted as excursions from the reliability standards. If and when such occurrences are found, FirstEnergy develops information about the occurrence and develops a remedial response to the specific circumstances, including in appropriate cases “self-reporting” an occurrence to RFC. Moreover, it is clear that NERC, RFC and FERC will continue to refine existing reliability standards as well as to develop and adopt new reliability standards. Any inability on FirstEnergy's part to comply with the reliability standards for its bulk electric system could result in the imposition of financial penalties, and obligations to upgrade or build transmission facilities, that could have a material adverse effect on its financial condition, results of operations and cash flows.

Maryland Regulatory Matters

PE operates under MDPSC approved base rates that were effective as of November 11, 1994. PE also provides SOS pursuant to a combination of settlement agreements, MDPSC orders and regulations, and statutory provisions. SOS supply is competitively procured in the form of rolling contracts of varying lengths through periodic auctions that are overseen by the MDPSC and a third-party monitor. Although settlements with respect to SOS supply for PE customers have expired, service continues in the same manner until changed by order of the MDPSC. PE recovers its costs plus a return for providing SOS.

The EmPOWER Maryland program requires each electric utility to file a plan to reduce electric consumption and demand 0.2% per year, up to the ultimate goal of 2% annual savings, for the duration of the 2018-2020 and 2021-2023 EmPOWER Maryland program cycles, to the extent the MDPSC determines that cost-effective programs and services are available. PE's 2016 starting goal under this requirement was 0.97%. PE's approved 2018-2020 EmPOWER Maryland plan continues and expands upon prior years' programs, and adds new programs, for a projected total cost of $116 million over the three-year period. PE recovers program costs subject to a five-year amortization. Maryland law only allows for the utility to recover lost distribution revenue attributable to energy efficiency or demand reduction programs through a base rate case proceeding, and to date, such recovery has not been sought or obtained by PE.

In 2013, the MDPSC required Maryland electric utilities to submit analyses relating to the costs and benefits of making further system and staffing enhancements in order to attempt to reduce storm outage durations. PE's submitted analysis projected that it would require up to approximately $2.7 billion in infrastructure investments over 15 years to attempt to achieve the quickest level of response for the largest storm projected in MDPSC's scenarios. The MDPSC conducted a hearing September 2014, but has not taken further action on this matter.

On January 19, 2018, PE filed a joint petition along with other utility companies, work group stakeholders and the MDPSC electric vehicle work group leader to implement a statewide electric vehicle portfolio in connection with a 2016 MDPSC proceeding to consider an array of issues relating to electric distribution system design, including matters relating to electric vehicles, distributed energy resources, advanced metering infrastructure, energy storage, system planning, rate design, and impacts on low-income customers. PE proposed an electric vehicle charging infrastructure program at a projected total cost of $12 million, to be recovered over a five-year amortization. On January 14, 2019, the MDPSC approved the petition subject to certain reductions in the scope of the program.

On January 12, 2018, the MDPSC instituted a proceeding to examine the impacts of the Tax Act on the rates and charges of Maryland utilities. PE must track and apply regulatory accounting treatment for the impacts beginning January 1, 2018, and submitted a report to the MDPSC on February 15, 2018, estimating that the Tax Act impacts would be approximately $7 million to $8 million annually for PE’s customers. On August 17, 2018, the Staff of the MDPSC filed a reply that recommended the MDPSC instead direct PE to reduce base rates by $6.5 million to reflect reduced federal tax costs pending resolution of PE's upcoming rate case and further direct that PE pay customers a one-time credit for what the Staff estimated were the tax savings to PE through the end of July 2018. On October 5, 2018, the MDPSC issued an order requiring PE to pay a one-time credit for tax savings through September 30, 2018, which totaled approximately $5 million, and reserved all other Tax Act impacts to be resolved in the pending rate case.

On August 24, 2018, PE filed a base rate case with the MDPSC, which it supplemented on October 22, 2018, to update the partially forecasted test year with a full twelve months of actual data. The rate case requested an annual increase in base distribution rates of $19.7 million, plus creation of an EDIS to fund four enhanced service reliability programs. In responding to discovery, PE revised its request for an annual increase in base rates to $17.6 million. The proposed rate increase reflects $7.3 million in annual savings for customers resulting from the recent federal tax law changes. On November 20, 2018, the Staff of the MDPSC filed testimony recommending an increase in base rates of $12.9 million and conditional approval of the EDIS, while the Maryland Office of People's Counsel filed testimony recommending a reduction in rates of $11.1 million and rejection of the EDIS. The evidentiary hearing concluded on January 28, 2019, and a final order is expected by March 23, 2019.

New Jersey Regulatory Matters

JCP&L operates under NJBPU approved rates that were effective as of January 1, 2017. In addition, on January 25, 2017, the NJBPU approved the acceleration of the amortization of JCP&L’s 2012 major storm expenses that are recovered through the SRC in order for JCP&L to achieve full recovery by December 31, 2019. JCP&L provides BGS for retail customers who do not choose a third-party EGS and for customers of third-party EGSs that fail to provide the contracted service. All New Jersey EDCs participate in this competitive BGS procurement process and recover BGS costs directly from customers as a charge separate from base rates.

In December 2017, the NJBPU issued proposed rules to modify its current CTA policy in base rate cases to: (i) calculate savings using a five-year look back from the beginning of the test year; (ii) allocate savings with 75% retained by the company and 25% allocated to rate payers; and (iii) exclude transmission assets of electric distribution companies in the savings calculation, which were published in the NJ Register in the first quarter of 2018. JCP&L filed comments supporting the proposed rulemaking. On January 17, 2019, the NJBPU approved the proposed CTA rules with no changes.

Also in December 2017, the NJBPU approved its IIP rulemaking. The IIP creates a financial incentive for utilities to accelerate the level of investment needed to promote the timely rehabilitation and replacement of certain non-revenue producing components that enhance reliability, resiliency, and/or safety. On July 13, 2018, JCP&L filed an infrastructure plan, JCP&L Reliability Plus, which proposed to accelerate $386.8 million of electric distribution infrastructure investment over four years to enhance the reliability and resiliency of its distribution system and reduce the frequency and duration of power outages. On August 29, 2018, the NJBPU retained the petition for hearing and, on November 22, 2018, issued a procedural schedule. On December 17, 2018, the Division of Rate Counsel recommended a $97 million program, a return on equity of 8.75%, and 5.38% cost of debt. On January 23, 2019, the NJBPU granted JCP&L's request to temporarily suspend procedural schedule in the matter pending settlement discussions. There can be no assurance that a definitive settlement agreement will be reached and, if so, will be approved by the NJBPU.

On January 31, 2018, the NJBPU instituted a proceeding to examine the impacts of the Tax Act on the rates and charges of New Jersey utilities. The NJBPU ordered New Jersey utilities to: (1) defer on their books the impacts of the Tax Act effective January 1, 2018; (2) to file tariffs effective April 1, 2018, reflecting the rate impacts of changes in current taxes; and (3) to file tariffs effective July 1, 2018, reflecting the rate impacts of changes in deferred taxes. On March 2, 2018, JCP&L filed a petition with the NJBPU, which included proposed tariffs for a base rate reduction of $28.6 million effective April 1, 2018, and a rider to reflect $1.3 million in rate impacts of changes in deferred taxes. On March 26, 2018, the NJBPU approved JCP&L's rate reduction effective April 1, 2018, on an interim basis subject to refund, pending the outcome of this proceeding. The NJBPU, however, did not address refunds and other proposed rider tariffs at such time.

Ohio Regulatory Matters

The Ohio Companies currently operate under ESP IV through May 31, 2024. ESP IV includes Rider DMR, which provides for the Ohio Companies to collect $132.5 million annually for three years, with the possibility of a two-year extension and is grossed up for federal income taxes, resulting in an approved amount of approximately $168 million annually in 2018 and 2019. Revenues from Rider DMR will be excluded from the significantly excessive earnings test for the initial three-year term but the exclusion will be reconsidered upon application for a potential two-year extension. The PUCO set three conditions for continued recovery under Rider DMR: (1) retention of the corporate headquarters and nexus of operations in Akron, Ohio; (2) no change in control of the Ohio Companies; and (3) a demonstration of sufficient progress in the implementation of grid modernization programs approved by the PUCO. ESP IV also continues a base distribution rate freeze through May 31, 2024. In addition, ESP IV continues the supply of power to non-shopping customers at a market-based price set through an auction process. On February 1, 2019, the Ohio Companies filed with the PUCO an application requesting a two-year extension of Rider DMR at the same amount and conditions.

ESP IV also continues Rider DCR, which supports continued investment related to the distribution system for the benefit of customers, with increased revenue caps of $30 million per year through May 31, 2019; $20 million per year from June 1, 2019 through May 31, 2022; and $15 million per year from June 1, 2022 through May 31, 2024. ESP IV also includes: (1) the collection of lost distribution revenues associated with energy efficiency and peak demand reduction programs; (2) an agreement to file a Grid Modernization Business Plan for PUCO consideration and approval, which was filed in February 2016, and remains pending as part of the grid modernization settlement described below; (3) a goal across FirstEnergy to reduce CO_2 emissions by 90% below 2005 levels by 2045; (4) contributions, totaling $51 million to: (a) fund energy conservation programs, economic development and job retention in the Ohio Companies' service territories; (b) establish a fuel-fund in each of the Ohio Companies' service territories to assist low-income customers; and (c) establish a Customer Advisory Council to ensure preservation and growth of the competitive market in Ohio; and (5) an agreement to file an application to transition to a straight fixed variable cost recovery mechanism for residential customers' base distribution rates, which filing the PUCO denied on June 13, 2018.

Several parties, including the Ohio Companies, filed applications for rehearing regarding the Ohio Companies' ESP IV with the PUCO. On August 16, 2017, the PUCO denied all remaining intervenor applications for rehearing, denied the Ohio Companies' challenges to the modifications to Rider DMR and added a third-party monitor to ensure that Rider DMR funds are spent appropriately. The Ohio Companies then filed an application for rehearing of the PUCO's August 16, 2017 ruling on the issues of the third-party monitor and the ROE calculation for advanced metering infrastructure, which the PUCO denied. In October 2017, the Sierra Club and the OMAEG filed notices of appeal with the Supreme Court of Ohio appealing various PUCO entries on their applications for rehearing. The Ohio Companies intervened in the appeal, and additional parties subsequently filed notices of appeal with the Supreme Court of Ohio challenging various PUCO entries on their applications for rehearing. On September 26, 2018, the Supreme Court of Ohio denied a July 30, 2018 joint motion filed by the OCC, the NOAC, and the OMAEG to stay the portions of the PUCO's orders and entries under appeal that authorized Rider DMR. Oral argument on the appeals was held on January 9, 2019.

Under Ohio law, the Ohio Companies are required to implement energy efficiency programs that achieve certain annual energy savings and total peak demand reductions. The Ohio Companies' 2017-2019 plan, as proposed in April 2016, includes a portfolio of energy efficiency programs targeted to a variety of customer segments, including residential customers, low income customers, small commercial customers, large commercial and industrial customers and governmental entities. In December 2016, the Ohio Companies filed a Stipulation and Recommendation with several parties that contained changes to the plan and a decrease in the plan costs. The Ohio Companies anticipate the cost of the plans will be approximately $268 million over the life of the portfolio plans and such costs are expected to be recovered through the Ohio Companies' existing rate mechanisms. On November 21, 2017, the PUCO issued an order that approved the proposed plans with several modifications, including a cap on the Ohio Companies' collection of program costs and shared savings set at 4% of the Ohio Companies' total sales to customers. On December 21, 2017, the Ohio Companies filed an application for rehearing challenging the PUCO's modifications, which the PUCO denied on January

10, 2018. On March 12, 2018, the Ohio Companies appealed to the Supreme Court of Ohio challenging the PUCO's imposition of a 4% cost cap. Various other parties also appealed challenging various PUCO entries on their applications for rehearing. Oral argument on the appeals is scheduled for February 20, 2019.

Ohio law requires electric utilities and electric service companies in Ohio to serve part of their load from renewable energy resources measured by an annually increasing percentage, which in 2017 was 3.5%, and increases 1% each year through 2026 (to 12.5%) and shall remain at 12.5% in 2027 and each year thereafter. The Ohio Companies conducted RFPs in 2009, 2010 and 2011 to secure RECs to help meet these renewable energy requirements. In September 2011, the PUCO opened a docket to review the Ohio Companies' alternative energy recovery rider through which the Ohio Companies recover the costs of acquiring these RECs. In August 2013, the PUCO approved the Ohio Companies' REC acquisitions except for certain purchases arising from one auction and directed the Ohio Companies to credit non-shopping customers in the amount of $43.4 million, plus interest, on the basis that the Ohio Companies did not prove such purchases were prudent. Following appeals, on January 24, 2018, the Supreme Court of Ohio reversed the PUCO order finding that the order violated the rule against retroactive ratemaking. After the OCC and ELPC filed a motion for reconsideration, to which the Ohio Companies responded in opposition, on April 25, 2018, the Supreme Court of Ohio denied the motion for reconsideration. As a result, in the second quarter of 2018, the Ohio Companies recognized a pre-tax benefit to earnings (within the Amortization (deferral) of regulatory assets, net line on the Consolidated Statement of Income (Loss)) of approximately $72 million to reverse the liability associated with the PUCO opinion and order.

On December 1, 2017, the Ohio Companies filed an application with the PUCO for approval of a DPM Plan. The DPM Plan is a portfolio of approximately $450 million in distribution platform investment projects, which are designed to modernize the Ohio Companies' distribution grid, prepare it for further grid modernization projects, and provide customers with immediate reliability benefits. On November 9, 2018, the Ohio Companies filed a settlement agreement that provides for the implementation of the first phase of grid modernization plans, including the investment of $516 million over three years to modernize the Ohio Companies' electric distribution system, and for all tax savings associated with the Tax Act, discussed below, to flow back to customers. On January 25, 2019, the Ohio Companies filed a supplemental settlement agreement that keeps intact the provisions of the settlement described above and adds further customer benefits and protections, which broadened support for the settlement. The settlement has broad support, including PUCO Staff, the OCC, representatives of industrial and commercial customers, a low-income advocate, environmental advocates, hospitals, competitive generation suppliers and other parties. The PUCO conducted a hearing and the settlement agreement remains subject to PUCO approval.

On January 10, 2018, the PUCO opened a case to consider the impacts of the Tax Act and determine the appropriate course of action to pass benefits on to customers. The Ohio Companies, effective January 1, 2018, were required to establish a regulatory liability for the estimated reduction in federal income tax resulting from the Tax Act, and filed comments on February 15, 2018, explaining that customers will save nearly $40 million annually as a result of updating tariff riders for the tax rate changes and that the Ohio Companies' base distribution rates are not impacted by the Tax Act changes because they are frozen through May 2024. On October 24, 2018, the PUCO entered an Order in its investigation into the impacts of the Tax Act on Ohio's utilities directing that by January 1, 2019, all Ohio rate-regulated utility companies, unless ordered otherwise, file applications not for an increase in rates to reflect the impact of the Tax Act on each specific utility's current rates. On October 30, 2018, the Ohio Companies filed an application to open a new proceeding for the implementation of matters relating to the impact of the Tax Act. As discussed further above, on November 9, 2018, the Ohio Companies filed a settlement agreement that provides for all tax savings associated with the Tax Act to flow back to customers and for the implementation of the first phase of grid modernization plans. As part of the agreement, the Ohio Companies also filed an application for approval of a rider to return the remaining tax savings to customers following PUCO approval of the settlement. On December 19, 2018, the PUCO upheld its January 10, 2018 ruling that utilities should be required to establish a deferred tax liability, effective January 1, 2018, in response to the Tax Act. On January 25, 2019, the Ohio Companies filed a supplemental settlement agreement that keeps intact the provisions of the settlement described above and adds further customer benefits and protections, which broadened support for the settlement. The PUCO conducted a hearing and the settlement agreement remains subject to PUCO approval.

Pennsylvania Regulatory Matters

The Pennsylvania Companies operate under rates approved by the PPUC, effective as of January 27, 2017. The Pennsylvania Companies operate under DSPs for the June 1, 2017 through May 31, 2019 delivery period, which provide for the competitive procurement of generation supply for customers who do not choose an alternative EGS or for customers of alternative EGSs that fail to provide the contracted service. Under the DSPs, the supply will be provided by wholesale suppliers through a mix of 12 and 24-month energy contracts, as well as one RFP for 2-year SREC contracts for ME, PN and Penn. The DSPs include modifications to the Pennsylvania Companies' POR programs in order to reduce the level of uncollectible expense the Pennsylvania Companies experience associated with alternative EGS charges.

The Pennsylvania Companies' DSPs for the June 1, 2019 through May 31, 2023 delivery period were approved by the PPUC in September 2018. Under the 2019-2023 DSPs, the supply will be provided by wholesale suppliers through a mix of 3, 12 and 24-month energy contracts, as well as two RFPs for 2-year SREC contracts for ME, PN and Penn. The 2019-2023 DSPs also include modifications to the Pennsylvania Companies' POR programs in order to continue their clawback pilot program as a long-term, permanent program term, and modifications to the Pennsylvania Companies' customer class definitions to allow for the introduction of hourly priced default service to customers at or above 100kW. The PPUC directed a working group to further discuss the implementation of customer assistance program shopping limitations and appropriate scripting for the Pennsylvania Companies'

customer referral programs, and in November 2018, issued a subsequent order to approve additional customer assistance program shopping parameters and further limit the scope of the working group discussion. On December 21, 2018, the PPUC issued a tentative order proposing a model to incorporate the directed shopping restrictions. Comments on the proposal were filed January 22, 2019.

Pursuant to Pennsylvania's EE&C legislation in Act 129 of 2008 and PPUC orders, Pennsylvania EDCs implement energy efficiency and peak demand reduction programs. The Pennsylvania Companies' Phase III EE&C plans for the June 2016 through May 2021 period, which were approved in March 2016, with expected costs up to $390 million, are designed to achieve the targets established in the PPUC's Phase III Final Implementation Order with full recovery through the reconcilable EE&C riders.

Pennsylvania EDCs may establish a DSIC to recover costs of infrastructure improvements and costs related to highway relocation projects with PPUC approval. LTIIPs outlining infrastructure improvement plans for PPUC review and approval must be filed prior to approval of a DSIC. On June 14, 2017, the PPUC approved modified LTIIPs for ME, PN and Penn for the remaining years of 2017 through 2020 to provide additional support for reliability and infrastructure investments. On September 20, 2018, following a periodic review of the LTIIPs as required by regulation once every five years, the PPUC entered an Order concluding that the Pennsylvania Companies have substantially adhered to the schedules and expenditures outlined in their LTIIPs, but that changes to the LTIIPs as designed are necessary to maintain and improve reliability and directed the Pennsylvania Companies to file modified or new LTIIPs. On January 18, 2019, the Pennsylvania Companies filed modifications to their current LTIIPs that would terminate those LTIIPs at the end of 2019, and proposed revised LTIIP spending in 2019 of $44.52 million by ME, $24.72 million by PN, $26.06 million by Penn and $50.85 million by WP. The Pennsylvania Companies also committed to making filings later in 2019, which would propose new LTIIPs for the 2020 through 2024 period.

The Pennsylvania Companies’ approved DSIC riders for quarterly cost recovery went into effect July 1, 2016, subject to hearings and refund or reallocation among customer classes. In the January 19, 2017 order approving the Pennsylvania Companies’ general rate cases, the PPUC added an additional issue to the DSIC proceeding to include whether ADIT should be included in DSIC calculations. On February 2, 2017, the parties to the DSIC proceeding submitted a Joint Settlement to the ALJ that resolved the issues that were pending from the order issued on June 9, 2016. On April 19, 2018, the PPUC approved the Joint Settlement without modification and reversed the ALJ's previous decision that would have required the Pennsylvania Companies to reflect all federal and state income tax deductions related to DSIC-eligible property in currently effective DSIC rates. On May 21, 2018, the Pennsylvania OCA filed an appeal with the Pennsylvania Commonwealth Court of the PPUC's decision of April 19, 2018. On June 11, 2018, the Pennsylvania Companies filed a Notice of Intervention in the Pennsylvania OCA's appeal to the Commonwealth Court. Briefing is complete and oral argument is scheduled for June 3, 2019.

On February 12, 2018, the PPUC initiated a proceeding to determine the effects of the Tax Act on the tax liability of utilities and the feasibility of reflecting such impacts in rates charged to customers. On March 9, 2018, the Pennsylvania Companies submitted their calculation of the net annual effect of the Tax Act on income tax expense and rate base to be $37 million for ME, $40 million for PN, $9 million for Penn, and $30 million for WP. The Pennsylvania Companies also filed comments proposing that rates be adjusted to reflect the tax rate changes prospectively from the date of a final PPUC order via a reconcilable rider, with the amount that would otherwise accrue between January 1, 2018 and the date of a final order being used to invest in the Pennsylvania Companies’ infrastructure. On March 15, 2018, the PPUC issued a Temporary Rates Order making the Pennsylvania Companies’ rates temporary and subject to refund for six months. On May 17, 2018, the PPUC issued orders directing that the Pennsylvania Companies implement a reconcilable negative surcharge mechanism in order to refund to customers the net effect of the Tax Act for the period July 1, 2018 through December 31, 2018, to be prospectively updated for new rates effective January 1, 2019. The Pennsylvania Companies were also directed to establish a regulatory liability for the net impact of the Tax Act for the period of January 1, 2018 through June 30, 2018. On June 14, 2018, the PPUC issued an order revising this directive such that the Pennsylvania Companies must instead establish accounts to track tax savings for the period January 1, 2018 through March 14, 2018, and record regulatory liabilities associated with tax savings for only the period March 15, 2018 through June 30, 2018. The cumulative value of the tracked amounts and the regulatory liability is expected to amount to $12 million for ME, $13 million for PN, $3 million for Penn, and $10 million for WP. These amounts are expected to be addressed in the Pennsylvania Companies' next available rate proceedings, or independent filings to be made within three years, whichever comes sooner. The Pennsylvania Companies filed voluntary surcharges on June 1, 2018, to adjust rates for the reduced tax rate, which were effective for bills rendered starting July 1, 2018. For the first six-month period, the surcharge returned to customers was approximately $22 million for ME, $23 million for PN, $6 million for Penn, and $18 million for WP.

West Virginia Regulatory Matters

MP and PE provide electric service to all customers through traditional cost-based, regulated utility ratemaking and operates under rates approved by the WVPSC effective February 2015. MP and PE recover net power supply costs, including fuel costs, purchased power costs and related expenses, net of related market sales revenue through the ENEC. MP's and PE's ENEC rate is updated annually.

In September 2016, the WVPSC approved the Phase II energy efficiency program for MP and PE as reflected in a unanimous settlement, which included three energy efficiency programs to meet the Phase II requirement of energy efficiency reductions of 0.5% of 2013 distribution sales for the January 1, 2017 through May 31, 2018 period. On December 15, 2017, the WVPSC approved

MP's and PE's proposed annual decrease in their EE&C rates, effective January 1, 2018, which is not material to FirstEnergy. This Phase II energy efficiency program ended May 31, 2018.

Previously, AE Supply was the winning bidder of a December 2016 RFP to address MP's generation shortfall and on March 6, 2017, MP and AE Supply signed an asset purchase agreement for MP to acquire AE Supply's Pleasants Power Station (1,300 MWs), subject to customary and other closing conditions, including regulatory approvals. In January 2018, FERC issued an order denying authorization for the transaction and the WVPSC issued an order approving the transfer of Pleasants Power Station conditioned on MP assuming significant commodity risk. Based on the adverse FERC ruling and the conditions included in the WVPSC order, MP and AE Supply terminated the asset purchase agreement.

On August 31, 2018, MP and PE filed a $100.9 million decrease in their ENEC rates proposed to be effective January 1, 2019, which included a $25.6 million annual decrease impact associated with the settlement regarding the impact of the Tax Act on West Virginia rates, as noted below. Additionally, the August 31, 2018 filing included an elimination of the Energy Efficiency Cost Rate Surcharge effective January 1, 2019, equating to an additional $2.1 million decrease. The rate decreases represent an approximate 7.2% annual decrease in rates versus those in effect on August 31, 2018. A unanimous settlement was filed with the WVPSC on November 20, 2018, and a hearing was held on November 27, 2018. An order adopting the settlement in full without modification was issued on January 2, 2019.

On January 3, 2018, the WVPSC initiated a proceeding to investigate the effects of the Tax Act on the revenue requirements of utilities. MP and PE must track the tax savings resulting from the Tax Act on a monthly basis, effective January 1, 2018. On January 26, 2018, the WVPSC issued an order clarifying that regulatory accounting should be implemented as of January 1, 2018, including the recording of any regulatory liabilities resulting from the Tax Act. MP and PE filed written testimony on May 30, 2018, explaining the impact of the Tax Act on federal income tax and revenue requirements and showing an annual rate impact of $26.2 million. MP and PE, the Staff of the WVPSC, the WV Consumer Advocate and a coalition of industrial customers entered into a settlement agreement on August 23, 2018, to have $25.6 million in rate reductions flow through to customers beginning September 1, 2018, and to defer to the next base rate case (or a separate proceeding if a base rate case is not filed by August 31, 2020) the amount and classification of the excess ADITs resulting from the Tax Act and the issue of whether MP and PE should be required to credit to customers any of the reduced income tax expense occurring between January 1, 2018 and August 31, 2018. The WVPSC approved the settlement on August 24, 2018.

FERC REGULATORY MATTERS

Under the FPA, FERC regulates rates for interstate wholesale sales, transmission of electric power, accounting and other matters, including construction and operation of hydroelectric projects. With respect to their wholesale services and rates, the Utilities, AE Supply, AGC, and the Transmission Companies are subject to regulation by FERC. FERC regulations require JCP&L, MP, PE, WP and the Transmission Companies to provide open access transmission service at FERC-approved rates, terms and conditions. Transmission facilities of JCP&L, MP, PE, WP and the Transmission Companies are subject to functional control by PJM and transmission service using their transmission facilities is provided by PJM under the PJM Tariff.

FERC regulates the sale of power for resale in interstate commerce in part by granting authority to public utilities to sell wholesale power at market-based rates upon showing that the seller cannot exert market power in generation or transmission or erect barriers to entry into markets. The Utilities and AE Supply each have been authorized by FERC to sell wholesale power in interstate commerce at market-based rates and have a market-based rate tariff on file with FERC, although major wholesale purchases remain subject to regulation by the relevant state commissions.

Federally-enforceable mandatory reliability standards apply to the bulk electric system and impose certain operating, record-keeping and reporting requirements on the Utilities, AE Supply, and the Transmission Companies. NERC is the ERO designated by FERC to establish and enforce these reliability standards, although NERC has delegated day-to-day implementation and enforcement of these reliability standards to eight regional entities, including RFC. All of the facilities that FirstEnergy operates are located within the RFC region. FirstEnergy actively participates in the NERC and RFC stakeholder processes, and otherwise monitors and manages its companies in response to the ongoing development, implementation and enforcement of the reliability standards implemented and enforced by RFC.

FirstEnergy believes that it is in compliance with all currently-effective and enforceable reliability standards. Nevertheless, in the course of operating its extensive electric utility systems and facilities, FirstEnergy occasionally learns of isolated facts or circumstances that could be interpreted as excursions from the reliability standards. If and when such occurrences are found, FirstEnergy develops information about the occurrence and develops a remedial response to the specific circumstances, including in appropriate cases "self-reporting" an occurrence to RFC. Moreover, it is clear that NERC, RFC and FERC will continue to refine existing reliability standards as well as to develop and adopt new reliability standards. Any inability on FirstEnergy's part to comply with the reliability standards for its bulk electric system could result in the imposition of financial penalties, or obligations to upgrade or build transmission facilities, that could have a material adverse effect on its financial condition, results of operations and cash flows.

PJM Transmission Rates

PJM and its stakeholders have been debating the proper method to allocate costs for a certain class of new transmission facilities since 2005. While FirstEnergy and other parties advocated for a traditional "beneficiary pays" (or usage based) approach, others advocated for “socializing” the costs on a load-ratio share basis, where each customer in the zone would pay based on its total usage of energy within PJM. On May 31, 2018, FERC issued an order approving a settlement agreement among various parties, including ATSI and the Utilities, agreeing to apply a combined usage based/socialization approach to cost allocation for charges to transmission customers in the PJM Region for transmission projects operating at or above 500 kV. For historical transmission costs prior to January 1, 2016, the settlement agreement provides a “black-box” schedule of credits to and payments from customers across PJM’s transmission zones. From January 1, 2016 forward, PJM will collect a charge for the revenue requirement associated with each transmission enhancement through a “50/50” calculation, with 50% based on a load-ratio share and the other 50% solution-based distribution factor (DFAX) hybrid method. As a result of the settlement, FirstEnergy recorded a pre-tax benefit of approximately $115 million in 2018 (within the Other operating expenses line on the Consolidated Statement of Income), relating to the amount of refund the Ohio Companies will receive and retain from PJM, of which $73 million is associated with the "black box" calculation of historical transmission costs prior to January 1, 2016, and $42 million is associated with the "50/50" calculation of historical transmission costs from January 1, 2016 to June 30, 2018. PJM implemented the settlement for transmission service in August 2018. Requests for rehearing or clarification of FERC's May 31, 2018, orders and related responses remain pending before FERC. FirstEnergy does not expect a material impact from implementation of the settlement agreement going forward.

RTO Realignment

On June 1, 2011, ATSI and the ATSI zone transferred from MISO to PJM. While many of the matters involved with the move have been resolved, FERC denied recovery under ATSI's transmission rate for certain charges that collectively can be described as "exit fees" and certain other transmission cost allocation charges totaling approximately $78.8 million until such time as ATSI submits a cost/benefit analysis demonstrating net benefits to customers from the transfer to PJM. Subsequently, FERC rejected a proposed settlement agreement to resolve the exit fee and transmission cost allocation issues, stating that its action is without prejudice to ATSI submitting a cost/benefit analysis demonstrating that the benefits of the RTO realignment decisions outweigh the exit fee and transmission cost allocation charges. In a subsequent order, FERC affirmed its prior ruling that ATSI must submit the cost/benefit analysis. ATSI is evaluating the cost/benefit approach.

Separately, FirstEnergy joined certain other PJM TOs in a protest of MISO's proposal to allocate MVP costs to energy transactions that cross MISO's borders into the PJM Region. On September 20, 2018, FERC denied rehearing with respect to its 2016 order regarding allocation of MVP costs and affirmed and clarified its prior decision that MISO may allocate MVP costs to PJM customers for power withdrawals from MISO to PJM as such exports occur.

MAIT Transmission Formula Rate

MAIT previously submitted an application to FERC requesting authorization to implement a forward-looking formula transmission rate to recover and earn a return on transmission assets effective February 1, 2017. Following various protests to the proposed MAIT formula transmission rate, on March 10, 2017, FERC issued an order accepting the MAIT formula transmission rate for filing, suspending the formula transmission rate for five months to become effective July 1, 2017, and establishing hearing and settlement judge procedures. On May 21, 2018, FERC issued an order accepting a settlement agreement as filed by MAIT and certain parties, without conditions. The settlement agreement provides for certain changes to MAIT's formula rate, including changing MAIT's ROE from 11% to 10.3%, setting the recovery amount for certain regulatory assets, and establishing that MAIT's capital structure will not exceed 60% equity over the period ending December 31, 2021. The settlement agreement further provides that the ROE and the 60% cap on the equity component of MAIT's capital structure will remain in effect unless changed pursuant to section 205 or 206 of the FPA provided the effective date for any change shall be no earlier than January 1, 2022. Refunds for the difference between the filed rate and the settlement rate will be handled through MAIT's true-up process.

JCP&L Transmission Formula Rate

In October 2016, after withdrawing its request to the NJBPU to transfer its transmission assets to MAIT, JCP&L submitted an application to FERC requesting authorization to implement a forward-looking formula transmission rate to recover and earn a return on transmission assets effective January 1, 2017. Following various protests to the proposed formula transmission rate, on March 10, 2017, FERC issued an order accepting the JCP&L formula transmission rate for filing, suspending the transmission rate for five months to become effective June 1, 2017, and establishing hearing and settlement judge procedures. On February 20, 2018, FERC issued an order accepting a settlement agreement filed by JCP&L and certain parties, with an effective date of June 1, 2017. The settlement agreement provides for a $135 million stated annual revenue requirement for Network Integration Transmission Service and an average of $20 million stated annual revenue requirement for certain projects listed on the PJM Tariff where the costs are allocated in part beyond the JCP&L transmission zone within the PJM Region. The revenue requirements are subject to a moratorium on additional revenue requirements proceedings through December 31, 2019, other than limited filings to seek recovery for certain additional costs. Refunds for the difference between the filed rate and the settlement rate were paid out ratably in 2018.

FERC Actions on Tax Act

On March 15, 2018, FERC took action to address the impact of the Tax Act on FERC-jurisdictional rates, including transmission and electric wholesale rates. FERC directed MP, PE and WP to either submit a joint filing to adjust their stated transmission rates to address the impact of the Tax Act changes in effective tax rate, or to "show cause" as to why such action is not required. FERC established a refund effective date of March 21, 2018, for any refunds as a result of the change in tax rate. On May 14, 2018, MP, PE and WP submitted revisions to their joint stated transmission rate to reflect the reduction in the federal corporate income tax rate. The revisions reduced the stated rate by 6.70%. FERC issued an order on November 15, 2018, accepting the revisions without modifications or conditions.

Also, on March 15, 2018, FERC issued a Notice of Inquiry seeking information regarding whether and how FERC should address possible changes to ADIT and bonus depreciation as a result of the Tax Act. Such possible changes could impact FERC-jurisdictional rates, including transmission rates. On November 15, 2018, FERC issued a NOPR suggesting mechanisms to revise transmission rates to address the Tax Act's effect on ADIT. Specifically, FERC proposed utilities with transmission formula rates would include mechanisms to (i) deduct any excess ADIT from or add any deficient ADIT to their rate bases; (ii) raise or lower their income tax allowances by any amortized excess or deficient ADIT; and (iii) incorporate a new permanent worksheet into their rates that will annually track information related to excess or deficient ADIT. Utilities with transmission stated rates would determine the amount of excess and deferred income tax caused by the reduced federal corporate income tax rate and return or recover this amount to or from customers. To assist with implementation of the proposed rule, FERC also issued on November 15, 2018, a policy statement providing accounting and ratemaking guidance for treatment of ADIT for all FERC-jurisdictional public utilities. The policy statement also addresses the accounting and ratemaking treatment of ADIT following the sale or retirement of an asset after December 31, 2017. FESC, on behalf of its affiliated transmission owners, supported comments submitted by Edison Electric Institute requesting additional clarification on the ratemaking and accounting treatment for ADIT in formula and stated transmission rates. FERC's final rule remains pending.

Transmission ROE Methodology

In June 2014, FERC issued Opinion No. 531 revising its approach for calculating the discounted cash flow element of FERC's ROE methodology and announcing the potential for a qualitative adjustment to the ROE methodology results. Parties appealed to the D.C. Circuit, and on April 14, 2017, that court issued a decision vacating FERC's order and remanding the matter to FERC for further review. On October 16, 2018, FERC issued its order on remand, in which it proposed a revised ROE methodology. Specifically, in complaint proceedings alleging that an existing ROE is not just and reasonable, FERC proposes to rely on three financial models-discounted cash flow, capital-asset pricing, and expected earnings-to establish a composite zone of reasonableness to identity a range of just and reasonable ROEs. FERC then will utilize the transmission utility's risk relative to other utilities within that zone of reasonableness to assign the transmission utility to one of three quartiles within the zone. FERC would take no further action (i.e., dismiss the complaint) if the existing ROE falls within the identified quartile. However, if the ROE falls outside the quartile, FERC would deem the existing ROE presumptively unjust and unreasonable and would determine the replacement ROE. FERC would add a fourth financial model risk premium to the analysis to calculate a ROE based on the average point of central tendency for each of the four financial models. FERC established a paper hearing on how the new methodology should apply to the remanded proceedings. FirstEnergy is monitoring the proceedings.

Capital Requirements

FirstEnergy's business is capital intensive, requiring significant resources to fund operating expenses, construction expenditures, scheduled debt maturities and interest payments, dividend payments and contributions to its pension plan.

On January 22, 2018, FirstEnergy announced a $2.5 billion equity issuance, which included $1.62 billion in mandatorily convertible preferred equity with an initial conversion price of $27.42 per share and $850 million of common equity issued at $28.22 per share. The preferred shares participate in dividends paid on common stock on an as-converted basis and are non-voting except in certain limited circumstances. The preferred shares are convertible at the option of the holders, and will mandatorily convert in July 2019, subject to limited exceptions. Proceeds from the investment were used to reduce FE holding company debt by $1.45 billion and fund FirstEnergy's pension plan as discussed below, with the remainder used for general corporate purposes.

The equity investment is strengthening FirstEnergy's balance sheet and is supporting the company's transition to a fully regulated utility company. By deleveraging the company, the investment also enabled FirstEnergy to enhance its investment grade credit metrics. The January 2018 equity issuance served as a catalyst to FirstEnergy's 2018-2021 "Unlocking the Future" regulated growth plan, which includes earnings growth targets, Regulated Distribution segment average annual rate base growth of 5%, formula transmission average annual rate base growth of 11%, and assumes no additional equity issuances through 2021, outside of FE's regular stock investment and employee benefit plans.

In addition to this equity investment, FE and its distribution and transmission subsidiaries expect their existing sources of liquidity to remain sufficient to meet their respective anticipated obligations. In addition to internal sources to fund liquidity and capital requirements for 2019 and beyond, FE and its distribution and transmission subsidiaries expect to rely on external sources of funds. Short-term cash requirements not met by cash provided from operations are generally satisfied through short-term borrowings. Long-term cash needs may be met through the issuance of long-term debt at certain distribution and transmission subsidiaries to, among other things, fund capital expenditures and refinance short-term and maturing long-term debt, subject to market conditions and other factors.

In January 2018, FirstEnergy satisfied its minimum required funding obligations to its qualified pension plan of $500 million and addressed anticipated required funding obligations through 2020 to its pension plan with an additional contribution of $750 million. On February 1, 2019, FirstEnergy made a $500 million voluntary cash contribution to the qualified pension plan. As a result of this contribution, FirstEnergy expects no required contributions through 2021.

FirstEnergy's capital expenditures for 2019 are expected to be approximately $2.9 to $3.0 billion. Planned capital initiatives are intended to promote reliability, improve operations, and support current environmental and energy efficiency directives.

Capital expenditures for 2018 and forecasted expenditures for 2019, 2020, and 2021, by reportable segment are included below:

Reportable Segment	2018 Actual	2019 Forecast	2020 Forecast	2021 Forecast
		(In millions)		
Regulated Distribution	$ 1,635	$ 1,600 - 1,700	$ 1,500 - 1,700	$ 1,500 - 1,700
Regulated Transmission	1,165	1,200	1,200	1,200
Corporate/Other	183	85	90	110
Total	$ 2,983	$ 2,885 - 2,985	$ 2,790 - 2,990	$ 2,810 - 3,010

FirstEnergy's transmission growth program, *Energizing the Future*, provides a stable and proven investment platform, while producing important customer benefits. Through the program, $4.4 billion in capital investments were made from 2014 through 2017, and the company plans to invest up to an additional $4.8 billion in the 2018-2021 timeframe, which includes approximately $1.2 billion in 2018 and a target of $1.2 billion annually through 2021. As noted above, over 80% of these capital investments are recoverable through formula rate mechanisms, reducing regulatory lag in recovering a return on investment, while offering a reasonable rate of return. These investments are expected to continue to improve the performance and condition of the transmission system while increasing automation and communication, adding capacity to the system and improving customer reliability. Beyond 2021, FirstEnergy believes there are incremental investment opportunities for its existing transmission infrastructure of up to approximately $20 billion, which are expected to strengthen grid and cyber-security and make the transmission system more reliable, robust, secure and resistant to extreme weather events, with improved operational flexibility.

In the Regulated Distribution segment, FirstEnergy remains committed to providing customer service-oriented growth opportunities by investing between $6.2 billion and $6.7 billion over 2018 to 2021, including $1.6 billion invested in 2018. Approximately 40% of capital expenditures are recoverable through various rate mechanisms, riders and trackers. Beginning in 2019, expected investments at the Ohio Companies include the pending Ohio Grid Modernization plan which includes installation of approximately 700,000 advanced meters, distribution automation, and integrated ‘volt/var’ controls. Additionally, the pending JCP&L Reliability Plus infrastructure improvement plan filed with the NJBPU is expected to bring both reduced outages and strengthen the system while preparing for the grid of the future in New Jersey. FirstEnergy continues to explore other opportunities for growth in its Regulated

Distribution business, including investments in electric system improvement and modernization projects to increase reliability and improve service to customers, as well as exploring opportunities in customer engagement that focus on electrification of customers' homes and businesses by providing a full range of products and services.

Any financing plans by FE or any of its consolidated subsidiaries, including the issuance of equity and debt, and the refinancing of short-term and maturing long-term debt are subject to market conditions and other factors. No assurance can be given that any such issuances, financing or refinancing, as the case may be, will be completed as anticipated or at all. Any delay in the completion of financing plans could require FE or any of its consolidated subsidiaries to utilize short-term borrowing capacity, which could impact available liquidity. In addition, FE and its consolidated subsidiaries expect to continually evaluate any planned financings, which may result in changes from time to time.

The FES Bankruptcy has also impacted FirstEnergy's capital requirements. On March 9, 2018, FES borrowed $500 million from FE under the secured credit facility, dated as of December 6, 2016, among FES, as Borrower, FG and NG as guarantors, and FE, as lender, which fully utilized the committed line of credit available under the secured credit facility. Following the FES Bankruptcy deconsolidation of FES, FE fully reserved for the $500 million associated with the borrowings under the secured credit facility. Under the terms of the FES Bankruptcy settlement agreement discussed below, FE will release any and all claims against the FES Debtors with respect to the $500 million borrowed under the secured credit facility.

On September 26, 2018, the Bankruptcy Court approved a FES Bankruptcy settlement agreement dated August 26, 2018, by and among FirstEnergy, two groups of key FES creditors (collectively, the FES Key Creditor Groups), the FES Debtors and the UCC. The FES Bankruptcy settlement agreement resolves certain claims by FirstEnergy against the FES Debtors and all claims by the FES Debtors and their creditors against FirstEnergy, and includes the following terms, among others:

- FE will pay certain pre-petition FES and FENOC employee-related obligations, which include unfunded pension obligations and other employee benefits.
- FE will waive all pre-petition claims (other than those claims under the Tax Allocation Agreement for the 2018 tax year) and certain post-petition claims, against the FES Debtors related to the FES Debtors and their businesses, including the full borrowings by FES under the $500 million secured credit facility, the $200 million credit agreement being used to support surety bonds, the BNSF/CSX rail settlement guarantee, and the FES Debtors' unfunded pension obligations.
- The full release of all claims against FirstEnergy by the FES Debtors and their creditors.
- A $225 million cash payment from FirstEnergy.
- A $628 million aggregate principal amount note issuance by FirstEnergy to the FES Debtors, which may be decreased by the amount, if any, of cash paid by FirstEnergy to the FES Debtors under the Intercompany Income Tax Allocation Agreement for the tax benefits related to the sale or deactivation of certain plants.
- Transfer of the Pleasants Power Station and related assets, including the economic interests therein as of January 1, 2019, and a requirement that FE continue to provide access to the McElroy's Run CCR Impoundment Facility, which is not being transferred. FE will provide certain guarantees for retained environmental liabilities of AE Supply, including the McElroy's Run CCR Impoundment Facility.
- FirstEnergy agrees to waive all pre-petition claims related to shared services and credit nine-months of the FES Debtors' shared service costs beginning as of April 1, 2018 through December 31, 2018, in an amount not to exceed $112.5 million, and FirstEnergy agrees to extend the availability of shared services until no later than June 30, 2020.
- FirstEnergy agrees to fund through its pension plan a pension enhancement, subject to a cap, should FES offer a voluntary enhanced retirement package in 2019 and to offer certain other employee benefits.
- FirstEnergy agrees to perform under the Intercompany Tax Allocation Agreement through the FES Debtors' emergence from bankruptcy, at which time FirstEnergy will waive a 2017 overpayment for NOLs of approximately $71 million, reverse 2018 estimated payments for NOLs of approximately $88 million and pay the FES Debtors for the use of NOLs in an amount no less than $66 million for 2018 (of which approximately $52 million has been paid through December 31, 2018).

FirstEnergy determined a loss is probable with respect to the FES Bankruptcy and recorded pre-tax charges totaling $877 million in 2018. See Note 3, "Discontinued Operations," for additional information.

The FES Bankruptcy settlement agreement remains subject to satisfaction of certain conditions, most notably the issuance of a final order by the Bankruptcy Court approving the plan or plans of reorganization for the FES Debtors that are acceptable to FirstEnergy consistent with the requirements of the FES Bankruptcy settlement agreement. There can be no assurance that such conditions will be satisfied or the FES Bankruptcy settlement agreement will be otherwise consummated, and the actual outcome of this matter may differ materially from the terms of the agreement described herein. FirstEnergy will continue to evaluate the impact of any new factors on the settlement and their relative impact on the financial statements.

In connection with the FES Bankruptcy settlement agreement, FirstEnergy entered into a separation agreement with the FES Debtors to implement the separation of the FES Debtors and their businesses from FirstEnergy. A business separation committee was established between FirstEnergy and the FES Debtors to review and determine issues that arise in the context of the separation of the FES Debtors' businesses from those of FirstEnergy.

The following table presents scheduled debt repayments for outstanding long-term debt as of December 31, 2018, excluding lease commitments, for the next five years. PCRBs that are scheduled to be tendered for mandatory purchase prior to maturity are reflected in the applicable year in which such PCRBs are scheduled to be tendered.

2019	2020-2023	Total
	(In millions)	
$ 489	$ 3,333	$ 3,822

The following table displays consolidated operating lease commitments as of December 31, 2018.

Operating Leases		
		(In millions)
	2019	$ 34
	2020	36
	2021	34
	2022	30
	2023	28
Years thereafter		127
Total minimum lease payments		$ 289

FE and the Utilities, and FET and certain of its subsidiaries, each participate in two separate five-year syndicated revolving credit facilities, which were amended on October 19, 2018, providing for aggregate commitments of $3.5 billion (Facilities), which are available through December 6, 2022. Under the amended FE facility, an aggregate amount of $2.5 billion is available to be borrowed, repaid and reborrowed, subject to separate borrowing sub-limits for each borrower including FE and its regulated distribution subsidiaries. Under the amended FET Facility, an aggregate amount of $1.0 billion is available to be borrowed, repaid and reborrowed under a syndicated credit facility, subject to separate borrowing sub-limits for each borrower including FET and the Transmission Companies. Prior to the amendments to the Facilities, the aggregate commitments under the Facilities was $5.0 billion, which were available until December 6, 2021. FirstEnergy amended the Facilities to reduce costs and to better align FirstEnergy's ongoing liquidity needs with its strategy to be a fully regulated utility company.

Borrowings under the Facilities may be used for working capital and other general corporate purposes, including intercompany loans and advances by a borrower to any of its subsidiaries. Generally, borrowings under the Facilities are available to each borrower separately and mature on the earlier of 364 days from the date of borrowing or the commitment termination date, as the same may be extended. Each of the Facilities contains financial covenants requiring each borrower to maintain a consolidated debt-to-total-capitalization ratio (as defined under each of the Facilities) of no more than 65%, and 75% for FET, measured at the end of each fiscal quarter.

On October 19, 2018, FE entered into two separate syndicated term loan credit agreements, the first being a $1.25 billion 364-day facility with The Bank of Nova Scotia, as administrative agent, and the lenders identified therein, and the second being a $500 million two-year facility with JPMorgan Chase Bank, N.A., as administrative agent, and the lenders identified therein, respectively, the proceeds of each were used to reduce short-term debt. The term loans contain covenants and other terms and conditions substantially similar to those of the FE Facility described above, including a consolidated debt-to-total-capitalization ratio.

The initial borrowing of $1.75 billion under the new term loans, which took the form of a Eurodollar rate advance, may be converted from time to time, in whole or in part, to alternate base rate advances or other Eurodollar rate advances. Outstanding alternate base rate advances will bear interest at a fluctuating interest rate per annum equal to the sum of an applicable margin for alternate base rate advances determined by reference to FE’s reference ratings plus the highest of (i) the administrative agent’s publicly-announced “prime rate”, (ii) the sum of 1/2 of 1% per annum plus the Federal Funds Rate in effect from time to time and (iii) the rate of interest per annum appearing on a nationally-recognized service such as the Dow Jones Market Service (Telerate) equal to one-month LIBOR on each day plus 1%. Outstanding Eurodollar rate advances will bear interest at LIBOR for interest periods of one week or one, two, three or six months plus an applicable margin determined by reference to FE’s reference ratings. Changes in FE's reference ratings would lower or raise its applicable margin depending on whether ratings improved or were lowered, respectively.

FirstEnergy had $1,250 million and $300 million of short-term borrowings as of December 31, 2018 and 2017, respectively. FirstEnergy's available liquidity from external sources as of February 18, 2019, was as follows:

Borrower(s)	Type	Maturity	Commitment	Available Liquidity
			(In millions)	
FirstEnergy[1]	Revolving	December 2022	$ 2,500	$ 2,490
FET[2]	Revolving	December 2022	1,000	1,000
		Subtotal	3,500	3,490
		Cash and cash equivalents	—	156
		Total	$ 3,500	$ 3,646

(1) FE and the Utilities. Available liquidity includes impact of $10 million of LOCs issued under various terms.
(2) Includes FET and the Transmission Companies.

Nuclear Regulation

Under NRC regulations, JCP&L, ME and PN must ensure that adequate funds will be available to decommission their retired nuclear facility, TMI-2. As of December 31, 2018, JCP&L, ME and PN had in total approximately $790 million invested in external trusts to be used for the decommissioning and environmental remediation of their retired TMI-2 nuclear generating facility. The values of these NDTs also fluctuate based on market conditions. If the values of the trusts decline by a material amount, the obligation to JCP&L, ME and PN to fund the trusts may increase. Disruptions in the capital markets and their effects on particular businesses and the economy could also affect the values of the NDTs.

Nuclear Insurance

JCP&L, ME and PN maintain property damage insurance provided by NEIL for their interest in the retired TMI- 2 nuclear facility, a permanently shut down and defueled facility. Under these arrangements, up to $150 million of coverage for decontamination costs, decommissioning costs, debris removal and repair and/or replacement of property is provided. JCP&L, ME and PN pay annual premiums and are subject to retrospective premium assessments of up to approximately $1.2 million during a policy year.

JCP&L, ME and PN intend to maintain insurance against nuclear risks as long as it is available. To the extent that property damage, decontamination, decommissioning, repair and replacement costs and other such costs arising from a nuclear incident at any of JCP&L, ME or PN's plants exceed the policy limits of the insurance in effect with respect to that plant, to the extent a nuclear incident is determined not to be covered by JCP&L, ME or PN's insurance policies, or to the extent such insurance becomes unavailable in the future, JCP&L, ME or PN would remain at risk for such costs.

The Price-Anderson Act limits public liability relative to a single incident at a nuclear power plant. In connection with TMI-2, JCP&L, ME and PN carry the required ANI third party liability coverage and also have coverage under a Price Anderson indemnity agreement issued by the NRC. The total available coverage in the event of a nuclear incident is $560 million, which is also the limit of public liability for any nuclear incident involving TMI-2.

Environmental Matters

Various federal, state and local authorities regulate FirstEnergy with regard to air and water quality and other environmental matters. Pursuant to a March 28, 2017 executive order, the EPA and other federal agencies are to review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law. FirstEnergy cannot predict the timing or ultimate outcome of any of these reviews or how any future actions taken as a result thereof, in particular with respect to existing environmental regulations, may materially impact its business, results of operations, cash flows and financial condition.

Compliance with environmental regulations could have a material adverse effect on FirstEnergy's earnings, cash flow and competitive position to the extent that FirstEnergy competes with companies that are not subject to such regulations and, therefore, do not bear the risk of costs associated with compliance, or failure to comply, with such regulations.

Clean Air Act

FirstEnergy complies with SO_2 and NOx emission reduction requirements under the CAA and SIP(s) by burning lower-sulfur fuel, utilizing combustion controls and post-combustion controls and/or using emission allowances.

CSAPR requires reductions of NOx and SO_2 emissions in two phases (2015 and 2017), ultimately capping SO_2 emissions in affected states to 2.4 million tons annually and NOx emissions to 1.2 million tons annually. CSAPR allows trading of NOx and SO_2 emission

allowances between power plants located in the same state and interstate trading of NOx and SO_2 emission allowances with some restrictions. The D.C. Circuit ordered the EPA on July 28, 2015, to reconsider the CSAPR caps on NOx and SO_2 emissions from power plants in 13 states, including Ohio, Pennsylvania and West Virginia. This follows the 2014 U.S. Supreme Court ruling generally upholding the EPA's regulatory approach under CSAPR, but questioning whether the EPA required upwind states to reduce emissions by more than their contribution to air pollution in downwind states. The EPA issued a CSAPR update rule on September 7, 2016, reducing summertime NOx emissions from power plants in 22 states in the eastern U.S., including Ohio, Pennsylvania and West Virginia, beginning in 2017. Various states and other stakeholders appealed the CSAPR update rule to the D.C. Circuit in November and December 2016. On September 6, 2017, the D.C. Circuit rejected the industry's bid for a lengthy pause in the litigation and set a briefing schedule. Depending on the outcome of the appeals, the EPA's reconsideration of the CSAPR update rule and how the EPA and the states ultimately implement CSAPR, the future cost of compliance may be material and changes to FirstEnergy's operations may result.

The EPA tightened the primary and secondary NAAQS for ozone from the 2008 standard levels of 75 PPB to 70 PPB on October 1, 2015. The EPA stated the vast majority of U.S. counties will meet the new 70 PPB standard by 2025 due to other federal and state rules and programs but on April 30, 2018, the EPA designated fifty-one areas in twenty-two states as non-attainment; however, FirstEnergy has no power plants operating in those areas. States have roughly three years to develop implementation plans to attain the new 2015 ozone NAAQS. Depending on how the EPA and the states implement the new 2015 ozone NAAQS, the future cost of compliance may be material and changes to FirstEnergy's operations may result. In August 2016, the State of Delaware filed a CAA Section 126 petition with the EPA alleging that the Harrison generating facility's NOx emissions significantly contribute to Delaware's inability to attain the ozone NAAQS. The petition sought a short-term NOx emission rate limit of 0.125 lb/mmBTU over an averaging period of no more than 24 hours. In November 2016, the State of Maryland filed a CAA Section 126 petition with the EPA alleging that NOx emissions from 36 EGUs, including Harrison Units 1, 2 and 3 and Pleasants Units 1 and 2, significantly contribute to Maryland's inability to attain the ozone NAAQS. The petition sought NOx emission rate limits for the 36 EGUs by May 1, 2017. On September 14, 2018, the EPA denied both the States of Delaware and Maryland petitions under CAA Section 126. In October 2018, Delaware and Maryland appealed the denials of their petitions to the D.C. Circuit. In March 2018, the State of New York filed a CAA Section 126 petition with the EPA alleging that NOx emissions from nine states (including Ohio, Pennsylvania and West Virginia) significantly contribute to New York's inability to attain the ozone NAAQS. The petition seeks suitable emission rate limits for large stationary sources that are affecting New York's air quality within the three years allowed by CAA Section 126. On May 3, 2018, the EPA extended the time frame for acting on the CAA Section 126 petition by six months to November 9, 2018, but has not taken any further action. FirstEnergy is unable to predict the outcome of these matters or estimate the loss or range of loss.

On May 1, 2017, FE and FG, and CSX and BNSF entered into a definitive settlement agreement, which resolved all claims related to a coal transportation contract dispute as a result of MATS. Pursuant to the settlement agreement, FG agreed to pay CSX and BNSF an aggregate amount equal to $109 million, payable in three annual installments, the first of which was made on May 1, 2017. FE agreed to unconditionally and continually guarantee the settlement payments due by FG pursuant to the terms of the settlement agreement. The settlement agreement further provided that in the event of the initiation of bankruptcy proceedings or failure to make timely settlement payments, the unpaid settlement amount will immediately accelerate and become due and payable in full. On April 6, 2018, FE paid the remaining $72 million under the settlement agreement as a result of the FES Bankruptcy.

As to a specific coal supply agreement, AE Supply, the party thereto, asserted termination rights effective in 2015 as a result of MATS. In response to notification of the termination, on January 15, 2015, Tunnel Ridge, LLC, the coal supplier, commenced litigation in the Court of Common Pleas of Allegheny County, Pennsylvania, alleging AE Supply did not have sufficient justification to terminate the agreement and seeking damages for the difference between the market and contract price of the coal, or lost profits plus incidental damages. On February 18, 2018, the parties reached an agreement in principle settling all claims in dispute. The agreement in principle includes, among other matters, a $93 million payment by AE Supply, as well as certain coal supply commitments for Pleasants Power Station during its remaining operation by AE Supply. Certain aspects of the final settlement agreement are guaranteed by FE, including the $93 million payment, which was paid in the first quarter of 2018. The parties executed the final settlement agreement on March 9, 2018, and the plaintiff dismissed the matter with prejudice on March 15, 2018.

Climate Change

FirstEnergy has established a goal to reduce CO_2 emissions by 90% below 2005 levels by 2045. There are a number of initiatives to reduce GHG emissions at the state, federal and international level. Certain northeastern states are participating in the RGGI and western states led by California, have implemented programs, primarily cap and trade mechanisms, to control emissions of certain GHGs. Additional policies reducing GHG emissions, such as demand reduction programs, renewable portfolio standards and renewable subsidies have been implemented across the nation.

The EPA released its final "Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act," in December 2009, concluding that concentrations of several key GHGs constitutes an "endangerment" and may be regulated as "air pollutants" under the CAA and mandated measurement and reporting of GHG emissions from certain sources, including electric generating plants. The EPA released its final CPP regulations in August 2015 to reduce CO_2 emissions from existing fossil fuel-fired EGUs and also finalized separate regulations imposing CO_2 emission limits for new, modified, and reconstructed fossil fuel fired EGUs. Numerous states and private parties filed appeals and motions to stay the CPP with the D.C. Circuit in October 2015. On January 21, 2016, a panel of the D.C. Circuit denied the motions for stay and set an expedited schedule for briefing and argument.

On February 9, 2016, the U.S. Supreme Court stayed the rule during the pendency of the challenges to the D.C. Circuit and U.S. Supreme Court. On March 28, 2017, an executive order, entitled “Promoting Energy Independence and Economic Growth,” instructed the EPA to review the CPP and related rules addressing GHG emissions and suspend, revise or rescind the rules if appropriate. On October 16, 2017, the EPA issued a proposed rule to repeal the CPP. To replace the CPP, the EPA proposed the ACE rule on August 21, 2018, which would establish emission guidelines for states to develop plans to address GHG emissions from existing coal-fired power plants. Depending on the outcomes of the review pursuant to the executive order, of further appeals and how any final rules are ultimately implemented, the future cost of compliance may be material.

At the international level, the United Nations Framework Convention on Climate Change resulted in the Kyoto Protocol requiring participating countries, which does not include the U.S., to reduce GHGs commencing in 2008 and has been extended through 2020. The Obama Administration submitted in March 2015, a formal pledge for the U.S. to reduce its economy-wide GHG emissions by 26 to 28 percent below 2005 levels by 2025, and in September 2016, joined in adopting the agreement reached on December 12, 2015, at the United Nations Framework Convention on Climate Change meetings in Paris. The Paris Agreement was ratified by the requisite number of countries (i.e., at least 55 countries representing at least 55% of global GHG emissions) in October 2016 and its non-binding obligations to limit global warming to well below two degrees Celsius became effective on November 4, 2016. On June 1, 2017, the Trump Administration announced that the U.S. would cease all participation in the Paris Agreement. FirstEnergy cannot currently estimate the financial impact of climate change policies, although potential legislative or regulatory programs restricting CO_2 emissions, or litigation alleging damages from GHG emissions, could require material capital and other expenditures or result in changes to its operations.

Clean Water Act

Various water quality regulations, the majority of which are the result of the federal CWA and its amendments, apply to FirstEnergy's plants. In addition, the states in which FirstEnergy operates have water quality standards applicable to FirstEnergy's operations.

The EPA finalized CWA Section 316(b) regulations in May 2014, requiring cooling water intake structures with an intake velocity greater than 0.5 feet per second to reduce fish impingement when aquatic organisms are pinned against screens or other parts of a cooling water intake system to a 12% annual average and requiring cooling water intake structures exceeding 125 million gallons per day to conduct studies to determine site-specific controls, if any, to reduce entrainment, which occurs when aquatic life is drawn into a facility's cooling water system. Depending on any final action taken by the states with respect to impingement and entrainment, the future capital costs of compliance with these standards may be material.

On September 30, 2015, the EPA finalized new, more stringent effluent limits for the Steam Electric Power Generating category (40 CFR Part 423) for arsenic, mercury, selenium and nitrogen for wastewater from wet scrubber systems and zero discharge of pollutants in ash transport water. The treatment obligations phase-in as permits are renewed on a five-year cycle from 2018 to 2023. On April 13, 2017, the EPA granted a Petition for Reconsideration and administratively stayed all deadlines in the effluent limits rule pending a new rulemaking. On September 18, 2017, the EPA replaced the administrative stay with a rulemaking which postponed only certain compliance deadlines for two years. Depending on the outcome of appeals and how any final rules are ultimately implemented, the future costs of compliance with these standards may be substantial and changes to FirstEnergy's operations may result.

In October 2009, the WVDEP issued an NPDES water discharge permit for the Fort Martin plant, which imposes TDS, sulfate concentrations and other effluent limitations for heavy metals, as well as temperature limitations. Concurrent with the issuance of the Fort Martin NPDES permit, WVDEP also issued an administrative order setting deadlines for MP to meet certain of the effluent limits that were effective immediately under the terms of the NPDES permit. MP appealed, and a stay of certain conditions of the NPDES permit and order have been granted pending a final decision on the appeal and subject to WVDEP moving to dissolve the stay. The Fort Martin NPDES permit could require an initial capital investment ranging from $150 million to $300 million in order to install technology to meet the TDS and sulfate limits, which technology may also meet certain of the other effluent limits. March 2018, the WVDEP issued a draft NPDES Permit Renewal that, if finalized as proposed, would moot the appeal and reduce the estimated capital investment requirements. MP intends to vigorously pursue these issues but cannot predict the outcome of the appeal or estimate the possible loss or range of loss.

FirstEnergy intends to vigorously defend against the CWA matters described above but, except as indicated above, cannot predict their outcomes or estimate the loss or range of loss.

Regulation of Waste Disposal

Federal and state hazardous waste regulations have been promulgated as a result of the RCRA, as amended, and the Toxic Substances Control Act. Certain CCRs, such as coal ash, were exempted from hazardous waste disposal requirements pending the EPA's evaluation of the need for future regulation.

In April 2015, the EPA finalized regulations for the disposal of CCRs (non-hazardous), establishing national standards for landfill design, structural integrity design and assessment criteria for surface impoundments, groundwater monitoring and protection procedures and other operational and reporting procedures to assure the safe disposal of CCRs from electric generating plants. On September 13, 2017, the EPA announced that it would reconsider certain provisions of the final regulations. On July 17, 2018,

the EPA Administrator signed a final rule extending the deadline for certain CCR facilities to cease disposal and commence closure activities, as well as, establishing less stringent groundwater monitoring and protection requirements. On August 21, 2018, the D.C. Circuit remanded sections of the CCR Rule to the EPA to provide additional safeguards for unlined CCR impoundments that are more protective of human health and the environment. AE Supply assessed the changes in timing and closure plan requirements associated with the McElroy's Run impoundment site and increased the ARO by approximately $43 million in the third quarter of 2018.

Pursuant to a 2013 consent decree, PA DEP issued a 2014 permit for the Little Blue Run CCR impoundment requiring the Bruce Mansfield plant to cease disposal of CCRs by December 31, 2016, and FG to provide bonding for 45 years of closure and post-closure activities and to complete closure within a 12-year period, but authorizing FG to seek a permit modification based on "unexpected site conditions that have or will slow closure progress." The permit does not require active dewatering of the CCRs, but does require a groundwater assessment for arsenic and abatement if certain conditions in the permit are met. The CCRs from the Bruce Mansfield plant are being beneficially reused with the majority used for reclamation of a site owned by the Marshall County Coal Company in Moundsville, West Virginia, and the remainder recycled into drywall by National Gypsum. These beneficial reuse options are expected to be sufficient for ongoing plant operations, however, the Bruce Mansfield plant is pursuing other options. On May 22, 2015 and September 21, 2015, the PA DEP reissued a permit for the Hatfield's Ferry CCR disposal facility and then modified that permit to allow disposal of Bruce Mansfield plant CCR. The Sierra Club's Notices of Appeal before the Pennsylvania Environmental Hearing Board challenging the renewal, reissuance and modification of the permit for the Hatfield's Ferry CCR disposal facility were resolved through a Consent Adjudication between FG, PA DEP and the Sierra Club requiring operational changes that became effective November 3, 2017. As noted above, FE provides credit support for FG surety bonds of $169 million and $31 million for the benefit of the PA DEP with respect to LBR and the Hatfield's Ferry disposal site, respectively.

FirstEnergy or its subsidiaries have been named as potentially responsible parties at waste disposal sites, which may require cleanup under the CERCLA. Allegations of disposal of hazardous substances at historical sites and the liability involved are often unsubstantiated and subject to dispute; however, federal law provides that all potentially responsible parties for a particular site may be liable on a joint and several basis. Environmental liabilities that are considered probable have been recognized on the Consolidated Balance Sheets as of December 31, 2018, based on estimates of the total costs of cleanup, FirstEnergy's proportionate responsibility for such costs and the financial ability of other unaffiliated entities to pay. Total liabilities of approximately $121 million have been accrued through December 31, 2018, including approximately $85 million for environmental remediation of former manufactured gas plants and gas holder facilities in New Jersey, which are being recovered by JCP&L through a non-bypassable SBC. FE or its subsidiaries could be found potentially responsible for additional amounts or additional sites, but the loss or range of losses cannot be determined or reasonably estimated at this time.

Fuel Supply

MP currently has coal contracts with various terms to acquire approximately 8.6 million tons of coal for the year 2019, which is approximately 98% of its forecasted 2019 coal requirements. This contracted coal is produced primarily from mines located in Pennsylvania and West Virginia. The contracts expire at various times through 2023. See "Environmental Matters," for additional information pertaining to the impact of increased environmental regulations on coal supply and transportation contracts applicable to certain deactivated coal-fired generating units and related pending disputes.

System Demand

The maximum hourly demand for each of the Utilities was:

System Demand	2018	2017	2016
		(in MWs)	
OE	5,604	5,434	5,655
Penn	950	926	994
CEI	4,301	4,220	4,193
TE	2,367	2,205	2,171
JCP&L	5,977	5,721	5,955
ME	3,026	2,897	2,904
PN	2,993	2,882	2,890
MP	2,089	1,986	2,053
PE	3,498	3,049	3,049
WP	3,879	3,752	3,947

Supply Plan

Certain of the Utilities have default service obligations to provide power to non-shopping customers who have elected to continue to receive service under regulated retail tariffs. The volume of these sales can vary depending on the level of shopping that occurs. Supply plans vary by state and by service territory. JCP&L's default service or BGS supply is secured through a statewide competitive procurement process approved by the NJBPU. Default service for the Ohio Companies, Pennsylvania Companies and PE's Maryland jurisdiction are provided through a competitive procurement process approved by the PUCO (under ESP IV), PPUC (under the DSP) and MDPSC (under the SOS), respectively. If any supplier fails to deliver power to any one of those Utilities' service areas, the Utility serving that area may need to procure the required power in the market in their role as the default LSE. West Virginia electric generation continues to be regulated by the WVPSC.

Regional Reliability

All of FirstEnergy's facilities are located within the PJM Region and operate under the reliability oversight of a regional entity known as RFC. This regional entity operates under the oversight of NERC in accordance with a delegation agreement approved by FERC.

Competition

Within FirstEnergy's Regulated Distribution segment, generally there is no competition for electric distribution service in the Utilities' respective service territories in Ohio, Pennsylvania, West Virginia, Maryland, New Jersey and New York. Additionally, there has traditionally been no competition for transmission service in PJM. However, pursuant to FERC's Order No. 1000 and subject to state and local siting and permitting approvals, non-incumbent developers now can compete for certain PJM transmission projects in the service territories of FirstEnergy's Regulated Transmission segment. This could result in additional competition to build transmission facilities in the Regulated Transmission segment's service territories while also allowing the Regulated Transmission segment the opportunity to seek to build facilities in non-incumbent service territories.

Seasonality

The sale of electric power is generally a seasonal business, and weather patterns can have a material impact on FirstEnergy's operating results. Demand for electricity in our service territories historically peaks during the summer and winter months. Accordingly, FirstEnergy's annual results of operations and liquidity position may depend disproportionately on its operating performance during the summer and winter. Mild weather conditions may result in lower power sales and consequently lower earnings.

Research and Development

The Utilities and the Transmission Companies participate in the funding of EPRI, which was formed for the purpose of expanding electric R&D under the voluntary participation of the nation's electric utility industry — public, private and cooperative. Its goal is to mutually benefit utilities and their customers by promoting the development of new and improved technologies to help the utility industry meet present and future electric energy needs in environmentally and economically acceptable ways. EPRI conducts research on all aspects of electric power production and use, including fuels, generation, delivery, efficient management of energy use, environmental effects and energy analysis. The majority of EPRI's R&D programs and projects are directed toward business solutions and their applications to problems facing the electric utility industry.

FirstEnergy participates in other initiatives with industry R&D consortiums and universities to address technology needs for its various business units. Participation in these consortiums helps the company address research needs in areas such as advanced energy and grid applications, reliability improvement for the transmission and distribution system infrastructure, environmental controls, and plant operations and maintenance.

Executive Officers as of February 19, 2019

Name	Age	Positions Held During Past Five Years	Dates
S. L. Belcher	50	Senior Vice President and President, FirstEnergy Utilities (B)	2018-present
		President (C) (D) (F)	2018-present
		President, FirstEnergy Nuclear Operating Company (B)	2015-2017
G. D. Benz	59	Senior Vice President, Strategy (B)	2015-present
		Vice President, Supply Chain (B)	*-2015
D. M. Chack	68	Senior Vice President, Product Development, Marketing and Branding (B)	2017-present
		Senior Vice President, Marketing and Branding (B)	2015-2017
		President, Ohio Operations (B)	*-2015
		Vice President (C)	*-2015
M. J. Dowling	54	Senior Vice President, External Affairs (B)	*-present
B. L. Gaines	65	Senior Vice President, Corporate Services and Chief Information Officer (B)	*-present
C. E. Jones	63	President and Chief Executive Officer (A) (B)	2015-present
		President (C) (D)	*-2015
		Executive Vice President & President, FirstEnergy Utilities (A) (B)	2014
C. D. Lasky	56	Senior Vice President, Human Resources and Chief Human Resource Officer (B)	2018-present
		Senior Vice President, Human Resources (B)	2015-2018
		Vice President (E)	*-2015
J. J. Lisowski	37	Vice President, Controller and Chief Accounting Officer (A) (B)	2018-present
		Vice President and Controller (C) (D) (F)	2018-present
E. M. Mikkelsen	58	Vice President, Rates and Regulatory Affairs (B)	2016-present
J. F. Pearson	64	Executive Vice President, Finance (A) (B)	2018-present
		Executive Vice President and Chief Financial Officer (F)	2016-2018
		Executive Vice President and Chief Financial Officer (A) (B) (C) (D)	2015-2018
		Executive Vice President and Chief Financial Officer (E)	2015-2017
		Senior Vice President and Chief Financial Officer (A) (B) (C) (D) (E)	*-2015
I. M. Prezelj	52	Vice President, Investor Relations (B)	*-present
R. P. Reffner	68	Senior Vice President and General Counsel (A) (B) (C) (D) (F)	2018-present
		Vice President and General Counsel (F)	2016-2018
		Vice President and General Counsel (B) (C) (D)	2014-2018
		Vice President and General Counsel (E)	2014-2017
S. E. Strah	54	Senior Vice President and Chief Financial Officer (A) (B) (C) (D) (F)	2018-present
		President (E)	2017-2018
		President (F)	2016-2018
		Senior Vice President & President, FirstEnergy Utilities (B)	2015-2018
		President (C) (D)	2015-2018
		Vice President, Distribution Support (B)	*-2015
L. L. Vespoli	59	Executive Vice President, Corporate Strategy, Regulatory Affairs & Chief Legal Officer (A) (B) (C) (D) (F)	2016-present
		Executive Vice President, Corporate Strategy, Regulatory Affairs & Chief Legal Officer (E)	2016-2017
		Executive Vice President, Markets & Chief Legal Officer (A) (B) (C) (D) (E)	2014-2016
C. L. Walker	53	Vice President, Human Resources (B)	2018-present
E. L. Yeboah-Amankwah	41	Vice President, Deputy General Counsel, Corporate Secretary & Chief Ethics Officer (A) (B)	2018-present
		Vice President, Deputy General Counsel, and Corporate Secretary (C) (D) (E) (F)	2018-present
		Vice President, Corporate Secretary and Chief Ethics Officer (A) (B)	2017-2018
		Vice President and Corporate Secretary (C) (D) (E) (F)	2017-2018
		Vice President, State and Federal Regulatory Legal Affairs (B)	2017

* Indicates position held at least since January 1, 2014

(A) Denotes executive officer of FE

(B) Denotes executive officer of FESC

(C) Denotes executive officer of OE, CEI and TE

(D) Denotes executive officer of ME, PN, Penn, MP, PE, WP, TrAIL, FET, and ATSI

(E) Denotes executive officer of AGC

(F) Denotes executive officer of MAIT

Employees

As of December 31, 2018, FirstEnergy had 12,494 employees located in the United States as follows:

	Total Employees	Bargaining Unit Employees
FESC	4,782	899
OE	1,146	765
CEI	916	600
TE	355	264
Penn	183	132
JCP&L	1,364	1,068
ME	659	489
PN	755	478
MP	1,076	716
PE	527	330
WP	731	448
Total	**12,494**	**6,189**

As of December 31, 2018, the IBEW, the UWUA and the OPEIU unions collectively represented approximately 5,332 of FirstEnergy's employees. There are 16 CBAs between FirstEnergy's subsidiaries and its unions, which have three, four or five year terms. In 2018, certain of FirstEnergy's subsidiaries reached a new agreement on a CBA with a UWUA local, covering approximately 762 employees. Additionally, in 2018, agreements were reached with two different IBEW locals covering approximately 1,276 employees.

On May 23, 2018 IBEW Local 777CC, which represents approximately 155 employees in the Reading, Pennsylvania, Call Center, ratified a contract that will expire on October 31, 2023. On August 16, 2018 IBEW 1289, which represents approximately 1,114 JCP&L employees, ratified a new agreement that will expire on October 31, 2021. On December 19, 2018, UWUA Local 102, which represents approximately 735 employees in WP and PE ratified a new agreement that will expire on April 30, 2023.

FirstEnergy Web Site and Other Social Media Sites and Applications

FirstEnergy's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, amendments to those reports and all other documents filed with or furnished to the SEC pursuant to Section 13(a) of the Securities Exchange Act of 1934 are made available free of charge on or through the "Investors" page of FirstEnergy's web site at www.firstenergycorp.com. These documents are also available to the public from commercial document retrieval services and the website maintained by the SEC at www.sec.gov.

These SEC filings are posted on the web site as soon as reasonably practicable after they are electronically filed with or furnished to the SEC. Additionally, FirstEnergy routinely posts additional important information, including press releases, investor presentations and notices of upcoming events under the "Investors" section of FirstEnergy's web site and recognizes FirstEnergy's web site as a channel of distribution to reach public investors and as a means of disclosing material non-public information for complying with disclosure obligations under Regulation FD. Investors may be notified of postings to the web site by signing up for email alerts and RSS feeds on the "Investors" page of FirstEnergy's web site. FirstEnergy also uses Twitter® and Facebook® as additional channels of distribution to reach public investors and as a supplemental means of disclosing material non-public information for complying with its disclosure obligations under Regulation FD. Information contained on FirstEnergy's web site, Twitter® handle or Facebook® page, and any corresponding applications of those sites, shall not be deemed incorporated into, or to be part of, this report.

ITEM 1A. RISK FACTORS

We operate in a business environment that involves significant risks, many of which are beyond our control. Management regularly evaluates the most significant risks of its businesses and reviews those risks with the Board of Directors or appropriate Committees of the Board. The following risk factors and all other information contained in this report should be considered carefully when evaluating FirstEnergy. These risk factors could affect our financial results and cause such results to differ materially from those expressed in any forward-looking statements made by or on behalf of us. Below, we have identified risks we consider material. Additional information on risk factors is included in "Item 1. Business," "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations," and in other sections of this Form 10-K that include forward-looking and other statements involving risks and uncertainties that could impact our business and financial results.

Risks Related to the FES Bankruptcy

We Are Subject to Risks Relating to the FES Bankruptcy

As previously disclosed, the FES Debtors filed voluntary petitions for relief under Chapter 11 of the United States Bankruptcy Code to facilitate an orderly restructuring. It is possible that as part of the restructuring process, claims may be asserted by or on behalf of the FES Debtors against non-debtor affiliates of the FES Debtors. Any assertions of claims by creditors of the FES Debtors against FirstEnergy may require significant effort, resources, and money to defend or could result in material losses to FirstEnergy. We can provide no assurance that any such claims, if asserted, will be resolved in accordance with the FE Bankruptcy settlement agreement or a manner that is satisfactory to FirstEnergy.

Management of FirstEnergy has been and may continue to be required to spend a significant amount of time and effort dealing with the FES Bankruptcy instead of focusing on FirstEnergy's business operations, which could have an adverse impact on our ability to execute our business plan and operations. Additionally, FirstEnergy's relationship with its employees, suppliers, customers and other parties may be adversely impacted by negative or confusing publicity related to the FES Bankruptcy or otherwise and FirstEnergy's operations could be materially and adversely affected. The FES Bankruptcy also may make it more difficult to retain, attract or replace management and other key personnel.

We are Subject to Risks that the Conditions to the FES Bankruptcy Settlement Agreement May Not be Satisfied or the Settlement May Not Otherwise be Consummated, Which Could Have a Material Adverse Impact on FirstEnergy's Business, Financial Condition, Results of Operations and Cash Flows

On September 26, 2018, the Bankruptcy Court approved a FES Bankruptcy settlement agreement dated August 26, 2018, by and among FirstEnergy, the FES Key Creditor Groups, the FES Debtors. Under the FES Bankruptcy settlement agreement, FirstEnergy agreed to provide the FES Debtors a release of substantially all claims related to the FES Debtors and their businesses, including for the full borrowings under intercompany financing arrangements and recovery of obligations previously paid under guarantees; payments in the form of cash and new FE notes not to exceed $628 million in aggregate principal amount; the transfer of AE Supply's Pleasants Power Station; an offsetting credit for shared services costs; funding for certain employee benefit programs; and continued performance under the intercompany tax sharing agreements, including waiver of an FES overpayment, reversal of a payment made for estimated net operating losses and agreement to pay certain 2018 tax year payments. In exchange, the FES Bankruptcy settlement agreement would resolve all outstanding disputes with respect to the claims and causes of action related to the FES Debtors and their businesses among FirstEnergy, on the one hand and the FES Debtors, the FES Key Creditor Groups, and the UCC, on the other hand.

The FES Bankruptcy settlement agreement and the releases granted therein are subject to material conditions, which primarily consist of the issuance of a final order by the Bankruptcy Court approving the plan or plans of reorganization for the FES Debtors acceptable to FirstEnergy. There can be no assurance that the conditions to the settlement agreement will be satisfied or that the settlement will otherwise be consummated, and the actual outcome of this matter may differ materially from the terms of the agreement described herein. If the settlement were not consummated, the FES Debtors or their creditors could assert various claims against FirstEnergy, while FirstEnergy's ability to recover any value from obligations owed it by the FES Debtors, secured or otherwise, may be limited.

In the event the FES Bankruptcy settlement agreement is not fully consummated, the costs of potential liabilities resulting from the FES Bankruptcy could have a material and adverse impact on FirstEnergy's business, financial condition, results of operations and cash flows.

Adverse Developments Related to the FES Bankruptcy Could Trigger Events of Default under Certain FirstEnergy Obligations

FirstEnergy's credit facilities contain various events of default, including with respect to the borrowers or significant subsidiaries (each as defined in the credit agreements), a bankruptcy or insolvency of FirstEnergy, the failure to pay any principal of or premium or interest on any indebtedness in excess of $100 million, or the failure to satisfy any judgment or order for the payment of money exceeding any applicable insurance coverage by more than $100 million. Although the FES Debtors are not "significant subsidiaries" for these purposes, it is possible that an adverse development related to the FES Bankruptcy could otherwise trigger an event of

default under the FirstEnergy credit facilities if creditors of the FES Debtors asserted successful claims against FE or our significant subsidiaries.

Certain Events in Connection with the Disposition of Competitive Generation Assets May Significantly Increase Cash Flow and Liquidity Risks and Have a Material Adverse Effect on Results of Operations and the Financial Condition of FirstEnergy

As part of the FES Bankruptcy settlement agreement, AE Supply entered into a definitive agreement on December 31, 2018, to transfer the 1,300 MW Pleasants Power Station and related assets to FG, while retaining certain specified liabilities. After closing, AE Supply will continue to provide access to the McElroy's Run CCR Impoundment Facility, which is not being transferred, and FE will provide certain guarantees for retained environmental liabilities of AE Supply, including the McElroy's Run CCR Impoundment Facility. The transfer is subject to various customary and other closing conditions, including the Bankruptcy Court's approval of the definitive transfer agreement, effectiveness of the FES Bankruptcy settlement agreement and the effectiveness of a plan of reorganization for the FES Debtors in connection with the FES Bankruptcy. Liabilities incurred under these guarantees could have an adverse impact on the financial condition of FirstEnergy.

Further, as part of AE Supply's sale of gas generation assets to a subsidiary of LS Power, FE provided two limited three-year guarantees totaling $555 million of certain obligations of AE Supply and AGC arising under the purchase agreement. Liabilities incurred under these guarantees could have an adverse impact on the financial condition of FE.

If Our "FE Tomorrow" Organizational Realignment Plans Do Not Achieve the Expected Benefits, There Could Be Negative Impacts to FirstEnergy's Business, Results of Operations and Financial Condition

In support of the strategic review to exit commodity-exposed generation, management launched the FE Tomorrow initiative to define FirstEnergy's future organization to support its regulated business. FE Tomorrow is intended to align corporate services to efficiently support the regulated operations by ensuring that FirstEnergy has the right talent, organizational and cost structure to achieve our earnings growth targets. In support of the FE Tomorrow initiative, in June and early July 2018, nearly 500 employees in the shared services and utility services and sustainability organizations, which was more than 80% of the eligible employees, accepted a voluntary enhanced retirement package, which included severance compensation and a temporary pension enhancement, with most employees retiring by December 31, 2018. Management expects the cost savings resulting from the FE Tomorrow initiative to support the company's growth targets. There can be no assurance that these organizational changes will result in the anticipated benefits to FirstEnergy's business, results of operations and financial condition in a timely manner if at all.

Our ability to achieve the anticipated cost savings and other benefits from FE Tomorrow within the expected time frame is subject to many estimates and assumptions. These estimates and assumptions are subject to significant economic, competitive and other uncertainties, some of which are beyond our control. Further, during and following completion of FE Tomorrow, FirstEnergy could experience unexpected delays in and business disruptions resulting from supporting these initiatives, decreased productivity, higher than anticipated costs, adverse effects on employee morale and employee turnover, including the possible loss of valuable employees, any of which may impair our ability to achieve anticipated results or otherwise harm FirstEnergy's business, results of operations and financial condition.

Risks Associated with Regulation

We Have Taken a Series of Actions to Focus on Growing Our Regulated Distribution and Transmission Operations. Whether This Investment Strategy Will Deliver the Desired Result Is Subject to Certain Risks Which Could Adversely Affect Our Results of Operations and Financial Condition in the Future

We focus on capitalizing on investment opportunities available to our Regulated Distribution and Transmission operations as we focus on delivering enhanced customer service and reliability. The success of these efforts will depend, in part, on successful recovery of our transmission investments. Factors that may affect rate recovery of our transmission investments include: (1) FERC's timely approval of rates to recover such investments; (2) whether the investments are included in PJM's RTEP; (3) FERC's evolving policies with respect to incentive rates for transmission assets; (4) FERC's evolving policies with respect to the calculation of the base ROE component of transmission rates; (5) consideration of the objections of those who oppose such investments and their recovery; and (6) timely development, construction, and operation of the new facilities.

The success of these efforts will also depend, in part, on any future distribution rate cases or other filings seeking cost recovery for distribution system enhancements in the states where our Utilities operate and transmission rate filings at FERC. Any denial of, or delay in, the approval of any future distribution or transmission rate requests could restrict us from fully recovering our cost of service, may impose risks on the Regulated Transmission and Regulated Distribution operations, and could have a material adverse effect on our regulatory strategy and results of operations.

Our efforts also could be impacted by our ability to finance the proposed expansion projects while maintaining adequate liquidity. There can be no assurance that our efforts to reflect a more regulated business profile will deliver the desired result which could adversely affect our future results of operations and financial condition.

Any Subsequent Modifications to, Denial of, or Delay in the Effectiveness of the PUCO's Approval of the DMR Could Impose Significant Risks on FirstEnergy's Operations and Materially and Adversely Impact the Credit Ratings, Results of Operations and Financial Condition of FirstEnergy

The Ohio Companies' Rider DMR provides for the collection of $132.5 million annually for three years through 2019 with a possible extension for an additional two years, which was filed for on February 1, 2019. Rider DMR will be grossed up for federal income taxes, resulting in an approved amount of approximately $168 million annually in 2019. Various parties have appealed the PUCO's denial of subsequent applications for rehearing to the Ohio Supreme Court. On February 1, 2019, the Ohio Companies filed with the PUCO an application requesting a two-year extension of Rider DMR at the same amount and conditions. Any subsequent modification to, denial of, or delay in the effectiveness of, the PUCO's order approving the DMR could impose risks on our operations and materially and adversely impact the credit ratings, results of operations and financial condition of FirstEnergy.

Complex and Changing Government Regulations, Including Those Associated with Rates and Rate Cases and Restrictions and Prohibitions on Certain Business Dealings Could Have a Negative Impact on Our Business, Financial Condition, Results of Operations and Cash Flows

We are subject to comprehensive regulation by various federal, state and local regulatory agencies that significantly influence our operating environment. Changes in, or reinterpretations of, existing laws or regulations, or the imposition of new laws or regulations, could require us to incur additional costs or change the way we conduct our business, and therefore could have a material adverse impact on our results of operations.

Our transmission and operating utility subsidiaries currently provide service at rates approved by one or more regulatory commissions. Thus, the rates a utility is allowed to charge may be decreased as a result of actions taken by FERC or by a state regulatory commission in which the utility operates. Also, these rates may not be set to recover such utility's expenses at any given time. Additionally, there may also be a delay between the timing of when costs are incurred and when costs are recovered. For example, we may be unable to timely recover the costs for our energy efficiency investments or expenses and additional capital or lost revenues resulting from the implementation of aggressive energy efficiency programs. While rate regulation is premised on providing an opportunity to earn a reasonable return on invested capital and recovery of operating expenses, there can be no assurance that the applicable regulatory commission will determine that all of our costs have been prudently incurred or that the regulatory process in which rates are determined will always result in rates that will produce full recovery of our costs in a timely manner. Further, there can be no assurance that we will retain the expected recovery in future rate cases.

In addition, as a U.S. corporation, we are subject to U.S. laws, Executive Orders, and regulations administered and enforced by the U.S. Department of Treasury and the Department of Justice restricting or prohibiting business dealings in or with certain nations and with certain specially designated nationals (individuals and legal entities). If any of our existing or future operations or investments, including our joint venture investment in Signal Peak, are subsequently determined to involve such prohibited parties we could be in violation of certain covenants in our financing documents and unless we cease or modify such dealings, we could also be in violation of such U.S. laws, Executive Orders and sanctions regulations, each of which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

State Rate Regulation May Delay or Deny Full Recovery of Costs and Impose Risks on Our Operations. Any Denial of or Delay in Cost Recovery Could Have an Adverse Effect on Our Business, Results of Operations, Cash Flows and Financial Condition

Each of the Utilities' retail rates are set by its respective regulatory agency for utilities in the state in which it operates - in Maryland by the MDPSC, in Ohio by the PUCO, in New Jersey by the NJBPU, in Pennsylvania by the PPUC, in West Virginia by the WVPSC and in New York by the NYPSC - through traditional, cost-based regulated utility ratemaking. As a result, any of the Utilities may not be permitted to recover its costs and, even if it is able to do so, there may be a significant delay between the time it incurs such costs and the time it is allowed to recover them. Factors that may affect outcomes in the distribution rate cases include: (i) the value of plant in service; (ii) authorized rate of return; (iii) capital structure (including hypothetical capital structures); (iv) depreciation rates; (v) the allocation of shared costs, including consolidated deferred income taxes and income taxes payable across the Utilities; (vi) regulatory approval of rate recovery mechanisms for capital spending programs; and (vii) the accuracy of forecasts used for ratemaking purposes in "future test year" cases.

FirstEnergy can provide no assurance that any base rate request filed by any of the Utilities will be granted in whole or in part. Any denial of, or delay in, any base rate request could restrict the applicable utility from fully recovering its costs of service, may impose risks on its operations, and may negatively impact its results of operations, cash flows and financial condition. In addition, to the extent that any of the Utilities seeks rate increases after an extended period of frozen or capped rates, pressure may be exerted on the applicable legislators and regulators to take steps to control rate increases, including through some form of rate increase moderation, reduction or freeze. Any related public discourse and debate can increase uncertainty associated with the regulatory process, the level of rates and revenues that are ultimately obtained, and the ability of the Utility to recover costs. Such uncertainty may restrict operational flexibility and resources, reduce liquidity and increase financing costs.

Federal Rate Regulation May Delay or Deny Full Recovery of Costs and Impose Risks on Our Operations. Any Denial or Reduction of, or Delay in Cost Recovery Could Have an Adverse Effect on Our Business, Results of Operations, Cash Flows and Financial Condition

FERC policy currently permits recovery of prudently-incurred costs associated with cost-of-service-based wholesale power rates and the expansion and updating of transmission infrastructure within its jurisdiction. If FERC were to adopt a different policy regarding recovery of transmission costs if transmission needs do not continue or develop as projected or if there is any resulting delay in cost recovery, our strategy of investing in transmission could be affected. If FERC were to lower the rate of return it has authorized for FirstEnergy's cost-based wholesale power rates or transmission investments and facilities, it could reduce future earnings and cash flows, and impact our financial condition.

There are multiple matters pending before FERC. There can be no assurance as to the outcome of these proceedings and an adverse result could have an adverse impact on FirstEnergy’s results of operations and business conditions.

We Could be Subject to Higher Costs and/or Penalties Related to Mandatory Reliability Standards Set by NERC/FERC or Changes in the Rules of Organized Markets

Owners, operators, and users of the bulk electric system are subject to mandatory reliability standards promulgated by NERC and approved by FERC. The standards are based on the functions that need to be performed to ensure that the bulk electric system operates reliably. NERC, RFC and FERC can be expected to continue to refine existing reliability standards as well as develop and adopt new reliability standards. Compliance with modified or new reliability standards may subject us to higher operating costs and/or increased capital expenditures. If we were found not to be in compliance with the mandatory reliability standards, we could be subject to sanctions, including substantial monetary penalties. FERC has authority to impose penalties up to and including $1 million per day for failure to comply with these mandatory electric reliability standards.

In addition to direct regulation by FERC, we are also subject to rules and terms of participation imposed and administered by various RTOs and ISOs. Although these entities are themselves ultimately regulated by FERC, they can impose rules, restrictions and terms of service that are quasi-regulatory in nature and can have a material adverse impact on our business. For example, the independent market monitors of ISOs and RTOs may impose bidding and scheduling rules to curb the perceived potential for exercise of market power and to ensure the markets function appropriately. Such actions may materially affect our ability to sell, and the price we receive for, our energy and capacity. In addition, PJM may direct our transmission-owning affiliates to build new transmission facilities to meet PJM's reliability requirements or to provide new or expanded transmission service under the PJM Tariff.

We incur fees and costs to participate in RTOs. Administrative costs imposed by RTOs, including the cost of administering energy markets, may increase. To the degree we incur significant additional fees and increased costs to participate in an RTO and are limited with respect to recovery of such costs from retail customers, our results of operations and cash flows could be significantly impacted.

We may be allocated a portion of the cost of transmission facilities built by others due to changes in RTO transmission rate design. We may be required to expand our transmission system according to decisions made by an RTO rather than our own internal planning processes. Various proposals and proceedings before FERC may cause transmission rates to change from time to time. In addition, RTOs have been developing rules associated with the allocation and methodology of assigning costs associated with improved transmission reliability, reduced transmission congestion and firm transmission rights that may have a financial impact on us.

As a member of an RTO, we are subject to certain additional risks, including those associated with the allocation among members of losses caused by unreimbursed defaults of other participants in that RTO’s market and those associated with complaint cases filed against the RTO that may seek refunds of revenues previously earned by its members.

The Business Operations of Our Subsidiaries That Sell Wholesale Power Are Subject to Regulation by FERC and Could be Adversely Affected by Such Regulation

FERC granted the Utilities and AE Supply authority to sell electric energy, capacity and ancillary services at market-based rates. These orders also granted waivers of certain FERC accounting, record-keeping and reporting requirements, as well as, for certain of these subsidiaries, waivers of the requirements to obtain FERC approval for issuances of securities. FERC’s orders that grant this market-based rate authority reserve with FERC the right to revoke or revise that authority if FERC subsequently determines that these companies can exercise market power in transmission or generation, create barriers to entry or have engaged in prohibited affiliate transactions. In the event that one or more of FirstEnergy's market-based rate authorizations were to be revoked or adversely revised, the affected FirstEnergy subsidiaries may be subject to sanctions and penalties and would be required to file with FERC for authorization of individual wholesale sales transactions, which could involve costly and possibly lengthy regulatory proceedings and the loss of flexibility afforded by the waivers associated with the current market-based rate authorizations.

Energy Efficiency and Peak Demand Reduction Mandates and Energy Price Increases Could Negatively Impact Our Financial Results

A number of regulatory and legislative bodies have introduced requirements and/or incentives to reduce peak demand and energy consumption. Such conservation programs could result in load reduction and adversely impact our financial results in different ways. We currently have energy efficiency riders in place to recover the cost of these programs either at or near a current recovery time frame in the states where we operate.

Currently, only our Ohio Companies recover lost distribution revenues that result between distribution rate cases. In our regulated operations, conservation could negatively impact us depending on the regulatory treatment of the associated impacts. Should we be required to invest in conservation measures that result in reduced sales from effective conservation, regulatory lag in adjusting rates for the impact of these measures could have a negative financial impact. We have already been adversely impacted by reduced electric usage due in part to energy conservation efforts such as the use of efficient lighting products such as CFLs, halogens and LEDs. We could also be adversely impacted if any future energy price increases result in a decrease in customer usage. We are unable to determine what impact, if any, conservation and increases in energy prices will have on our financial condition or results of operations.

Additionally, failure to meet regulatory or legislative requirements to reduce energy consumption or otherwise increase energy efficiency could result in penalties that could adversely affect our financial results.

Mandatory Renewable Portfolio Requirements Could Negatively Affect Our Costs and Have an Adverse Effect on Our Financial Condition and Results of Operations

Where federal or state legislation mandates the use of renewable and alternative fuel sources, such as wind, solar, biomass and geothermal and such legislation does not also provide for adequate cost recovery, it could result in significant changes in our business, including material increases in REC purchase costs, purchased power costs and capital expenditures. Such mandatory renewable portfolio requirements may have an adverse effect on our financial condition and results of operations.

Changes in Local, State or Federal Tax Laws Applicable to Us or Adverse Audit Results or Tax Rulings, and Any Resulting Increases in Taxes and Fees, May Adversely Affect Our Results of Operations, Financial Condition and Cash Flows

FirstEnergy is subject to various local, state and federal taxes, including income, franchise, real estate, sales and use and employment-related taxes. We exercise significant judgment in calculating such tax obligations, booking reserves as necessary to reflect potential adverse outcomes regarding tax positions we have taken and utilizing tax benefits, such as carryforwards and credits. Additionally, various tax rate and fee increases may be proposed or considered in connection with such changes in local, state or federal tax law. We cannot predict whether legislation or regulation will be introduced, the form of any legislation or regulation, or whether any such legislation or regulation will be passed by legislatures or regulatory bodies. Any such changes, or any adverse tax audit results or adverse tax rulings on positions taken by FirstEnergy or its subsidiaries could have a negative impact on its results of operations, financial condition and cash flows.

In addition, in December 2017, Congress passed the Tax Act. Various state regulatory proceedings have been initiated to investigate the impact of the Tax Act on the Utilities' rates and charges. FirstEnergy continues to work with state regulatory commissions to determine appropriate changes to customer rates and, beginning in the first quarter of 2018, began to track and apply regulatory accounting treatment for the expected rate impact of changes in current taxes resulting from the Tax Act. FERC also recently took action to address the impact of the Tax Act on FERC-jurisdictional rates. FirstEnergy has reflected the impact of changes to current taxes in its stated transmission rates and in its normal update to FERC-jurisdictional formula transmission rates and will continue to work with the Commission regarding whether and how FERC should address possible changes to transmission and wholesale rates resulting from the Tax Act.

We cannot predict whether, when or to what extent new tax regulations, interpretations or rulings will be issued, nor is the short-term or long-term impact of the Tax Act clear. Any future reform of U.S. tax laws may be enacted in a manner that negatively impacts our results of operations, financial condition, business operations, earnings and is adverse to FE's shareholders. Furthermore, with respect to the Utilities and our transmission-owning affiliates, FirstEnergy cannot predict what, if any, further response state regulatory commissions or FERC may have and the potential response of such authorities regarding the rates and charges of the Utilities and our transmission-owning affiliates.

The EPA is Conducting NSR Investigations at Generating Plants that We Currently or Formerly Owned, the Results of Which Could Negatively Impact Our Results of Operations and Financial Condition

We may be subject to risks from changing or conflicting interpretations of existing laws and regulations, including, for example, the applicability of the EPA's NSR programs. Under the CAA, modification of our generation facilities in a manner that results in increased emissions could subject our existing generation facilities to the far more stringent new source standards applicable to new generation facilities.

The EPA has taken the view that many companies, including many energy producers, have been modifying emissions sources in violation of NSR standards during work considered by the companies to be routine maintenance. The EPA has investigated alleged violations of the NSR standards at certain of our existing and former generating facilities. We intend to vigorously pursue and defend our position, but we are unable to predict their outcomes. If NSR and similar requirements are imposed on our generation facilities, in addition to the possible imposition of fines, compliance could entail significant capital investments in pollution control technology, which could have an adverse impact on our business, results of operations, cash flows and financial condition.

Costs of Compliance with Environmental Laws are Significant, and the Cost of Compliance with New Environmental Laws, Including Limitations on GHG Emissions, Could Adversely Affect Cash Flow and Profitability

Our operations are subject to extensive federal, state and local environmental statutes, rules and regulations. Compliance with these legal requirements requires us to incur costs for, among other things, installation and operation of pollution control equipment, emissions monitoring and fees, remediation and permitting at our facilities. These expenditures have been significant in the past and may increase in the future. We may be forced to shut down other facilities or change their operating status, either temporarily or permanently, if we are unable to comply with these or other existing or new environmental requirements, or if the expenditures required to comply with such requirements are unreasonable.

Moreover, new environmental laws or regulations including, but not limited to CWA effluent limitations imposing more stringent water discharge regulations, or changes to existing environmental laws or regulations may materially increase our costs of compliance or accelerate the timing of capital expenditures. Our compliance strategy, including but not limited to, our assumptions regarding estimated compliance costs, although reasonably based on available information, may not successfully address future relevant standards and interpretations. If we fail to comply with environmental laws and regulations or new interpretations of longstanding requirements, even if caused by factors beyond our control, that failure could result in the assessment of civil or criminal liability and fines. In addition, any alleged violation of environmental laws and regulations may require us to expend significant resources to defend against any such alleged violations.

At the international level, the Obama Administration submitted in March 2015, a formal pledge for the U.S. to reduce its economy-wide greenhouse gas emissions by 26 to 28 percent below 2005 levels by 2025, and in September 2016, joined in adopting the agreement reached on December 12, 2015 at the United Nations Framework Convention on Climate Change meetings in Paris. However, on June 1, 2017, the Trump Administration announced that the U.S. would cease all participation in the 2015 Paris Agreement. Due to the uncertainty of control technologies available to reduce GHG emissions, any other legal obligation that requires substantial reductions of GHG emissions could result in substantial additional costs, adversely affecting cash flow and profitability, and raise uncertainty about the future viability of fossil fuels, particularly coal, as an energy source for new and existing electric generation facilities.

We Could be Exposed to Private Rights of Action Relating to Environmental Matters Seeking Damages Under Various State and Federal Law Theories Which Could Have an Adverse Impact on Our Results of Operations, Financial Condition and Business Operations

Private individuals may seek to enforce environmental laws and regulations against us and could allege personal injury, property damages or other relief. For example, claims have been made against certain energy companies alleging that CO_2 emissions from power generating facilities constitute a public nuisance under federal and/or state common law. While FirstEnergy is not a party to this litigation, it, and/or one of its subsidiaries, could be named in other actions making similar allegations. An unfavorable ruling in any such case could result in the need to make modifications to our coal-fired plants or reduce emissions, suspend operations or pay money damages or penalties. Adverse rulings in these or other types of actions could have an adverse impact on our results of operations and financial condition and could significantly impact our business operations.

We Are or May Be Subject to Environmental Liabilities, Including Costs of Remediation of Environmental Contamination at Current or Formerly Owned Facilities, Which Could Have a Material Adverse effect on Our Results of Operations and Financial Condition

We may be subject to liability under environmental laws for the costs of remediating environmental contamination of property now or formerly owned or operated by us and of property contaminated by hazardous substances that we may have generated regardless of whether the liabilities arose before, during or after the time we owned or operated the facilities. We are currently involved in a number of proceedings relating to sites where hazardous substances have been released and we may be subject to additional proceedings in the future. We also have current or previous ownership interests in sites associated with the production of gas and the production and delivery of electricity for which we may be liable for additional costs related to investigation, remediation and monitoring of these sites. Remediation activities associated with our former MGP operations are one source of such costs. Citizen groups or others may bring litigation over environmental issues including claims of various types, such as property damage, personal injury, and citizen challenges to compliance decisions on the enforcement of environmental requirements, such as opacity and other air quality standards, which could subject us to penalties, injunctive relief and the cost of litigation. We cannot predict the amount and timing of all future expenditures (including the potential or magnitude of fines or penalties) related to such environmental matters, although we expect that they could be material.

In some cases, a third party who has acquired assets from us has assumed the liability we may otherwise have for environmental matters related to the transferred property. If the transferee fails to discharge the assumed liability or disputes its responsibility, a regulatory authority or injured person could attempt to hold us responsible, and our remedies against the transferee may be limited by the financial resources of the transferee.

We Are and May Become Subject to Legal Claims Arising from the Presence of Asbestos or Other Regulated Substances at Some of Our Facilities

We have been named as a defendant in pending asbestos litigations involving multiple plaintiffs and multiple defendants, in several states. The majority of these claims arise out of alleged past exposures by contractors (and in Pennsylvania, former employees) at both currently and formerly owned electric generation plants. In addition, asbestos and other regulated substances are, and may continue to be, present at currently owned facilities where suitable alternative materials are not available. We believe that any remaining asbestos at our facilities is contained and properly identified in accordance with applicable governmental regulations, including OSHA. The continued presence of asbestos and other regulated substances at these facilities, however, could result in additional actions being brought against us. This is further complicated by the fact that many diseases, such as mesothelioma and cancer, have long latency periods in which the disease process develops, thus making it impossible to accurately predict the types and numbers of such claims in the near future. While insurance coverages exist for many of these pending asbestos litigations, others have no such coverages, resulting in FirstEnergy being responsible for all defense expenditures, as well as any settlements or verdict payouts.

The Risks Associated with Climate Change May Have an Adverse Impact on Our Business Operations, Operating Results and Cash Flows

Physical risks of climate change, such as more frequent or more extreme weather events, changes in temperature and precipitation patterns, and other related phenomena, could affect some, or all, of our operations. Severe weather or other natural disasters could be destructive, which could result in increased costs, including supply chain costs. An extreme weather event within the Utilities' service areas can also directly affect their capital assets, causing disruption in service to customers due to downed wires and poles or damage to other operating equipment. Further, as extreme weather conditions increase system stress, we may incur costs relating to additional system backup or service interruptions, and in some instances, we may be unable to recover such costs. For all of these reasons, these physical risks could have an adverse financial impact on our business operations, operating results and cash flows. Climate change poses other financial risks as well. To the extent weather conditions are affected by climate change, customers' energy use could increase or decrease depending on the duration and magnitude of the changes. Increased energy use due to weather changes may require us to invest in additional system assets and purchase additional power. Additionally, decreased energy use due to weather changes may affect our financial condition through decreased rates, revenues, margins or earnings.

Future Changes in Accounting Standards May Affect Our Reported Financial Results

The SEC, FASB or other authoritative bodies or governmental entities may issue new pronouncements or new interpretations of existing accounting standards that may require us to change our accounting policies. These changes are beyond our control, can be difficult to predict and could materially impact how we report our financial condition and results of operations. We could be required to apply a new or revised standard retroactively, which could adversely affect our financial position.

Risks Related to Business Operations Generally

Temperature Variations as well as Weather Conditions or other Natural Disasters Could Have an Adverse Impact on Our Results of Operations and Financial Condition, and Demand Significantly Below or Above Our Forecasts Could Adversely Affect Our Energy Margins and Have an Adverse Effect on our Financial Condition and Results of Operations

Weather conditions directly influence the demand for electric power. Demand for power generally peaks during the summer and winter months, with market prices also typically peaking at that time. Overall operating results may fluctuate based on weather conditions. In addition, we have historically sold less power, and consequently received less revenue, when weather conditions are milder. Severe weather, such as tornadoes, hurricanes, ice or snowstorms, droughts or other natural disasters, may cause outages and property damage that may require us to incur additional costs that are generally not insured and that may not be recoverable from customers. The effect of the failure of our facilities to operate as planned under these conditions would be particularly burdensome during a peak demand period and could have an adverse effect on our financial condition and results of operations.

We Are Subject to Financial Performance Risks Related to Regional and General Economic Cycles and also Related to Heavy Industries such as Shale Gas, Automotive and Steel

Our business follows economic cycles. Economic conditions impact the demand for electricity and declines in the demand for electricity will reduce our revenues. The regional economy in which our Utilities operate is influenced by conditions in industries in our business territories, e.g. shale gas, automotive, chemical, steel and other heavy industries, and as these conditions change, our revenues will be impacted.

Certain FirstEnergy Companies May Not Be Able to Meet Their Obligations to or on Behalf of Other FirstEnergy Companies or Their Affiliates, Which Could Have a Material Adverse Effect on the Results of Operations, Financial Condition or Liquidity of One or More FirstEnergy Entities

Certain of the FirstEnergy companies have obligations to other FirstEnergy companies pursuant to transactions involving credit, energy, coal, services and hedging transactions. If one FirstEnergy entity failed to perform under any of these arrangements, other FirstEnergy entities could incur losses. Their results of operations, financial position, or liquidity could be adversely affected, and such non-performance could result in the non-defaulting FirstEnergy entity being unable to meet its obligations to unrelated third parties. Certain FirstEnergy companies also provide guarantees to third-party creditors on behalf of other FirstEnergy affiliate companies under transactions of the types described above, legal settlements or under financing transactions. Any failure to perform under such guarantees by such FirstEnergy guarantor company or under the underlying transaction by the FirstEnergy company on whose behalf the guarantee was issued could have similar adverse impacts on one or both FirstEnergy companies or their affiliates.

We Are Subject to Risks Arising from the Operation of Our Power Plants and Transmission and Distribution Equipment Which Could Reduce Revenues, Increase Expenses and Have a Material Adverse Effect on Our Business, Financial Condition and Results of Operations

Operation of generation, transmission and distribution facilities involves risk, including the risk of potential breakdown or failure of equipment or processes due to aging infrastructure, fuel supply or transportation disruptions, accidents, labor disputes or work stoppages by employees, human error in operations or maintenance, acts of terrorism or sabotage, construction delays or cost overruns, shortages of or delays in obtaining equipment, material and labor, operational restrictions resulting from environmental requirements and governmental interventions, and performance below expected levels. In addition, weather-related incidents and other natural disasters can disrupt generation, transmission and distribution delivery systems. Because our transmission facilities are interconnected with those of third parties, the operation of our facilities could be adversely affected by unexpected or uncontrollable events occurring on the systems of such third parties.

Failure to Provide Safe and Reliable Service and Equipment Could Result in Serious Injury or Loss of Life That May Harm Our Business Reputation and Adversely Affect Our Operating Results

We are committed to provide safe and reliable service and equipment in our franchised service territories. Meeting this commitment requires the expenditure of significant capital resources. However, our employees, contractors and the general public may be exposed to dangerous environments due to the nature of our operations. Failure to provide safe and reliable service and equipment due to various factors, including equipment failure, accidents and weather, could result in serious injury or loss of life that may harm our business reputation and adversely affect our operating results through reduced revenues, increased capital and operating costs, litigation or the imposition of penalties/fines or other adverse regulatory outcomes.

Our Use of Non-Derivative and Derivative Contracts to Mitigate Risks Could Result in Financial Losses That May Negatively Impact Our Financial Results

We use a variety of non-derivative and derivative instruments, such as swaps, options, futures and forwards, to manage our commodity and financial market risks. In the absence of actively quoted market prices and pricing information from external sources, the valuation of some of these derivative instruments involves management's judgment or use of estimates. As a result, changes in the underlying assumptions or use of alternative valuation methods could affect the reported fair value of some of these contracts. Also, we could recognize financial losses as a result of volatility in the market value of these contracts if a counterparty fails to perform or if there is limited liquidity of these contracts in the market.

The Outcome of Litigation, Arbitration, Mediation, and Similar Proceedings Involving Our Business, or That of One or More of Our Operating Subsidiaries, Is Unpredictable and an Adverse Decision in Any Material Proceeding Could Have a Material Adverse Effect on Our Financial Condition and Results of Operations

We are involved in a number of litigation, arbitration, mediation, and similar proceedings. These and other matters may divert financial and management resources that would otherwise be used to benefit our operations. Further, no assurances can be given that the resolution of these matters will be favorable to us. If certain matters were ultimately resolved unfavorably to us, the results of operations and financial condition of FirstEnergy could be materially adversely impacted.

In addition, we are sometimes subject to investigations and inquiries by various state and federal regulators due to the heavily regulated nature of our industry. Any material inquiry or investigation could potentially result in an adverse ruling against us, which could have a material adverse impact on our financial condition and operating results.

Capital Market Performance and Other Changes May Decrease the Value of Pension Fund Assets and Other Trust Funds, Which Could Require Significant Additional Funding and Negatively Impact Our Results of Operations and Financial Condition

Our financial statements reflect the values of the assets held in trust to satisfy our obligations to decommission our retired nuclear generating facility and under pension and OPEB plans. Certain of the assets held in these trusts do not have readily determinable market values. Changes in the estimates and assumptions inherent in the value of these assets could affect the value of the trusts. If the value of the assets held by the trusts declines by a material amount, our funding obligation to the trusts could materially increase. These assets are subject to market fluctuations and will yield uncertain returns, which may fall below our projected return rates. Forecasting investment earnings and costs to decommission FirstEnergy's retired nuclear generating facility and to pay future pension and other obligations requires significant judgment and actual results may differ significantly from current estimates. Capital market conditions that generate investment losses or that negatively impact the discount rate and increase the present value of liabilities may have significant impacts on the value of the decommissioning, pension and other trust funds, which could require significant additional funding and negatively impact our results of operations and financial position.

We Face Certain Human Resource Risks Associated with Potential Labor Disruptions and/or With the Availability of Trained and Qualified Labor to Meet Our Future Staffing Requirements

We are continually challenged to find ways to balance the retention of our aging skilled workforce while recruiting new talent to mitigate losses in critical knowledge and skills due to retirements. Additionally, a significant number of our physical workforce are represented by unions. While we believe that our relations with our employees are generally fair, we cannot provide assurances that the company will be completely free of labor disruptions such as work stoppages, work slowdowns, union organizing campaigns, strikes, lockouts or that any labor disruption will be favorably resolved. Mitigating these risks could require additional financial commitments and the failure to prevent labor disruptions and retain and/or attract trained and qualified labor could have an adverse effect on our business.

Significant Increases in Our Operation and Maintenance Expenses, Including Our Health Care and Pension Costs, Could Adversely Affect Our Future Earnings and Liquidity

We continually focus on limiting, and reducing where possible, our operation and maintenance expenses. However, we expect to continue to face increased cost pressures related to operation and maintenance expenses, including in the areas of health care and pension costs. We have experienced health care cost inflation in recent years, and we expect our cash outlay for health care costs, including prescription drug coverage, to continue to increase despite measures that we have taken requiring employees and retirees to bear a higher portion of the costs of their health care benefits. The measurement of our expected future health care and pension obligations and costs is highly dependent on a variety of assumptions, many of which relate to factors beyond our control. These assumptions include investment returns, interest rates, discount rates, health care cost trends, benefit design changes, salary increases, the demographics of plan participants and regulatory requirements. While we anticipate that our operation and maintenance expenses will continue to increase, if actual results differ materially from our assumptions, our costs could be significantly higher than expected which could adversely affect our future earnings and liquidity.

Our Results May be Adversely Affected by the Volatility in Pension and OPEB Expenses

FirstEnergy recognizes in income the change in the fair value of plan assets and net actuarial gains and losses for its pension and OPEB plans. This adjustment is recognized in the fourth quarter of each year and whenever a plan is determined to qualify for a remeasurement, which could result in greater volatility in pension and OPEB expenses and may materially impact our results of operations.

Cyber-Attacks, Data Security Breaches and Other Disruptions to Our Information Technology Systems Could Compromise Our Business Operations, Critical and Proprietary Information and Employee and Customer Data, Which Could Have a Material Adverse Effect on Our Business, Financial Condition and Reputation

In the ordinary course of our business, we depend on information technology systems that utilize sophisticated operational systems and network infrastructure to run all facets of our generation, transmission and distribution services. Additionally, we store sensitive data, intellectual property and proprietary or personally identifiable information regarding our business, employees, shareholders, customers, suppliers, business partners and other individuals in our data centers and on our networks. The secure maintenance of information and information technology systems is critical to our operations.

Over the last several years, there has been an increase in the frequency of cyber-attacks by terrorists, hackers, international activist organizations, countries and individuals. These and other unauthorized parties may attempt to gain access to our network systems or facilities, or those of third parties with whom we do business in many ways, including directly through our network infrastructure or through fraud, trickery, or other forms of deceiving our employees, contractors and temporary staff. Additionally, our information and information technology systems may be increasingly vulnerable to data security breaches, damage and/or interruption due to viruses, human error, malfeasance, faulty password management or other malfunctions and disruptions. Further, hardware, software, or applications we develop or procure from third parties may contain defects in design or manufacture or other problems that could unexpectedly compromise information and/or security.

Despite security measures and safeguards we have employed, including certain measures implemented pursuant to mandatory NERC Critical Infrastructure Protection standards, our infrastructure may be increasingly vulnerable to such attacks as a result of the rapidly evolving and increasingly sophisticated means by which attempts to defeat our security measures and gain access to our information technology systems may be made. Also, we may be at an increased risk of a cyber-attack and/or data security breach due to the nature of our business.

Any such cyber-attack, data security breach, damage, interruption and/or defect could: (i) disable our generation, transmission (including our interconnected regional transmission grid) and/or distribution services for a significant period of time; (ii) delay development and construction of new facilities or capital improvement projects; (iii) adversely affect our customer operations; (iv) corrupt data; and/or (v) result in unauthorized access to the information stored in our data centers and on our networks, including, company proprietary information, supplier information, employee data, and personal customer data, causing the information to be publicly disclosed, lost or stolen or result in incidents that could result in economic loss and liability and harmful effects on the environment and human health, including loss of life. Additionally, because our generation, transmission and distribution services are part of an interconnected system, disruption caused by a cybersecurity incident at another utility, electric generator, RTO, or commodity supplier could also adversely affect our operations.

Although we maintain cyber insurance and property and casualty insurance, there can be no assurance that liabilities or losses we may incur, including as a result of cybersecurity-related litigation, will be covered under such policies or that the amount of insurance will be adequate. Further, as cyber threats become more difficult to detect and successfully defend against, there can be no assurance that we can implement adequate preventive measures, accurately assess the likelihood of a cyber-incident or quantify potential liabilities or losses. Also, we may not discover any data security breach and loss of information for a significant period of time after the data security breach occurs.

For all of these reasons, any such cyber incident could result in significant lost revenue, the inability to conduct critical business functions and serve customers for a significant period of time, the use of significant management resources, legal claims or proceedings, regulatory penalties, significant remediation costs, increased regulation, increased capital costs, increased protection costs for enhanced cybersecurity systems or personnel, damage to our reputation and/or the rendering of our internal controls ineffective, all of which could materially adversely affect our business and financial condition.

Our Risk Management Policies Relating to Energy and Fuel Prices, and Counterparty Credit, Are by Their Very Nature Subject to Uncertainties, and We Could Suffer Economic Losses Resulting in an Adverse Effect on Results of Operations Despite Our Efforts to Manage and Mitigate Our Risks

We attempt to mitigate the market risk inherent in our energy, fuel and debt positions. Procedures have been implemented to enhance and monitor compliance with our risk management policies, including validation of transaction and market prices, verification of risk and transaction limits, sensitivity analysis and daily portfolio reporting of various risk measurement metrics. Nonetheless, we cannot economically hedge all of our exposure in these areas and our risk management program may not operate as planned. As a result, actual events may lead to greater losses or costs than our risk management positions were intended to hedge.

We Have Coal-Fired Generation Capacity, Which Exposes Us to Risk from Regulations Relating to Coal, GHGs and CCRs

Approximately 86% of FirstEnergy's generation fleet capacity is coal-fired, totaling 3,093 MWs at MP and 1,367 MWs at AE Supply (including 1,300 MWs at Pleasants Power Station which is pending transfer to FG). Historically, coal-fired generating plants have greater exposure to the costs of complying with federal, state and local environmental statutes, rules and regulations relating to air emissions, including GHGs and CCR disposal, than other types of electric generation facilities. These legal requirements and any future initiatives could impose substantial additional costs and, in the case of GHG requirements, could raise uncertainty about the future viability of fossil fuels, particularly coal, as an energy source for new and existing electric generation facilities and could require our coal-fired generation plants to curtail generation or cease to generate. Failure to comply with any such existing or future legal requirements may also result in the assessment of fines and penalties. Significant resources also may be expended to defend against allegations of violations of any such requirements.

Physical Acts of War, Terrorism or Other Attacks on any of Our Facilities or Other Infrastructure Could Have an Adverse Effect on Our Business, Results of Operations and Financial Condition

As a result of the continued threat of physical acts of war, terrorism, or other attacks in the United States, our electric generation, fuel storage, transmission and distribution facilities and other infrastructure, including power plants, transformer and high voltage lines and substations, or the facilities or other infrastructure of an interconnected company, could be direct targets of, or indirect casualties of, an act of war, terrorism, or other attack, which could result in disruption of our ability to generate, purchase, transmit or distribute electricity for a significant period of time, otherwise disrupt our customer operations and/or result in incidents that could result in harmful effects on the environment and human health, including loss of life. Any such disruption or incident could result in a significant decrease in revenue, significant additional capital and operating costs, including costs to implement additional security systems or personnel to purchase electricity and to replace or repair our assets over and above any available insurance reimbursement, higher insurance deductibles, higher premiums and more restrictive insurance policies, legal claims or proceedings,

greater regulation with higher attendant costs, generally, and significant damage to our reputation, which could have a material adverse effect on our business, results of operations and financial condition.

Capital Improvements and Construction Projects May Not be Completed Within Forecasted Budget, Schedule or Scope Parameters or Could be Canceled Which Could Adversely Affect Our Business and Results of Operations

Our business plan calls for execution of extensive capital investments in electric generation, transmission and distribution, including but not limited to our *Energizing the Future* transmission expansion program, which has been extended to include up to $4.8 billion in investments from 2018 through 2021. We may be exposed to the risk of substantial price increases in, or the adequacy or availability of, the costs of labor and materials used in construction, nonperformance of equipment and increased costs due to delays, including delays relating to the procurement of permits or approvals, adverse weather or environmental matters. We engage numerous contractors and enter into a large number of construction agreements to acquire the necessary materials and/or obtain the required construction-related services. As a result, we are also exposed to the risk that these contractors and other counterparties could breach their obligations to us. Such risk could include our contractors' inabilities to procure sufficient skilled labor as well as potential work stoppages by that labor force. Should the counterparties to these arrangements fail to perform, we may be forced to enter into alternative arrangements at then-current market prices that may exceed our contractual prices, with resulting delays in those and other projects. Although our agreements are designed to mitigate the consequences of a potential default by the counterparty, our actual exposure may be greater than these mitigation provisions. Also, because we enter into construction agreements for the necessary materials and to obtain the required construction related services, any cancellation by FirstEnergy of a construction agreement could result in significant termination payments or penalties. Any delays, increased costs or losses or cancellation of a construction project could adversely affect our business and results of operations, particularly if we are not permitted to recover any such costs in rates.

Changes in Technology and Regulatory Policies May Make Our Facilities Significantly Less Competitive and Adversely Affect Our Results of Operations

Traditionally, electricity is generated at large central station generation facilities. This method results in economies of scale and lower unit costs than newer generation technologies such as fuel cells, microturbines, windmills and photovoltaic solar cells. It is possible that advances in newer generation technologies will make newer generation technologies more cost-effective, or that changes in regulatory policy will create benefits that otherwise make these newer generation technologies even more competitive with central station electricity production. To the extent that newer generation technologies are connected directly to load, bypassing the transmission and distribution systems, potential impacts could include decreased transmission and distribution revenues, stranded assets and increased uncertainty in load forecasting and integrated resource planning and could adversely affect our business and results of operations.

Certain FirstEnergy Companies Have Guaranteed the Performance of Third Parties, Which May Result in Substantial Costs or the Incurrence of Additional Debt

Certain FirstEnergy companies have issued guarantees of the performance of others, which obligates such FirstEnergy companies to perform in the event that the third parties do not perform. For instance, FE is a guarantor under a syndicated senior secured term loan facility, under which Global Holding's outstanding principal balance is approximately $190 million at December 31, 2018. In the event of non-performance by the third parties, FirstEnergy could incur substantial cost to fulfill this obligation and other obligations under such guarantees. Such performance guarantees could have a material adverse impact on our financial position and operating results.

Additionally, with respect to FEV's investment in Global Holding, it could require additional capital from its owners, including FEV, to fund operations and meet its obligations under its term loan facility. These capital requirements could be significant and if other partners do not fund the additional capital, resulting in FEV increasing its equity ownership and obtaining the ability to direct the significant activities of Global Holding, FEV may be required to consolidate Global Holding, increasing FirstEnergy's debt by $190 million.

Energy Companies are Subject to Adverse Publicity Causing Less Favorable Regulatory and Legislative Outcomes Which Could have an Adverse Impact on Our Business

Energy companies, including FirstEnergy's utility and transmission subsidiaries, have been the subject of criticism on matters including the reliability of their distribution services and the speed with which they are able to respond to power outages, such as those caused by storm damage. Adverse publicity of this nature, as well as negative publicity associated with the operation or bankruptcy of nuclear and/or coal-fired facilities or proceedings seeking regulatory recoveries may cause less favorable legislative and regulatory outcomes and damage our reputation, which could have an adverse impact on our business.

Risks Associated with Financing and Capital Structure

In the Event of Volatility or Unfavorable Conditions in the Capital and Credit Markets, Our Business, Including the Immediate Availability and Cost of Short-Term Funds for Liquidity Requirements, Our Ability to Meet Long-Term Commitments and the Competitiveness and Liquidity of Energy Markets May be Adversely Affected, Which Could Negatively Impact Our Results of Operations, Cash Flows and Financial Condition

We rely on the capital markets to meet our financial commitments and short-term liquidity needs if internal funds are not available from our operations. We also use letters of credit provided by various financial institutions to support our hedging operations. We also deposit cash in short-term investments. In the event of volatility in the capital and credit markets, our ability to draw on our credit facilities and cash may be adversely affected. Our access to funds under those credit facilities is dependent on the ability of the financial institutions that are parties to the facilities to meet their funding commitments. Those institutions may not be able to meet their funding commitments if they experience shortages of capital and liquidity or if they experience excessive volumes of borrowing requests within a short period of time. Any delay in our ability to access those funds, even for a short period of time, could have a material adverse effect on our results of operations and financial condition.

Should there be fluctuations in the capital and credit markets as a result of uncertainty, changing or increased regulation, reduced alternatives or failures of significant foreign or domestic financial institutions or foreign governments, our access to liquidity needed for our business could be adversely affected. Unfavorable conditions could require us to take measures to conserve cash until the markets stabilize or until alternative credit arrangements or other funding for our business needs can be arranged. Such measures could include deferring capital expenditures, changing hedging strategies to reduce collateral-posting requirements, and reducing or eliminating future dividend payments or other discretionary uses of cash.

Energy markets depend heavily on active participation by multiple counterparties, which could be adversely affected should there be disruptions in the capital and credit markets. Reduced capital and liquidity and failures of significant institutions that participate in the energy markets could diminish the liquidity and competitiveness of energy markets that are important to our business. Perceived weaknesses in the competitive strength of the energy markets could lead to pressures for greater regulation of those markets or attempts to replace those market structures with other mechanisms for the sale of power, including the requirement of long-term contracts, which could have a material adverse effect on our results of operations and cash flows.

Interest Rates and/or a Credit Rating Downgrade Could Negatively Affect Our or Our Subsidiaries' Financing Costs, Ability to Access Capital and Requirement to Post Collateral

We have near-term exposure to interest rates from outstanding indebtedness indexed to variable interest rates, and we have exposure to future interest rates to the extent we seek to raise debt in the capital markets to meet maturing debt obligations and fund construction or other investment opportunities. Past disruptions in capital and credit markets have resulted in higher interest rates on new publicly issued debt securities, increased costs for certain of our variable interest rate debt securities and failed remarketing of variable interest rate tax-exempt debt issued to finance certain of our facilities. Similar future disruptions could increase our financing costs and adversely affect our results of operations. Also, interest rates could change as a result of economic or other events that are beyond our risk management processes. As a result, we cannot always predict the impact that our risk management decisions may have on us if actual events lead to greater losses or costs that our risk management positions were intended to hedge. Although we employ risk management techniques to hedge against interest rate volatility, significant and sustained increases in market interest rates could materially increase our financing costs and negatively impact our reported results of operations.

We rely on access to bank and capital markets as sources of liquidity for cash requirements not satisfied by cash from operations. A downgrade in our or our subsidiaries' credit ratings from the nationally recognized credit rating agencies, particularly to a level below investment grade, could negatively affect our ability to access the bank and capital markets, especially in a time of uncertainty in either of those markets, and may require us to post cash collateral to support outstanding commodity positions in the wholesale market, as well as available letters of credit and other guarantees. Furthermore, a downgrade could increase the cost of such capital by causing us to incur higher interest rates and fees associated with such capital. A rating downgrade would increase our interest expense on certain of FirstEnergy's long-term debt obligations and would also increase the fees we pay on our various existing credit facilities, thus increasing the cost of our working capital. A rating downgrade could also impact our ability to grow our regulated businesses by substantially increasing the cost of, or limiting access to, capital.

Any Default by Customers or Other Counterparties Could Have a Material Adverse Effect on Our Results of Operations and Financial Condition

We are exposed to the risk that counterparties that owe us money, power, fuel or other commodities could breach their obligations. Should the counterparties to these arrangements fail to perform, we may be forced to enter into alternative arrangements at then-current market prices that may exceed our contractual prices, which would cause our financial results to be diminished and we might incur losses. Some of our agreements contain provisions that require the counterparties to provide credit support to secure all or part of their obligations to FirstEnergy or its subsidiaries. If the counterparties to these arrangements fail to perform, we may have a right to receive the proceeds from the credit support provided, however the credit support may not always be adequate to

cover the related obligations. In such event, we may incur losses in addition to amounts, if any, already paid to the counterparties, including by being forced to enter into alternative arrangements at then-current market prices that may exceed our contractual prices. Although our estimates take into account the expected probability of default by a counterparty, our actual exposure to a default by customers or other counterparties may be greater than the estimates predict, which could have a material adverse effect on our results of operations and financial condition.

We Must Rely on Cash from Our Subsidiaries and Any Restrictions on Our Utility Subsidiaries' Ability to Pay Dividends or Make Cash Payments to Us May Adversely Affect Our Cash Flows and Financial Condition

We are a holding company and our investments in our subsidiaries are our primary assets. Substantially all of our business is conducted by our subsidiaries. Consequently, our cash flow, including our ability to pay dividends and service debt, is dependent on the operating cash flows of our subsidiaries and their ability to upstream cash to the holding company. Any inability of our subsidiaries to pay dividends or make cash payments to us may adversely affect our cash flows and financial condition.

Additionally, our utility and transmission subsidiaries are regulated by various state utility and federal commissions that generally possess broad powers to ensure that the needs of utility customers are being met. Those state and federal commissions could attempt to impose restrictions on the ability of our utility and transmission subsidiaries to pay dividends or otherwise restrict cash payments to us.

Our Mandatorily Convertible Preferred Stock Will be Converted into Common Stock, in January 2020 and the Holders Thereof Have Registration Rights. Upon Conversion of the Preferred Shares, the Number of Common Shares Eligible for Future Resale in the Public Market Will Increase and May Result in Dilution to Common Shareholders. This May Have an Adverse Effect on the Market Price of Common Stock.

On January 22, 2018, FE issued $2.5 billion of equity, which included $1.62 billion of mandatorily convertible preferred equity with an initial conversion price of $27.42 per share and $850 million of common equity issued at $28.22 per share. The issuance of common equity created some dilution to existing common holders. The preferred shares contain an optional conversion right, and any remaining preferred shares will mandatorily convert in July 2019, subject to limited exceptions.

Upon the conversion of the mandatorily convertible preferred stock, additional shares, up to a maximum of 58,964,222 shares, of our common stock will be issued, which results in dilution to our common stockholders, and will increase the number of shares eligible for resale in the public market. Sales of substantial numbers of such shares in the public market could adversely affect the market price of our common stock. As of December 31, 2018, 911,411 shares of preferred stock have been converted into 33,238,910 shares of common stock at the option of the holders. An additional 494,767 preferred shares were converted into 18,044,018 common shares at the option of the holder in January 2019, resulting in 209,822 preferred shares outstanding and yet to be converted as of January 31, 2019.

We Cannot Assure Common and Preferred Shareholders that Future Dividend Payments Will be Made, or if Made, in What Amounts They May be Paid

Our Board of Directors will continue to regularly evaluate our common stock dividend and determine an appropriate dividend each quarter taking into account such factors as, among other things, our earnings, financial condition and cash flows from subsidiaries, as well as general economic and competitive conditions. We cannot assure common or preferred shareholders that dividends will be paid in the future, or that, if paid, dividends will be at the same amount or with the same frequency as in the past. Further, the terms of the outstanding preferred stock require that preferred shareholders receive dividends alongside the common shareholders on an as-converted, pro rata basis.

The Transaction Occurring as Part of the FES Bankruptcy Will Likely Change the Tax Characterization of Our Distributions to Shareholders

When we make distributions to shareholders, we are required to subsequently determine and report the tax characterization of those distributions for purposes of shareholders' income taxes. Whether a distribution is characterized as a dividend or a return of capital (and possible capital gain) depends upon an internal tax calculation to determine earnings and profits for income tax purposes (E&P). E&P should not be confused with earnings or net income under GAAP. Further, after we report the expected tax characterization of distributions we have paid, the actual characterization could vary from our expectation with the result that holders of our common stock could incur different income tax liabilities than expected.

In general, distributions are characterized as dividends to the extent the amount of such distributions do not exceed our calculation of current or accumulated E&P. Distributions in excess of current and accumulated E&P may be treated as a non-taxable return of capital. Generally, a non-taxable return of capital will reduce an investor's basis in our stock for federal tax purposes, which will impact the calculation of gain or loss when the stock is sold.

Our internal calculation of E&P can be impacted by a variety of factors. We expect that upon the FES Debtors' emergence from bankruptcy, FirstEnergy's accumulated E&P will be eliminated. All else being equal, eliminating accumulated E&P will make it more

likely that at least a portion of our current or future distributions will be characterized for shareholders' tax purposes as a return of capital. Upon such characterization, shareholders are urged to consult their own tax advisors regarding the income tax treatment of our distributions to them.

The Recognition of Impairments of Goodwill and Long-Lived Assets Has Adversely Affected Our Results of Operations and Additional Impairments Could Have a Material Adverse Effect on FirstEnergy's Business, Financial Condition, Results of Operations, Liquidity and the Trading Price of FirstEnergy's Securities

We have approximately $5.6 billion of goodwill on our Consolidated Balance Sheet as of December 31, 2018. Goodwill is tested for impairment annually as of July 31 or whenever events or changes in circumstances indicate impairment may have occurred. Key assumptions incorporated in the estimated cash flows used for the impairment analysis requiring significant management judgment include: discount rates, growth rates, projected operating income, changes in working capital, projected operating capital expenditures, projected funding of pension plans, expected results of future rate proceedings and terminal multiples.

We are unable to predict whether further impairments of one or more of our long-lived assets or investments may occur in the future. The actual timing and amounts of any impairments to goodwill or long-lived assets in the future depends on many factors, including interest rates, sector market performance, our capital structure, results of future rate proceedings, operating and capital expenditure requirements, and other factors. A determination that goodwill, a long-lived asset, or other investments are impaired would result in a non-cash charge that could materially adversely affect our results of operations and capitalization.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The first mortgage indentures for the Ohio Companies, Penn, MP, PE and WP constitute direct first liens on substantially all of the respective physical property, subject only to excepted encumbrances, as defined in the first mortgage indentures. See Note 13, "Capitalization," of the Notes to Consolidated Financial Statements for information concerning financing encumbrances affecting certain of the Utilities' properties.

FirstEnergy controls the following generation sources as of December 31, 2018, shown in the table below. Except for the OVEC participation referenced in the footnotes to the table, the competitive generating units are owned by AE Supply and the regulated generating units are owned by JCP&L and MP.

Plant (Location)	Unit	Total		Competitive	Regulated
				Net Demonstrated Capacity (MW)	
Super-critical Coal-fired:					
Harrison (Haywood, WV)	1-3	1,984		—	1,984
Pleasants (Willow Island, WV)	1-2	1,300	(1)	1,300	—
Fort Martin (Maidsville, WV)	1-2	1,098		—	1,098
		4,382		1,300	3,082
Sub-critical and Other Coal-fired:					
OVEC (Cheshire, OH) (Madison, IN)	1-11	78	(2)	67	11
		78		67	11
Pumped-storage Hydro:					
Bath County (Warm Springs, VA)	1-6	487	(3)	—	487
Yard's Creek (Blairstown Twp., NJ)	1-3	210	(4)	—	210
		697		—	697
Total		**5,157**		**1,367**	**3,790**

(1) On August 26, 2018, FirstEnergy, the FES Key Creditor Groups, the FES Debtors and the UCC entered into a FES Bankruptcy settlement agreement which included the transfer of the Pleasants Power Station and related assets to FES or its designee for the benefit of FES' creditors. Prior to transfer and beginning no later than January 1, 2019, FES acquired the economic interests in Pleasants and AE Supply will operate Pleasants until the transfer.

(2) Represents AE Supply's 3.01% and MP's 0.49% entitlement based on their participation in OVEC.

(3) Represents AGC's 16.25% undivided interest in Bath County. The station is operated by VEPCO.

(4) Represents JCP&L's 50% ownership interest.

The above generating plants and load centers are connected by a transmission system with various voltage ratings ranging from 23 kV to 500 kV. FirstEnergy's overhead and underground transmission lines aggregate 24,506 circuit miles.

The Utilities' electric distribution systems include 277,284 miles of overhead pole line and underground conduit carrying primary, secondary and street lighting circuits. They own substations with a total installed transformer capacity of approximately 164,611,989 kV-amperes.

All of FirstEnergy's transmission, distribution and generation assets operate in PJM.

FirstEnergy's distribution and transmission systems as of December 31, 2018, consist of the following:

	Distribution Lines[1]	Transmission Lines[1]	Substation Transformer Capacity[2]
			kV Amperes
OE	67,323	379	7,831,823
Penn	13,628	—	1,064,907
CEI	33,528	—	10,100,363
TE	19,088	73	2,892,703
JCP&L	23,666	2,598	23,616,166
ME	19,000	—	5,190,675
PN	27,698	—	9,044,989
ATSI[3]	—	7,841	38,651,682
WP	25,014	4,341	15,957,666
MP	22,430	2,650	12,326,155
PE	25,909	2,122	11,256,024
TrAIL	—	262	12,689,600
MAIT	—	4,240	13,989,236
Total	277,284	24,506	164,611,989

[1] Circuit Miles
[2] Top rating of in-service power transformers only. Excludes grounding banks, station power transformers, and generator and customer-owned transformers.
[3] Represents transmission line assets of 69 kV and greater located in the service territories of OE, Penn, CEI and TE.

ITEM 3. LEGAL PROCEEDINGS

Reference is made to Note 16, "Regulatory Matters," and Note 17, "Commitments, Guarantees and Contingencies," of the Notes to Consolidated Financial Statements for a description of certain legal proceedings involving FirstEnergy.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The information required by Item 5 regarding FirstEnergy's market information, including stock exchange listings, dividends and holders of common stock is included in Item 6, "Selected Financial Data."

FirstEnergy had no transactions regarding purchases of FE common stock during the fourth quarter of 2018.

FirstEnergy does not have any publicly announced plan or program for share purchases.

ITEM 6. SELECTED FINANCIAL DATA

For the Years Ended December 31,	2018	2017[1]	2016[1]	2015[1]	2014[1]
		(In millions, except per share amounts)			
Revenues	$ 11,261	$ 10,928	$ 10,700	$ 10,583	$ 9,455
Income (Loss) From Continuing Operations	$ 1,022	$ (289)	$ 551	$ 383	$ 421
Net Income (Loss) Attributable to Common Stockholders	$ 981	$ (1,724)	$ (6,177)	$ 578	$ 299
Earnings (Loss) per Share of Common Stock:					
Basic - Continuing Operations	$ 1.33	$ (0.65)	$ 1.29	$ 0.91	$ 1.00
Basic - Discontinued Operations	0.66	(3.23)	(15.78)	0.46	(0.29)
Basic - Net Income (Loss) Attributable to Common Stockholders	$ 1.99	$ (3.88)	$ (14.49)	$ 1.37	$ 0.71
Diluted - Continuing Operations	$ 1.33	$ (0.65)	$ 1.29	$ 0.91	$ 1.00
Diluted - Discontinued Operations	0.66	(3.23)	(15.78)	0.46	(0.29)
Diluted - Net Income (Loss) Attributable to Common Stockholders	$ 1.99	$ (3.88)	$ (14.49)	$ 1.37	$ 0.71
Weighted Average Number of Common Shares Outstanding:					
Basic	492	444	426	422	420
Diluted	494	444	426	424	421
Dividends Declared per Share of Common Stock	$ 1.82	$ 1.44	$ 1.44	$ 1.44	$ 1.44
As of December 31,					
Total Assets	$ 40,063	$ 42,257	$ 43,148	$ 52,094	$ 51,552
Capitalization:					
Total Equity	$ 6,814	$ 3,925	$ 6,241	$ 12,422	$ 12,422
Long-Term Debt and Other Long-Term Obligations	17,751	18,687	15,251	16,444	16,345
Total Capitalization	$ 24,565	$ 22,612	$ 21,492	$ 28,866	$ 28,767

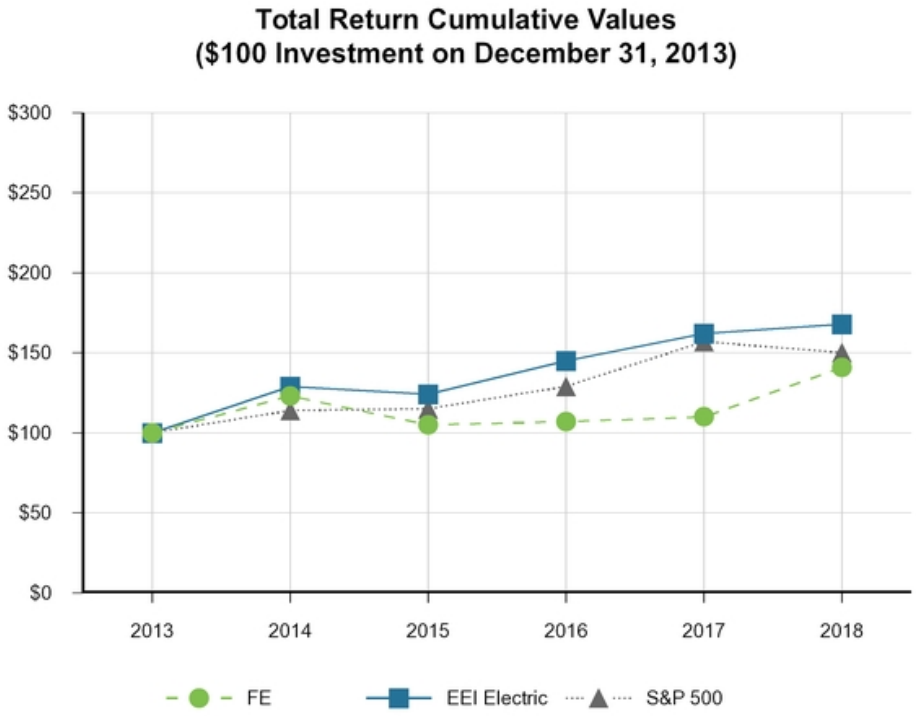
[1] Prior year numbers have been re-casted for discontinued operations.

PRICE RANGE OF COMMON STOCK

The common stock of FirstEnergy Corp. is listed on the New York Stock Exchange under the symbol “FE” and is traded on other registered exchanges.

SHAREHOLDER RETURN

The following graph shows the total cumulative return from a $100 investment on December 31, 2013, in FE’s common stock compared with the total cumulative returns of EEI’s Index of Investor-Owned Electric Utility Companies and the S&P 500.



HOLDERS OF COMMON STOCK

There were 74,813 holders of 511,915,450 shares of FE’s common stock as of December 31, 2018, and 74,535 holders of 530,152,175 shares of FE's common stock as of January 31, 2019. Information regarding retained earnings available for payment of cash dividends is given in Note 13, "Capitalization," of the Notes to Consolidated Financial Statements.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements: This Form 10-K includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 based on information currently available. Such statements are subject to certain risks and uncertainties and readers are cautioned not to place undue reliance on these forward-looking statements. These statements include declarations regarding management's intents, beliefs and current expectations, and typically contain, but are not limited to, the terms "anticipate," "potential," "expect," "forecast," "target," "will," "intend," "believe," "project," "estimate," "plan" and similar words. Forward-looking statements involve estimates, assumptions, known and unknown risks, uncertainties and other factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements, which may include the following (see Glossary of Terms for definitions of capitalized terms):

- The ability to successfully execute an exit from commodity-based generation.
- The risks associated with the FES Bankruptcy that could adversely affect us, our liquidity or results of operations, including, without limitation, that conditions to the FES Bankruptcy settlement agreement may not be met or that the FES Bankruptcy settlement agreement may not be otherwise consummated, and if so, the potential for litigation and payment demands against us by FES, FENOC or their creditors.
- The ability to accomplish or realize anticipated benefits from strategic and financial goals, including, but not limited to, our strategy to operate and grow as a fully regulated business, to execute our transmission and distribution investment plans, to continue to reduce costs through FE Tomorrow and other initiatives, and to improve our credit metrics, strengthen our balance sheet and grow earnings.
- Legislative and regulatory developments at the federal and state levels, including, but not limited to, matters related to rates, compliance and enforcement activity.
- Economic and weather conditions affecting future operating results, such as significant weather events and other natural disasters, and associated regulatory events or actions.
- Changes in assumptions regarding economic conditions within our territories, the reliability of our transmission and distribution system, or the availability of capital or other resources supporting identified transmission and distribution investment opportunities.
- Changes in customers' demand for power, including, but not limited to, the impact of state and federal energy efficiency and peak demand reduction mandates.
- Changes in national and regional economic conditions affecting us and/or our major industrial and commercial customers or others with which we do business.
- The risks associated with cyber-attacks and other disruptions to our information technology system that may compromise our operations, and data security breaches of sensitive data, intellectual property and proprietary or personally identifiable information.
- The ability to comply with applicable state and federal reliability standards and energy efficiency and peak demand reduction mandates.
- Changes to federal and state environmental laws and regulations, including, but not limited to, those related to climate change.
- Changing market conditions affecting the measurement of certain liabilities and the value of assets held in our pension trusts and other trust funds, or causing us to make additional contributions sooner, or in amounts that are larger, than currently anticipated.
- The risks associated with the decommissioning of our retired nuclear facility.
- The risks and uncertainties associated with litigation, arbitration, mediation and like proceedings.
- Labor disruptions by our unionized workforce.
- Changes to significant accounting policies.
- Any changes in tax laws or regulations, including the Tax Act, or adverse tax audit results or rulings.
- The ability to access the public securities and other capital and credit markets in accordance with our financial plans, the cost of such capital and overall condition of the capital and credit markets affecting us.
- Actions that may be taken by credit rating agencies that could negatively affect either our access to or terms of financing or our financial condition and liquidity.
- The risks and other factors discussed from time to time in our SEC filings.

Dividends declared from time to time on our common stock, and thereby on our preferred stock, during any period may in the aggregate vary from prior periods due to circumstances considered by our Board of Directors at the time of the actual declarations. A security rating is not a recommendation to buy or hold securities and is subject to revision or withdrawal at any time by the assigning rating agency. Each rating should be evaluated independently of any other rating.

These forward-looking statements are also qualified by, and should be read together with, the risk factors included in (a) Item 1A. Risk Factors, (b) Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, and (c) other factors discussed herein and in FirstEnergy's other filings with the SEC. The foregoing review of factors also should not be construed as exhaustive. New factors emerge from time to time, and it is not possible for management to predict all such factors, nor assess the impact of any such factor on our business or the extent to which any factor, or combination of factors, may cause results to differ materially from those contained in any forward-looking statements. We expressly disclaim any obligation to update or revise, except as required by law, any forward-looking statements contained herein as a result of new information, future events or otherwise.

FIRSTENERGY'S BUSINESS

FE and its subsidiaries are principally involved in the transmission, distribution and generation of electricity through its reportable segments, Regulated Distribution and Regulated Transmission.

The **Regulated Distribution** segment distributes electricity through FirstEnergy's ten utility operating companies, serving approximately six million customers within 65,000 square miles of Ohio, Pennsylvania, West Virginia, Maryland, New Jersey and New York. This segment also controls 3,790 MWs of regulated electric generation capacity located primarily in West Virginia, Virginia and New Jersey. Regulation of our retail distribution rates is generally premised on providing an opportunity to earn a reasonable return of and on prudently incurred invested capital to provide service to our customers through the use of both base rate proceedings and other cost-based rate mechanisms, including recovery riders and trackers. The segment's results reflect the costs of securing and delivering electric generation from transmission facilities to customers, including the deferral and amortization of certain related costs.

The service areas of, and customers served by, FirstEnergy's regulated distribution utilities as of December 31, 2018 are summarized below (in thousands):

Company	Area Served	Customers Served
OE	Central and Northeastern Ohio	1,051
Penn	Western Pennsylvania	167
CEI	Northeastern Ohio	753
TE	Northwestern Ohio	312
JCP&L	Northern, Western and East Central New Jersey	1,135
ME	Eastern Pennsylvania	572
PN	Western Pennsylvania and Western New York	587
WP	Southwest, South Central and Northern Pennsylvania	727
MP	Northern, Central and Southeastern West Virginia	393
PE	Western Maryland and Eastern West Virginia	414
		6,111

The **Regulated Transmission** segment provides transmission infrastructure owned and operated by the Transmission Companies and certain of FirstEnergy's utilities (JCP&L, MP, PE and WP) to transmit electricity from generation sources to distribution facilities. The segment's revenues are primarily derived from forward-looking formula rates at the Transmission Companies as well as stated transmission rates at JCP&L, MP, PE and WP. Both the forward-looking formula and stated rates recover costs that the regulatory agencies determine are permitted to be recovered and provide a return on transmission capital investment. Under forward-looking formula rates, the revenue requirement is updated annually based on a projected rate base and projected costs, which is subject to an annual true-up based on actual costs. The segment's results also reflect the net transmission expenses related to the delivery of electricity on FirstEnergy's transmission facilities.

The **Corporate/Other** segment reflects corporate support not charged to FE's subsidiaries, interest expense on FE's holding company debt and other businesses that do not constitute an operating segment. Additionally, reconciling adjustments for the elimination of inter-segment transactions and discontinued operations are included in Corporate/Other. As of December 31, 2018, approximately 70 MWs of electric generating capacity, representing AE Supply's OVEC capacity entitlement, was included in continuing operations of the Corporate/Other reportable segment. As of December 31, 2018, Corporate/Other had approximately $7.1 billion of FE holding company debt.

FES, FENOC, BSPC and a portion of AE Supply (including the Pleasants Power Station), representing substantially all of FirstEnergy's operations that previously comprised the CES reportable operating segment, are presented as discontinued operations in FirstEnergy's consolidated financial statements resulting from the FES Bankruptcy and actions taken as part of the strategic review to exit commodity-exposed generation, as discussed below. During the third quarter of 2018, the Pleasants Power Station was reclassified to discontinued operations following its inclusion in the definitive FES Bankruptcy settlement agreement for the benefit of FES' creditors. Prior period results have been reclassified to conform with such presentation as discontinued operations. The financial information for all periods has been revised to present the discontinued operations within Reconciling Adjustments. The remaining business activities that previously comprised the CES reportable operating segment were not material and, as such, have been combined into **Corporate/Other** for reporting purposes.

EXECUTIVE SUMMARY

FirstEnergy is a forward-thinking electric utility, powered by a diverse team of employees committed to making customers' lives brighter, the environment better and its communities stronger.

Over the past year, FirstEnergy has transformed into a fully regulated utility company, focused on driving sustainable long-term regulated earnings growth and stable cash flows that support its dividend, while also sustaining investment grade credit ratings at FE and its regulated subsidiaries. FirstEnergy believes that the right investments are those that the customers value and are willing to pay for, while also providing attractive returns for its investors.

The scale and diversity of the company's distribution and transmission operations position FirstEnergy for sustained growth well into the future. Since 2015, the Regulated Distribution business has experienced significant growth through investments, which has been realized through base rates and/or various recovery riders and trackers that have improved reliability and added operating flexibility to distribution infrastructure, benefiting to the customers and communities those Utilities service. The Regulated Transmission business is the centerpiece of FirstEnergy's regulated investment strategy, where approximately 80% of its capital investments are recovered under forward-looking formula rates for its three standalone Transmission operating companies ATSI, MAIT and TrAIL.

2018-2021 "Unlocking the Future" Plan

The January 2018 equity issuance served as a catalyst to FirstEnergy's 2018-2021 "Unlocking the Future" regulated growth plan, which includes earnings growth targets, Regulated Distribution segment average annual rate base growth of 5%, formula transmission average annual rate base growth of 11%, and assumes no additional equity issuances through 2021, outside of FirstEnergy's regular stock investment and employee benefit plans.

FirstEnergy's transmission growth program, *Energizing the Future*, provides a stable and proven investment platform, while producing important customer benefits. Through the program, $4.4 billion in capital investments were made from 2014 through 2017, and the company plans to invest up to an additional $4.8 billion in the 2018-2021 timeframe, which includes approximately $1.2 billion in 2018 and a target of $1.2 billion annually through 2021. As noted above, over 80% of these capital investments are recoverable through formula rate mechanisms, reducing regulatory lag in recovering a return on investment, while offering a reasonable rate of return. These investments are expected to continue to improve the performance and condition of the transmission system while increasing automation and communication, adding capacity to the system and improving customer reliability. Beyond 2021, FirstEnergy believes there are incremental investment opportunities for its existing transmission infrastructure of up to approximately $20 billion, which are expected to strengthen grid and cyber-security and make the transmission system more reliable, robust, secure and resistant to extreme weather events, with improved operational flexibility.

In the Regulated Distribution segment, FirstEnergy remains committed to providing customer service-oriented growth opportunities by investing between $6.2 billion and $6.7 billion over 2018 to 2021, including $1.6 billion invested in 2018. Approximately 40% of capital expenditures are recoverable through various rate mechanisms, riders and trackers. Beginning in 2019, expected investments at the Ohio Companies include the pending Ohio Grid Modernization plan which includes installation of approximately 700,000 advanced meters, distribution automation, and integrated 'volt/var' controls. Additionally, the pending JCP&L Reliability Plus infrastructure improvement plan filed with the NJBPU is expected to bring both reduced outages and strengthen the system while preparing for the grid of the future in New Jersey. FirstEnergy continues to explore other opportunities for growth in its Regulated Distribution business, including investments in electric system improvement and modernization projects to increase reliability and improve service to customers, as well as exploring opportunities in customer engagement that focus on electrification of customers' homes and businesses by providing a full range of products and services.

Regulated Growth Plans - 2018 Achievements

In addition to our definitive settlement agreement in the FES Bankruptcy, which allowed us to turn our full focus to the implementation of our regulated growth plans in 2018, FirstEnergy made significant progress in positioning the company for sustained and continued regulated growth, including:

- Reached a settlement that is subject to PUCO approval on the Ohio Grid Modernization plan
- Filed a JCP&L Reliability Plus infrastructure investment plan in New Jersey
- Filed a PE distribution rate case in Maryland, the first such base rate filing since 1994
- Announced and implemented a new shared services organizational structure through the FE Tomorrow initiative
- Earned an upgrade from S&P on FE's issuer credit rating to BBB from BBB-
- Earned a positive ratings outlook from Fitch on FE's BBB- credit rating
- Established a Board of Directors approved dividend policy and declared an increased dividend for March 1, 2019
- Implemented rate reductions across all Utilities and at the formula-rate transmission subsidiaries to address the impacts of tax reform to appropriately pass on the benefits to customers

Also in 2018, the FE Tomorrow cost cutting initiative was implemented to define the corporate services FirstEnergy would need to support its regulated business once the company exited commodity-exposed generation. Through the initiative, FirstEnergy sought to ensure the company has the right talent, organizational and cost structure to efficiently service customers and achieve its earnings growth targets. In support of the FE Tomorrow initiative, more than 80% of eligible employees, totaling nearly 500 people in the shared services, utility services and sustainability organizations, accepted a voluntary enhanced retirement package that included severance compensation and a temporary pension enhancement, with most employees having already retired. Management expects the cost savings resulting from the FE Tomorrow initiative to support the company's growth targets.

In November 2018, the Board of Directors approved a dividend policy that includes a targeted payout ratio. As a first step, the Board declared a $0.02 increase to the common dividend payable March 1, 2019 to $0.38 per share, which represents an increase of 6% compared to the quarterly dividend of $0.36 per share that has been paid since 2014. Resuming modest dividend growth enables enhanced shareholder returns, while still allowing for continued substantial regulated investments. Dividend payments are subject to declaration by the Board and future dividend decisions determined by the Board may be impacted by earnings growth, cash flows, credit metrics and other business conditions.

FirstEnergy is making progress in its sustainability efforts. In 2018, FirstEnergy enhanced its focus on sustainability efforts by including the responsibility of Sustainability and Corporate Responsibility oversight into one of the Board's Charters and created a Sustainability group focused on the continued realization of sustainability accomplishments that make FirstEnergy customers' lives brighter, the environment better and its communities stronger. These actions reinforce FirstEnergy's commitment to including the broad concepts of Environmental, Social, Governance (ESG), and corporate responsibility in our sustainability strategy. In 2019, FirstEnergy is focusing on additional initiatives that aim to inform, engage and achieve its sustainability goals, and demonstrate its commitment to stakeholders.

In recognition of customers using electricity in diverse ways, FirstEnergy created an Emerging Technologies department responsible for analyzing and implementing new technologies such as microgrids, plug-in electric vehicles, energy storage, and smart cities. The department will focus on monitoring changing energy policies which support utilities to enable the grid of the future, expanding on sustainable solutions for a better environment, and empowering customers through personalized solutions.

RESULTS OF OPERATIONS

The financial results discussed below include revenues and expenses from transactions among FirstEnergy's business segments. A reconciliation of segment financial results is provided in Note 19, "Segment Information," of the Notes to Consolidated Financial Statements. Certain prior year amounts have been reclassified to conform to the current year presentation.

Net income (loss) by business segment was as follows:

	For the Years Ended December 31,			Increase (Decrease)	
	2018	2017	2016	2018 vs 2017	2017 vs 2016
	(In millions, except per share amounts)				
Net Income (Loss) By Business Segment:					
Regulated Distribution	$ 1,242	$ 916	$ 651	$ 326	$ 265
Regulated Transmission	397	336	331	61	5
Corporate/Other	(617)	(1,541)	(431)	924	(1,110)
Income (Loss) from Continuing Operations	$ 1,022	$ (289)	$ 551	$ 1,311	$ (840)
Discontinued Operations	326	(1,435)	(6,728)	1,761	5,293
Net Income (Loss)	$ 1,348	$ (1,724)	$ (6,177)	$ 3,072	$ 4,453
Earnings (Loss) per share of common stock					
Basic - Continuing Operations	$ 1.33	$ (0.65)	$ 1.29	$ 1.98	$ (1.94)
Basic - Discontinued Operations	0.66	(3.23)	(15.78)	3.89	12.55
Basic - Net Income (Loss) Attributable to Common Stockholders	$ 1.99	$ (3.88)	$ (14.49)	$ 5.87	$ 10.61
Earnings (Loss) per share of common stock					
Diluted - Continuing Operations	$ 1.33	$ (0.65)	$ 1.29	$ 1.98	$ (1.94)
Diluted - Discontinued Operations	0.66	(3.23)	(15.78)	3.89	12.55
Diluted - Net Income (Loss) Attributable to Common Stockholders	$ 1.99	$ (3.88)	$ (14.49)	$ 5.87	$ 10.61

Summary of Results of Operations — 2018 Compared with 2017

Financial results for FirstEnergy's business segments for the years ended December 31, 2018 and 2017, were as follows:

2018 Financial Results	Regulated Distribution	Regulated Transmission	Corporate/Other and Reconciling Adjustments	FirstEnergy Consolidated
		(In millions)		
Revenues:				
External				
Electric	$ 9,851	$ 1,335	$ (136)	$ 11,050
Other	252	18	(59)	211
Total Revenues	10,103	1,353	(195)	11,261
Operating Expenses:				
Fuel	538	—	—	538
Purchased power	3,103	—	6	3,109
Other operating expenses	2,984	253	(104)	3,133
Provision for depreciation	812	252	72	1,136
Amortization (deferral) of regulatory assets, net	(163)	13	—	(150)
General taxes	760	192	41	993
Total Operating Expenses	8,034	710	15	8,759
Operating Income (Loss)	2,069	643	(210)	2,502
Other Income (Expense):				
Miscellaneous income (expense), net	192	14	(1)	205
Pension and OPEB mark-to-market adjustment	(109)	(8)	(27)	(144)
Interest expense	(514)	(167)	(435)	(1,116)
Capitalized financing costs	26	37	2	65
Total Other Expense	(405)	(124)	(461)	(990)
Income (Loss) Before Income Taxes (Benefits)	1,664	519	(671)	1,512
Income taxes	422	122	(54)	490
Income (Loss) From Continuing Operations	1,242	397	(617)	1,022
Discontinued Operations, net of tax	—	—	326	326
Net Income (Loss)	$ 1,242	$ 397	$ (291)	$ 1,348

2017 Financial Results	Regulated Distribution	Regulated Transmission	Corporate/Other and Reconciling Adjustments	FirstEnergy Consolidated
		(In millions)		
Revenues:				
External				
Electric	$ 9,521	$ 1,307	$ (94)	$ 10,734
Other	239	17	(62)	194
Total Revenues	9,760	1,324	(156)	10,928
Operating Expenses:				
Fuel	493	—	4	497
Purchased power	2,924	—	2	2,926
Other operating expenses	2,546	203	12	2,761
Provision for depreciation	724	224	79	1,027
Amortization of regulatory assets, net	292	16	—	308
General taxes	727	173	40	940
Impairment of assets	—	41	—	41
Total Operating Expenses	7,706	657	137	8,500
Operating Income (Loss)	2,054	667	(293)	2,428
Other Income (Expense):				
Miscellaneous income (expense), net	57	1	(5)	53
Pension and OPEB mark-to-market adjustment	(102)	—	—	(102)
Interest expense	(535)	(156)	(314)	(1,005)
Capitalized financing costs	22	29	1	52
Total Other Expense	(558)	(126)	(318)	(1,002)
Income (Loss) Before Income Taxes (Benefits)	1,496	541	(611)	1,426
Income taxes (benefits)	580	205	930	1,715
Income (Loss) From Continuing Operations	916	336	(1,541)	(289)
Discontinued Operations, net of tax	—	—	(1,435)	(1,435)
Net Income (Loss)	$ 916	$ 336	$ (2,976)	$ (1,724)

Changes Between 2018 and 2017 Financial Results Increase (Decrease)	Regulated Distribution	Regulated Transmission	Corporate/Other and Reconciling Adjustments	FirstEnergy Consolidated
		(In millions)		
Revenues:				
External				
Electric	$ 330	$ 28	$ (42)	$ 316
Other	13	1	3	17
Total Revenues	343	29	(39)	333
Operating Expenses:				
Fuel	45	—	(4)	41
Purchased power	179	—	4	183
Other operating expenses	438	50	(116)	372
Provision for depreciation	88	28	(7)	109
Amortization (deferral) of regulatory assets, net	(455)	(3)	—	(458)
General taxes	33	19	1	53
Impairment of assets	—	(41)	—	(41)
Total Operating Expenses	328	53	(122)	259
Operating Income	15	(24)	83	74
Other Income (Expense):				
Miscellaneous income (expense), net	135	13	4	152
Pension and OPEB mark-to-market adjustment	(7)	(8)	(27)	(42)
Interest expense	21	(11)	(121)	(111)
Capitalized financing costs	4	8	1	13
Total Other Income (Expense)	153	2	(143)	12
Income (Loss) Before Income Taxes (Benefits)	168	(22)	(60)	86
Income taxes (benefits)	(158)	(83)	(984)	(1,225)
Income (Loss) From Continuing Operations	326	61	924	1,311
Discontinued Operations, net of tax	—	—	1,761	1,761
Net Income (Loss)	$ 326	$ 61	$ 2,685	$ 3,072

Regulated Distribution — 2018 Compared with 2017

Regulated Distribution's operating results increased $326 million in 2018, as compared to 2017, primarily reflecting the reversal of a reserve on recoverability of certain REC purchases in Ohio, the net impact of a FERC settlement that reallocated certain transmission costs, higher revenues associated with increased weather-related usage and the implementation of approved rates in Ohio and Pennsylvania, as further described below, and lower pension and OPEB non-service costs.

Revenues —

The $343 million increase in total revenues resulted from the following sources:

	For the Years Ended December 31,		
Revenues by Type of Service	**2018**	**2017**	**Increase**
		(In millions)	
Distribution services [(1)]	$ 5,413	$ 5,323	$ 90
Generation sales:			
Retail	3,936	3,733	203
Wholesale	502	465	37
Total generation sales	4,438	4,198	240
Other	252	239	13
Total Revenues	$ 10,103	$ 9,760	$ 343

[(1)] Includes $254 million and $263 million of ARP revenues for the years ended December 31, 2018 and 2017, respectively.

Distribution services revenues increased $90 million primarily resulting from the impact of approved base distribution rate increases in Pennsylvania, effective January 27, 2017, higher revenue from the DCR in Ohio, and higher weather-related customer usage as described below. Additionally, distribution revenues were impacted by higher rates associated with the recovery of deferred costs, partially offset by certain tax impacts reflected as a reduction in revenues resulting from the Tax Act. Distribution deliveries by customer class are summarized in the following table:

	For the Years Ended December 31,		Increase
Electric Distribution MWH Deliveries	**2018**	**2017**	**(Decrease)**
	(In thousands)		
Residential	55,994	52,048	7.6 %
Commercial	42,213	41,220	2.4 %
Industrial	53,004	51,876	2.2 %
Other	560	572	(2.1)%
Total Electric Distribution MWH Deliveries	151,771	145,716	4.2 %

Higher distribution deliveries to residential and commercial customers primarily reflect higher weather-related usage resulting from cooling degree days that were 26% above 2017, and 34% above normal, as well as, heating degree days that were 14% above 2017, and 2% above normal. Deliveries to industrial customers increased reflecting higher shale and steel customer usage.

The following table summarizes the price and volume factors contributing to the $240 million increase in generation revenues in 2018, as compared to 2017:

Source of Change in Generation Revenues	Increase (Decrease)
	(In millions)
Retail:	
Effect of increase in sales volumes	$ 253
Change in prices	(50)
	203
Wholesale:	
Effect of decrease in sales volumes	(41)
Change in prices	49
Capacity revenue	29
	37
Increase in Generation Revenues	$ 240

The increase in retail generation sales volumes was primarily due to higher weather-related usage, as described above, as well as decreased customer shopping in New Jersey and Pennsylvania. Total generation provided by alternative suppliers as a percentage of total MWH deliveries decreased to 50% from 52% in New Jersey and to 67% from 68% in Pennsylvania. The decrease in retail generation prices primarily resulted from lower default service auction prices in New Jersey and Pennsylvania.

Wholesale generation revenues increased $37 million in 2018, as compared to 2017, primarily due to higher spot market energy prices and capacity revenue, partially offset by lower wholesale sales volumes. The difference between current wholesale generation revenues and certain energy costs incurred are deferred for future recovery or refund, with no material impact to earnings.

Operating Expenses —

Total operating expenses increased $328 million primarily due to the following:

- Fuel expense increased $45 million in 2018, as compared to 2017, primarily related to higher unit costs.

- Purchased power costs increased $179 million in 2018, as compared to 2017, primarily due to increased volumes resulting from higher customer weather-related usage as well as decreased customer shopping.

Source of Change in Purchased Power	Increase (Decrease)
	(In millions)
Purchases from non-affiliates:	
Change due to decreased unit costs	$ (25)
Change due to increased volumes	200
	175
Purchases from affiliates:	
Change due to decreased unit costs	(9)
Change due to decreased volumes	(35)
	(44)
Capacity expense	48
Increase in Purchased Power Costs	$ 179

- Other operating expenses increased $438 million primarily due to:

    - Increased storm restoration costs of $228 million, primarily associated with the March 2018 east coast storms, which were mostly deferred for future recovery, resulting in no material impact on current period earnings.
    - Higher net network transmission expenses of $49 million reflecting increased transmission costs, partially offset by a FERC settlement during the second quarter of 2018 that reallocated certain transmission costs across utilities in PJM and resulted in a refund to the Ohio Companies. Except for certain transmission costs and credits at the

Ohio Companies, the difference between current revenues and transmission costs incurred are deferred for future recovery or refund, resulting in no material impact on current period earnings.

- Higher energy efficiency and other program costs of $18 million, which are deferred for future recovery, resulting in no material impact on current period earnings.
- Higher operating and maintenance expenses of $115 million, primarily due to higher benefit costs, increased vegetation management costs and higher contractor spend.
- Pension special termination costs associated with the voluntary retirement program in 2018 of $28 million.

- Depreciation expense increased $88 million, primarily due to a higher asset base.

- Amortization expense decreased $455 million, primarily due to increased deferral of storm restoration costs, the Ohio Supreme Court ruling regarding purchase of RECs, higher deferral of transmission and generation expenses including the net impact of the FERC settlement discussed above, and higher deferral of energy efficiency program costs.

- General taxes expense increased $33 million, primarily due to higher property taxes and revenue-related taxes associated with increased sales volumes.

Other Expense —

Total other expense decreased $153 million, primarily due to higher net miscellaneous income resulting from lower pension and OPEB non-service costs from the pension contribution discussed above, and lower capitalization, as well as lower interest expense resulting from debt maturities and refinancings.

Income Taxes —

Regulated Distribution's effective tax rate was 25.4% and 38.8% for 2018 and 2017, respectively. The lower rate is primarily a result of certain impacts of the Tax Act and the absence of a $30 million charge to income tax expense as a result of the remeasurement of accumulated deferred income taxes recognized in 2017.

Regulated Transmission — 2018 Compared with 2017

Regulated Transmission's operating results increased $61 million in 2018, as compared to 2017, primarily resulting from the impact of a higher rate base at ATSI and MAIT, higher revenues at JCP&L, and the absence of a pre-tax impairment charge of $41 million in 2017, partially offset by a lower rate base at TrAIL.

Revenues —

Total revenues increased $29 million in 2018, as compared to 2017, primarily due to the full year impact of the implementation of approved settlement rates at JCP&L and recovery of incremental operating expenses and a higher rate base at ATSI and MAIT, partially offset by a lower rate base at TrAIL.

Revenues by transmission asset owner are shown in the following table:

	For the Years Ended December 31,		Increase
Revenues by Transmission Asset Owner	**2018**	**2017**	**(Decrease)**
		(In millions)	
ATSI	$ 668	$ 657	$ 11
TrAIL	246	282	(36)
MAIT	154	110	44
Other	285	275	10
Total Revenues	$ 1,353	$ 1,324	$ 29

Operating Expenses —

Total operating expenses increased $53 million in 2018, as compared to 2017, primarily due to higher operating and maintenance expenses, as well as higher property taxes and depreciation due to a higher asset base. The majority of the increases are recovered through formula rates at the Transmission Companies, resulting in no material impact on current period earnings. Additionally, as a result of settlement agreements filed with FERC regarding the transmission rates for MAIT and JCP&L, a pre-tax impairment charge of $41 million was recognized in 2017.

Income Taxes —

Regulated Transmission's effective tax rate was 23.5% and 37.9% for 2018 and 2017, respectively. The lower rate is primarily a result of certain impacts of the Tax Act and the absence of a $6 million charge to income tax expense as a result of the remeasurement of accumulated deferred income taxes recognized in 2017.

Corporate/Other — 2018 Compared with 2017

Financial results from the Corporate/Other operating segment and reconciling adjustments resulted in a $924 million increase in income from continuing operations for 2018 compared to 2017, primarily associated with the absence of FES' and FENOC's remeasurement of deferred taxes in 2017, resulting from the Tax Act and lower operating expenses, partially offset by an increase in the ARO at McElroy's Run, higher interest expense and the 2018 remeasurement of West Virginia unitary group deferred taxes. Although FES' and FENOC's operations are presented in discontinued operations, the 2017 remeasurement of deferred taxes remain in continuing operations in accordance with accounting standards for the impact of tax rate changes. Higher interest expense resulted from FE's issuance of $3 billion of senior notes in June 2017, as well as make-whole premiums of approximately $89 million in connection with the repayment of AE Supply and AGC senior notes in the second quarter of 2018. The increase in taxes resulting from the remeasurement of West Virginia unitary group deferred taxes is primarily due to the legal and financial separation of FES and FENOC from FirstEnergy. This separation officially eroded the ties between FES, FENOC and other FirstEnergy subsidiaries doing business in West Virginia. As such, FES and FENOC were removed from the West Virginia unitary group when calculating West Virginia state income taxes, resulting in a $126 million charge to income tax expense in continuing operations associated with the remeasurement in state deferred taxes.

For the year ended December 31, 2018 and 2017, FirstEnergy recorded income (loss) from discontinued operations, net of tax, of $326 million and $(1,435) million, respectively. Discontinued operations were comprised of the results of FES, FENOC, BSPC and a portion of AE Supply (including the Pleasants Power Station, designated as discontinued operations in the third quarter of 2018) and a net gain on disposal of $435 million in 2018, which consisted of the following:

(In millions)	**For the Year Ended December 31, 2018**
Removal of investment in FES and FENOC	$ 2,193
Assumption of benefit obligations retained at FE	(820)
Guarantees and credit support provided by FE	(139)
Reserve on receivables and allocated Pension/OPEB mark-to-market	(914)
Settlement consideration and services credit	(1,197)
Loss on disposal of FES and FENOC, before tax	(877)
Income tax benefit, including estimated worthless stock deduction	1,312
Gain on disposal of FES and FENOC, net of tax	$ 435

Summary of Results of Operations — 2017 Compared with 2016

Financial results for FirstEnergy's business segments for the years ended December 31, 2017 and 2016, were as follows:

2017 Financial Results	Regulated Distribution	Regulated Transmission	Corporate/Other and Reconciling Adjustments	FirstEnergy Consolidated
		(In millions)		
Revenues:				
External				
Electric	$ 9,521	$ 1,307	$ (94)	$ 10,734
Other	239	17	(62)	194
Total Revenues	9,760	1,324	(156)	10,928
Operating Expenses:				
Fuel	493	—	4	497
Purchased power	2,924	—	2	2,926
Other operating expenses	2,546	203	12	2,761
Provision for depreciation	724	224	79	1,027
Amortization of regulatory assets, net	292	16	—	308
General taxes	727	173	40	940
Impairment of assets	—	41	—	41
Total Operating Expenses	7,706	657	137	8,500
Operating Income (Loss)	2,054	667	(293)	2,428
Other Income (Expense):				
Miscellaneous income (expense), net	57	1	(5)	53
Pension and OPEB mark-to-market adjustment	(102)	—	—	(102)
Interest expense	(535)	(156)	(314)	(1,005)
Capitalized financing costs	22	29	1	52
Total Other Expense	(558)	(126)	(318)	(1,002)
Income (Loss) Before Income Taxes (Benefits)	1,496	541	(611)	1,426
Income taxes (benefits)	580	205	930	1,715
Income (Loss) From Continuing Operations	916	336	(1,541)	(289)
Discontinued Operations, net of tax	—	—	(1,435)	(1,435)
Net Income (Loss)	$ 916	$ 336	$ (2,976)	$ (1,724)

2016 Financial Results	Regulated Distribution	Regulated Transmission	Corporate/Other and Reconciling Adjustments	FirstEnergy Consolidated
		(In millions)		
Revenues:				
External				
Electric	$ 9,352	$ 1,123	$ (12)	$ 10,463
Other	267	20	(50)	237
Total Revenues	9,619	1,143	(62)	10,700
Operating Expenses:				
Fuel	567	—	4	571
Purchased power	3,303	—	7	3,310
Other operating expenses	2,455	152	(28)	2,579
Provision for depreciation	676	187	70	933
Amortization of regulatory assets, net	290	7	—	297
General taxes	720	153	40	913
Impairment of assets	—	—	43	43
Total Operating Expenses	8,011	499	136	8,646
Operating Income (Loss)	1,608	644	(198)	2,054
Other Income (Expense):				
Miscellaneous income (expense), net	85	(1)	(40)	44
Pension and OPEB mark-to-market adjustment	(101)	(1)	—	(102)
Interest expense	(586)	(158)	(229)	(973)
Capitalized financing costs	20	34	1	55
Total Other Expense	(582)	(126)	(268)	(976)
Income (Loss) Before Income Taxes (Benefits)	1,026	518	(466)	1,078
Income taxes (benefits)	375	187	(35)	527
Income (Loss) From Continuing Operations	651	331	(431)	551
Discontinued Operations, net of tax	—	—	(6,728)	(6,728)
Net Income (Loss)	$ 651	$ 331	$ (7,159)	$ (6,177)

Changes Between 2017 and 2016 Financial Results Increase (Decrease)	Regulated Distribution	Regulated Transmission	Corporate/Other and Reconciling Adjustments	FirstEnergy Consolidated
		(In millions)		
Revenues:				
External				
Electric	$ 169	$ 184	$ (82)	$ 271
Other	(28)	(3)	(12)	(43)
Internal	—	—	—	—
Total Revenues	141	181	(94)	228
Operating Expenses:				
Fuel	(74)	—	—	(74)
Purchased power	(379)	—	(5)	(384)
Other operating expenses	91	51	40	182
Provision for depreciation	48	37	9	94
Amortization of regulatory assets, net	2	9	—	11
General taxes	7	20	—	27
Impairment of assets	—	41	(43)	(2)
Total Operating Expenses	(305)	158	1	(146)
Operating Income (Loss)	446	23	(95)	374
Other Income (Expense):				
Miscellaneous income (expense), net	(28)	2	35	9
Pension and OPEB mark-to-market adjustment	(1)	1	—	—
Interest expense	51	2	(85)	(32)
Capitalized financing costs	2	(5)	—	(3)
Total Other Expense	24	—	(50)	(26)
Income (Loss) Before Income Taxes (Benefits)	470	23	(145)	348
Income taxes (benefits)	205	18	965	1,188
Income (Loss) From Continuing Operations	265	5	(1,110)	(840)
Discontinued Operations, net of tax	—	—	5,293	5,293
Net Income (Loss)	$ 265	$ 5	$ 4,183	$ 4,453

Regulated Distribution — 2017 Compared with 2016

Regulated Distribution's operating results increased $265 million in 2017, as compared to 2016, primarily reflecting the implementation of approved rates in Ohio, Pennsylvania, and New Jersey, and the absence of a $51 million regulatory charge recognized in 2016 resulting from the PUCO's March 31, 2016 Opinion and Order adopting and approving, with modifications, the Ohio Companies' ESP IV, partially offset by lower weather-related customer usage, as further described below.

Revenues —

The $141 million increase in total revenues resulted from the following sources:

Revenues by Type of Service	For the Years Ended December 31, 2017	2016	Increase (Decrease)
		(In millions)	
Distribution services [1]	$ 5,323	$ 4,720	$ 603
Generation sales:			
Retail	3,733	4,147	(414)
Wholesale	465	485	(20)
Total generation sales	4,198	4,632	(434)
Other	239	267	(28)
Total Revenues	$ 9,760	$ 9,619	$ 141

[1] Includes $263 million and $67 million of ARP revenues for the years ended December 31, 2017 and 2016, respectively.

Distribution services revenues increased $603 million, primarily resulting from the implementation of the DMR in Ohio effective January 1, 2017, approved base distribution rate increases in Pennsylvania and New Jersey effective January 27, 2017 and January 1, 2017, respectively, and higher revenue from the DCR in Ohio. Additionally, distribution revenues were impacted by higher rates associated with the recovery of deferred costs and the implementation of certain energy efficiency programs in Ohio. Partially offsetting these rate increases was a decline in MWH deliveries, primarily resulting from lower weather-related usage, as described below. Distribution deliveries by customer class are summarized in the following table:

Electric Distribution MWH Deliveries	For the Years Ended December 31, 2017	2016	Increase (Decrease)
	(In thousands)		
Residential	52,048	54,840	(5.1)%
Commercial	41,220	42,771	(3.6)%
Industrial	51,876	50,651	2.4 %
Other	572	579	(1.2)%
Total Electric Distribution MWH Deliveries	145,716	148,841	(2.1)%

Lower distribution deliveries to residential and commercial customers primarily reflect lower weather-related usage resulting from heating degree days that were 4% below 2016, and 11% below normal as well as cooling degree days that were 19% below 2016, but 8% above normal. Deliveries to industrial customers increased reflecting higher shale and steel customer usage.

The following table summarizes the price and volume factors contributing to the $434 million decrease in generation revenues in 2017 as compared to 2016:

Source of Change in Generation Revenues	Decrease
	(In millions)
Retail:	
Effect of decrease in sales volumes	$ (242)
Change in prices	(172)
	(414)
Wholesale:	
Effect of decrease in sales volumes	(6)
Capacity revenue	(14)
	(20)
Decrease in Generation Revenues	$ (434)

The decrease in retail generation sales volumes was primarily due to increased customer shopping in Ohio, Pennsylvania, and JCP&L, as well as lower weather-related usage, as described above. Total generation provided by alternative suppliers as a percentage of total MWH deliveries increased to 86% from 83% for the Ohio Companies, to 68% from 67% for the Pennsylvania
Companies and to 52% from 51% for JCP&L. The decrease in retail generation prices primarily resulted from lower default service auction prices in Ohio, Pennsylvania, and New Jersey.

Wholesale generation revenues decreased $20 million in 2017, as compared to 2016, primarily due to lower capacity revenue and lower wholesale sales. The difference between current wholesale generation revenues and certain energy costs is deferred for future recovery or refund, with no material impact to earnings.

Other revenues decreased $28 million, primarily related to lower transition cost recovery revenues in New Jersey.

Operating Expenses —

Total operating expenses decreased $305 million primarily due to the following:

- Fuel expense decreased $74 million in 2017 as compared to 2016, primarily related to lower unit costs.
- Purchased power costs decreased $379 million, in 2017 as compared to 2016, primarily due to decreased volumes, as described above, as well as lower default service auction prices.

Source of Change in Purchased Power	Increase (Decrease)
	(In millions)
Purchases from non-affiliates:	
Change due to decreased unit costs	$ (147)
Change due to decreased volumes	(151)
	(298)
Purchases from affiliates:	
Change due to decreased unit costs	(26)
Change due to decreased volumes	(67)
	(93)
Capacity expense	12
Decrease in Purchased Power Costs	$ (379)

- Other operating expenses increased $91 million primarily due to:
    - Higher network transmission expenses of $35 million. The difference between current revenues and transmission costs incurred are deferred for future recovery or refund, resulting in no material impact on current period earnings.
    - Higher operating and maintenance expenses of $62 million, including increased expenses in Pennsylvania recovered through the new base distribution rates, effective January 27, 2017, and increased storm restoration costs, which were deferred for future recovery, resulting in no material impact on current period earnings.

- Higher energy efficiency program expenses of $45 million in Ohio, which were recovered through higher distribution rider revenues; partially offset by,
- Lower regulatory costs of $51 million resulting from the absence of economic development and energy efficiency obligations recognized in 2016 in accordance with the PUCO's March 31, 2016 Opinion and Order adopting and approving, with modifications, the Ohio Companies' ESP IV.

- Depreciation expenses increased $48 million due to a higher asset base as well as increased rates in Pennsylvania.

Other Expense —

Total other expense decreased $24 million primarily related to lower interest expense resulting from various debt maturities at JCP&L, CEI and OE, partially offset by the absence of a $29 million gain on the sale of oil and gas rights at WP recognized in 2016.

Income Taxes —

Regulated Distribution's effective tax rate was 38.8% and 36.5% for 2017 and 2016, respectively. The increase primarily resulted from a $30 million charge to income tax expense as a result of the remeasurement of accumulated deferred income taxes in conjunction with the Tax Act.

Regulated Transmission — 2017 Compared with 2016

Regulated Transmission's operating results increased $5 million in 2017 as compared to 2016, primarily resulting from the impact of a higher rate base at ATSI and TrAIL, partially offset by a pre-tax impairment charge of $41 million, as discussed below.

Revenues —

Total revenues increased $181 million in 2017, as compared to 2016, primarily due to recovery of incremental operating expenses and a higher rate base at ATSI and TrAIL, and the implementation of new rates at MAIT and JCP&L.

Revenues by transmission asset owner are shown in the following table:

Revenues by Transmission Asset Owner	For the Years Ended December 31, 2017	2016	Increase (Decrease)
		(In millions)	
ATSI	$ 657	$ 540	$ 117
TrAIL	282	252	30
MAIT[(1)]	110	101	9
JCPL	125	91	34
Other	150	159	(9)
Total Revenues	$ 1,324	$ 1,143	$ 181

[(1)] Revenues prior to January 31, 2017, represent transmission revenues under stated rates at ME and PN.

Operating Expenses —

Total operating expenses increased $158 million in 2017, as compared to 2016, principally due to higher operating and maintenance expenses, as well as higher property taxes and depreciation expense due to a higher asset base. Additionally, as a result of settlement agreements filed with FERC regarding the transmission rates for MAIT and JCP&L, a pre-tax impairment charge of $41 million was recognized in 2017.

Income Taxes —

Regulated Transmission's effective tax rate was 37.9% and 36.1% for 2017 and 2016, respectively. The increase resulted from a $6 million charge to income tax expense as a result of the remeasurement of accumulated deferred income taxes in conjunction with the Tax Act.

Corporate/Other — 2017 Compared with 2016

Financial results from the Corporate/Other operating segment and reconciling adjustments resulted in a $1,110 million decrease in income from continuing operations for 2017 compared to 2016, primarily associated with higher interest expense and a charge

to income tax expense as a result of the remeasurement of accumulated deferred income taxes in conjunction with the Tax Act. Higher interest expense resulted from the issuance of $3 billion of senior notes in June 2017.

For 2017 and 2016, FirstEnergy recorded a loss from discontinued operations, net of tax, of $1,435 million and $6,728 million, respectively. Discontinued operations were comprised of the results of FES, FENOC, BSPC and a portion of AE Supply (including the Pleasants Power Station). Included in these amounts were impairment charges of $2,358 million and $10,622 million for the years ended December 31, 2017 and 2016, respectively.

Regulatory Assets and Liabilities

Regulatory assets represent incurred costs that have been deferred because of their probable future recovery from customers through regulated rates. Regulatory liabilities represent amounts that are expected to be credited to customers through future regulated rates or amounts collected from customers for costs not yet incurred. FirstEnergy, the Utilities and the Transmission Companies net their regulatory assets and liabilities based on federal and state jurisdictions.

As a result of the Tax Act, FirstEnergy adjusted its net deferred tax liabilities at December 31, 2017, for the reduction in the corporate federal income tax rate from 35% to 21%. For the portions of FirstEnergy's business that apply regulatory accounting, the impact of reducing the net deferred tax liabilities was offset with a regulatory liability, as appropriate, for amounts expected to be refunded to rate payers in future rates, with the remainder recorded to deferred income tax expense.

The following table provides information about the composition of net regulatory assets and liabilities as of December 31, 2018 and December 31, 2017, and the changes during the year ended December 31, 2018:

Net Regulatory Assets (Liabilities) by Source	December 31, 2018	December 31, 2017	Change
		(In millions)	
Regulatory transition costs	$ 49	$ 46	$ 3
Customer payables for future income taxes	(2,725)	(2,765)	40
Nuclear decommissioning and spent fuel disposal costs	(148)	(323)	175
Asset removal costs	(787)	(774)	(13)
Deferred transmission costs	170	187	(17)
Deferred generation costs	202	198	4
Deferred distribution costs	208	258	(50)
Contract valuations	62	118	(56)
Storm-related costs	500	329	171
Other	62	46	16
Net Regulatory Liabilities included on the Consolidated Balance Sheets	$ (2,407)	$ (2,680)	$ 273

The following is a description of the regulatory assets and liabilities described above:

Regulatory transition costs - Primarily relates to JCP&L costs incurred during the transition to a competitive retail market and under-recovered during the period from August 1, 1999 through July 31, 2003; and JCP&L costs associated with basic generation service, capacity and ancillary services, net of all revenues from the sale of the committed supply in the wholesale market. Amounts are amortized through 2021.

Customer payables for future income taxes - Reflects amounts to be recovered or refunded through future rates to pay income taxes that become payable when rate revenue is provided to recover items such as AFUDC-equity and depreciation of property, plant and equipment for which deferred income taxes were not recognized for ratemaking purposes, including amounts attributable to tax rate changes such as tax reform. These amounts are being amortized over the period in which the related deferred tax asset reverse, which is generally over the expected life of the underlying asset. See Note 7, "Taxes" for further discussion on the Tax Act.

Nuclear decommissioning and spent fuel disposal costs - Reflects a regulatory liability representing amounts collected from customers and placed in external trusts including income, losses and changes in fair value thereon (as well as accretion of the related ARO) for the future decommissioning of TMI-2.

Asset removal costs - Primarily represents the rates charged to customers by FirstEnergy's regulated businesses that include a provision for the cost of future activities to remove assets, including obligations for which an asset retirement obligation has been recognized, that are expected to be incurred at the time of retirement.

Deferred transmission costs - Principally represents differences between revenues earned based on actual costs for formula rate companies (the Transmission Companies) and the amounts billed. Amounts are recorded as a regulatory asset or liability and recovered or refunded, respectively, in subsequent periods.

Deferred generation costs - Primarily relates to regulatory assets associated with the securitized recovery of certain electric customer heating discounts, fuel and purchased power regulatory assets at the Ohio Companies (amortized through 2034) as well as the ENEC at MP and PE. MP and PE recover net power supply costs, including fuel costs, purchased power costs and related expenses, net of related market sales revenue through the ENEC. The ENEC rate is updated annually.

Deferred distribution costs - Primarily relates to the Ohio Companies deferral of certain expenses resulting from distribution and reliability related expenditures, including interest, and are amortized through 2036.

Contract valuations - Primarily relates to the recovery of Penelec above-market NUG costs. Amounts also include the amortization of a purchase accounting adjustment which was recorded in connection with the AE merger representing the fair value of NUG purchased power contracts (amortized over the life of the contracts with various end dates from 2027 through 2036).

Storm-related costs - Relates to the recovery of storm costs which vary by jurisdiction of which $232 million is currently being recovered through rates. Approximately $268 million is not currently being recovered as of December 31, 2018.

Approximately $503 million and $223 million of regulatory assets, primarily related to storm damage costs, do not earn a current return as of December 31, 2018 and 2017, respectively, and a majority of which are currently being recovered through rates over varying periods depending on the nature of the deferral and the jurisdiction. Additionally, certain regulatory assets, totaling approximately $141 million as of December 31, 2018, are recorded based on prior precedent or anticipated recovery based on rate making premises without a specific order.

CAPITAL RESOURCES AND LIQUIDITY

FirstEnergy's business is capital intensive, requiring significant resources to fund operating expenses, construction expenditures, scheduled debt maturities and interest payments, dividend payments and contributions to its pension plan.

On January 22, 2018, FirstEnergy announced a $2.5 billion equity issuance, which included $1.62 billion in mandatorily convertible preferred equity with an initial conversion price of $27.42 per share and $850 million of common equity issued at $28.22 per share. The preferred shares participate in dividends paid on common stock on an as-converted basis and are non-voting except in certain limited circumstances. The preferred shares are convertible at the option of the holders, and will mandatorily convert in July 2019, subject to limited exceptions. Proceeds from the investment were used to reduce FE holding company debt by $1.45 billion and fund FirstEnergy's pension plan as discussed below, with the remainder used for general corporate purposes. As of December 31, 2018, 911,411 preferred shares have been converted into 33,238,910 common shares at the option of the holders, resulting in 704,589 shares of preferred shares outstanding. An additional 494,767 preferred shares were converted into 18,044,018 common shares at the option of the holders in January 2019, resulting in 209,822 preferred shares outstanding and yet to be converted as of January 31, 2019.

The equity investment is strengthening FirstEnergy's balance sheet and is supporting the company's transition to a fully regulated utility company. By deleveraging the company, the investment also enabled FirstEnergy to enhance its investment grade credit metrics. The January 2018 equity issuance served as a catalyst to FirstEnergy's 2018-2021 "Unlocking the Future" regulated growth plan, which includes earnings growth targets, Regulated Distribution segment average annual rate base growth of 5%, formula transmission average annual rate base growth of 11%, and assumes no additional equity issuances through 2021, outside of FE's regular stock investment and employee benefit plans.

In addition to this equity investment, FE and its distribution and transmission subsidiaries expect their existing sources of liquidity to remain sufficient to meet their respective anticipated obligations. In addition to internal sources to fund liquidity and capital requirements for 2019 and beyond, FE and its distribution and transmission subsidiaries expect to rely on external sources of funds. Short-term cash requirements not met by cash provided from operations are generally satisfied through short-term borrowings. Long-term cash needs may be met through the issuance of long-term debt at certain distribution and transmission subsidiaries to, among other things, fund capital expenditures and refinance short-term and maturing long-term debt, subject to market conditions and other factors.

In January 2018, FirstEnergy satisfied its minimum required funding obligations to its qualified pension plan of $500 million and addressed anticipated required funding obligations through 2020 to its pension plan with an additional contribution of $750 million. On February 1, 2019, FirstEnergy made a $500 million voluntary cash contribution to the qualified pension plan. As a result of this contribution, FirstEnergy expects no required contributions through 2021.

FirstEnergy's capital expenditures for 2019 are expected to be approximately $2.9 to $3.0 billion. Planned capital initiatives are intended to promote reliability, improve operations, and support current environmental and energy efficiency directives.

Capital expenditures for 2018 and forecasted expenditures for 2019, 2020, and 2021, by reportable segment are included below:

Reportable Segment	2018 Actual	2019 Forecast	2020 Forecast	2021 Forecast
		(In millions)		
Regulated Distribution	$ 1,635	$ 1,600 - 1,700	$ 1,500 - 1,700	$ 1,500 - 1,700
Regulated Transmission	1,165	1,200	1,200	1,200
Corporate/Other	183	85	90	110
Total	$ 2,983	$ 2,885 - 2,985	$ 2,790 - 2,990	$ 2,810 - 3,010

FirstEnergy's transmission growth program, *Energizing the Future*, provides a stable and proven investment platform, while producing important customer benefits. Through the program, $4.4 billion in capital investments were made from 2014 through 2017, and the company plans to invest up to an additional $4.8 billion in the 2018-2021 timeframe, which includes approximately $1.2 billion in 2018 and a target of $1.2 billion annually through 2021. As noted above, over 80% of these capital investments are recoverable through formula rate mechanisms, reducing regulatory lag in recovering a return on investment, while offering a reasonable rate of return. These investments are expected to continue to improve the performance and condition of the transmission system while increasing automation and communication, adding capacity to the system and improving customer reliability. Beyond 2021, FirstEnergy believes there are incremental investment opportunities for its existing transmission infrastructure of up to approximately $20 billion, which are expected to strengthen grid and cyber-security and make the transmission system more reliable, robust, secure and resistant to extreme weather events, with improved operational flexibility.

In the Regulated Distribution segment, FirstEnergy remains committed to providing customer service-oriented growth opportunities by investing between $6.2 billion and $6.7 billion over 2018 to 2021, including $1.6 billion invested in 2018. Approximately 40% of capital expenditures are recoverable through various rate mechanisms, riders and trackers. Beginning in 2019, expected investments at the Ohio Companies include the pending Ohio Grid Modernization plan which includes installation of approximately 700,000

advanced meters, distribution automation, and integrated ‘volt/var’ controls. Additionally, the pending JCP&L Reliability Plus infrastructure improvement plan filed with the NJBPU is expected to bring both reduced outages and strengthen the system while preparing for the grid of the future in New Jersey. FirstEnergy continues to explore other opportunities for growth in its Regulated Distribution business, including investments in electric system improvement and modernization projects to increase reliability and improve service to customers, as well as exploring opportunities in customer engagement that focus on electrification of customers’ homes and businesses by providing a full range of products and services.

Any financing plans by FE or any of its consolidated subsidiaries, including the issuance of equity and debt, and the refinancing of short-term and maturing long-term debt are subject to market conditions and other factors. No assurance can be given that any such issuances, financing or refinancing, as the case may be, will be completed as anticipated or at all. Any delay in the completion of financing plans could require FE or any of its consolidated subsidiaries to utilize short-term borrowing capacity, which could impact available liquidity. In addition, FE and its consolidated subsidiaries expect to continually evaluate any planned financings, which may result in changes from time to time.

The FES Bankruptcy has also impacted FirstEnergy's capital requirements. On March 9, 2018, FES borrowed $500 million from FE under the secured credit facility, dated as of December 6, 2016, among FES, as Borrower, FG and NG as guarantors, and FE, as lender, which fully utilized the committed line of credit available under the secured credit facility. Following the FES Bankruptcy deconsolidation of FES, FE fully reserved for the $500 million associated with the borrowings under the secured credit facility. Under the terms of the FES Bankruptcy settlement agreement discussed below, FE will release any and all claims against the FES Debtors with respect to the $500 million borrowed under the secured credit facility.

On September 26, 2018, the Bankruptcy Court approved a FES Bankruptcy settlement agreement dated August 26, 2018, by and among FirstEnergy, two groups of key FES creditors (collectively, the FES Key Creditor Groups), the FES Debtors and the UCC. The FES Bankruptcy settlement agreement resolves certain claims by FirstEnergy against the FES Debtors and all claims by the FES Debtors and their creditors against FirstEnergy, and includes the following terms, among others:

- FE will pay certain pre-petition FES and FENOC employee-related obligations, which include unfunded pension obligations and other employee benefits.
- FE will waive all pre-petition claims (other than those claims under the Tax Allocation Agreement for the 2018 tax year) and certain post-petition claims, against the FES Debtors related to the FES Debtors and their businesses, including the full borrowings by FES under the $500 million secured credit facility, the $200 million credit agreement being used to support surety bonds, the BNSF/CSX rail settlement guarantee, and the FES Debtors' unfunded pension obligations.
- The full release of all claims against FirstEnergy by the FES Debtors and their creditors.
- A $225 million cash payment from FirstEnergy.
- A $628 million aggregate principal amount note issuance by FirstEnergy to the FES Debtors, which may be decreased by the amount, if any, of cash paid by FirstEnergy to the FES Debtors under the Intercompany Income Tax Allocation Agreement for the tax benefits related to the sale or deactivation of certain plants.
- Transfer of the Pleasants Power Station and related assets, including the economic interests therein as of January 1, 2019, and a requirement that FE continue to provide access to the McElroy's Run CCR Impoundment Facility, which is not being transferred. FE will provide certain guarantees for retained environmental liabilities of AE Supply, including the McElroy’s Run CCR Impoundment Facility.
- FirstEnergy agrees to waive all pre-petition claims related to shared services and credit nine-months of the FES Debtors' shared service costs beginning as of April 1, 2018 through December 31, 2018, in an amount not to exceed $112.5 million, and FirstEnergy agrees to extend the availability of shared services until no later than June 30, 2020.
- FirstEnergy agrees to fund through its pension plan a pension enhancement, subject to a cap, should FES offer a voluntary enhanced retirement package in 2019 and to offer certain other employee benefits.
- FirstEnergy agrees to perform under the Intercompany Tax Allocation Agreement through the FES Debtors’ emergence from bankruptcy, at which time FirstEnergy will waive a 2017 overpayment for NOLs of approximately $71 million, reverse 2018 estimated payments for NOLs of approximately $88 million and pay the FES Debtors for the use of NOLs in an amount no less than $66 million for 2018 (of which approximately $52 million has been paid through December 31, 2018).

FirstEnergy determined a loss is probable with respect to the FES Bankruptcy and recorded pre-tax charges totaling $877 million in 2018. See Note 3, "Discontinued Operations," for additional information.

The FES Bankruptcy settlement agreement remains subject to satisfaction of certain conditions, most notably the issuance of a final order by the Bankruptcy Court approving the plan or plans of reorganization for the FES Debtors that are acceptable to FirstEnergy consistent with the requirements of the FES Bankruptcy settlement agreement. There can be no assurance that such conditions will be satisfied or the FES Bankruptcy settlement agreement will be otherwise consummated, and the actual outcome of this matter may differ materially from the terms of the agreement described herein. FirstEnergy will continue to evaluate the impact of any new factors on the settlement and their relative impact on the financial statements.

In connection with the FES Bankruptcy settlement agreement, FirstEnergy entered into a separation agreement with the FES Debtors to implement the separation of the FES Debtors and their businesses from FirstEnergy. A business separation committee was established between FirstEnergy and the FES Debtors to review and determine issues that arise in the context of the separation of the FES Debtors’ businesses from those of FirstEnergy.

In support of the strategic review to exit commodity-exposed generation, management launched the FE Tomorrow cost cutting initiative to define FirstEnergy's future organization to support its regulated business. FE Tomorrow is intended to align corporate services to efficiently support the regulated operations by ensuring that FirstEnergy has the right talent, organizational and cost structure to achieve our earnings growth targets. In support of the FE Tomorrow initiative, in June and early July 2018, nearly 500 employees in the shared services and utility services and sustainability organizations, which was more than 80% of eligible employees, accepted a voluntary enhanced retirement package, which included severance compensation and a temporary pension enhancement, with most employees retiring by December 31, 2018. Management expects the cost savings resulting from the FE Tomorrow initiative to support the company's growth targets.

As of December 31, 2018, FirstEnergy's net deficit in working capital (current assets less current liabilities) was due in large part to currently payable long-term debt. Currently payable long-term debt as of December 31, 2018, included the following:

Currently Payable Long-Term Debt	December 31, 2018
	(In millions)
Unsecured notes	$ 425
Sinking fund requirements	64
Other notes	14
	$ 503

Short-Term Borrowings / Revolving Credit Facilities

FE and the Utilities, and FET and certain of its subsidiaries, each participate in two separate five-year syndicated revolving credit facilities, which were amended on October 19, 2018, providing for aggregate commitments of $3.5 billion (Facilities), which are available through December 6, 2022. Under the amended FE facility, an aggregate amount of $2.5 billion is available to be borrowed, repaid and reborrowed, subject to separate borrowing sub-limits for each borrower including FE and its regulated distribution subsidiaries. Under the amended FET Facility, an aggregate amount of $1.0 billion is available to be borrowed, repaid and reborrowed under a syndicated credit facility, subject to separate borrowing sub-limits for each borrower including FET and the Transmission Companies. Prior to the amendments to the Facilities, the aggregate commitments under the Facilities was $5.0 billion, which were available until December 6, 2021. FirstEnergy amended the Facilities to reduce costs and to better align FirstEnergy's ongoing liquidity needs with its strategy to be a fully regulated utility company.

Borrowings under the Facilities may be used for working capital and other general corporate purposes, including intercompany loans and advances by a borrower to any of its subsidiaries. Generally, borrowings under the Facilities are available to each borrower separately and mature on the earlier of 364 days from the date of borrowing or the commitment termination date, as the same may be extended. Each of the Facilities contains financial covenants requiring each borrower to maintain a consolidated debt-to-total-capitalization ratio (as defined under each of the Facilities) of no more than 65%, and 75% for FET, measured at the end of each fiscal quarter.

FirstEnergy had $1,250 million and $300 million of short-term borrowings as of December 31, 2018 and 2017, respectively. FirstEnergy's available liquidity from external sources as of February 18, 2019, was as follows:

Borrower(s)	Type	Maturity	Commitment	Available Liquidity
			(In millions)	
FirstEnergy[(1)]	Revolving	December 2022	$ 2,500	$ 2,490
FET[(2)]	Revolving	December 2022	1,000	1,000
		Subtotal	$ 3,500	$ 3,490
		Cash and cash equivalents	—	156
		Total	$ 3,500	$ 3,646

(1) FE and the Utilities. Available liquidity includes impact of $10 million of LOCs issued under various terms.
(2) Includes FET and the Transmission Companies.

The following table summarizes the borrowing sub-limits for each borrower under the facilities, the limitations on short-term indebtedness applicable to each borrower under current regulatory approvals and applicable statutory and/or charter limitations as of January 31, 2019:

Borrower	FirstEnergy Revolving Credit Facility Sub-Limit	FET Revolving Credit Facility Sub-Limit	Regulatory and Other Short-Term Debt Limitations
		(In millions)	
FE	$ 2,500	$ —	$ — [1]
FET	—	1,000	— [1]
OE	500	—	500 [2]
CEI	500	—	500 [2]
TE	300	—	300 [2]
JCP&L	500	—	500 [2]
ME	500	—	500 [2]
PN	300	—	300 [2]
WP	200	—	200 [2]
MP	500	—	500 [2]
PE	150	—	150 [2]
ATSI	—	500	500 [2]
Penn	100	—	100 [2]
TrAIL	—	400	400 [2]
MAIT	—	400	400 [2]

[1] No limitations.
[2] Includes amounts which may be borrowed under the regulated companies' money pool.

The FE Facility and the FET Facility have $250 million and $100 million, respectively, subject to each borrower's sub-limit, available for the issuance of LOCs (subject to borrowings drawn under the Facilities) expiring up to one year from the date of issuance. The stated amount of outstanding LOCs will count against total commitments available under each of the Facilities and against the applicable borrower’s borrowing sub-limit.

The Facilities do not contain provisions that restrict the ability to borrow or accelerate payment of outstanding advances in the event of any change in credit ratings of the borrowers. Pricing is defined in “pricing grids,” whereby the cost of funds borrowed under the facilities is related to the credit ratings of the company borrowing the funds, other than the FET Facility, which is based on its subsidiaries' credit ratings. Additionally, borrowings under each of the Facilities are subject to the usual and customary provisions for acceleration upon the occurrence of events of default, including a cross-default for other indebtedness in excess of $100 million.

As of December 31, 2018, the borrowers were in compliance with the applicable debt-to-total-capitalization covenants in each case as defined under the respective Facilities. The minimum interest charge coverage ratio no longer applies following FE's upgrade to an investment grade credit rating.

Term Loans

On October 19, 2018, FE entered into two separate syndicated term loan credit agreements, the first being a $1.25 billion 364-day facility with The Bank of Nova Scotia, as administrative agent, and the lenders identified therein, and the second being a $500 million two-year facility with JPMorgan Chase Bank, N.A., as administrative agent, and the lenders identified therein, respectively, the proceeds of each were used to reduce short-term debt. The term loans contain covenants and other terms and conditions substantially similar to those of the FE Facility described above, including a consolidated debt-to-total-capitalization ratio.

The initial borrowing of $1.75 billion under the new term loans, which took the form of a Eurodollar rate advance, may be converted from time to time, in whole or in part, to alternate base rate advances or other Eurodollar rate advances. Outstanding alternate base rate advances will bear interest at a fluctuating interest rate per annum equal to the sum of an applicable margin for alternate base rate advances determined by reference to FE’s reference ratings plus the highest of (i) the administrative agent’s publicly-announced “prime rate”, (ii) the sum of 1/2 of 1% per annum plus the Federal Funds Rate in effect from time to time and (iii) the rate of interest per annum appearing on a nationally-recognized service such as the Dow Jones Market Service (Telerate) equal to one-month LIBOR on each day plus 1%. Outstanding Eurodollar rate advances will bear interest at LIBOR for interest periods of one week or one, two, three or six months plus an applicable margin determined by reference to FE’s reference ratings. Changes in FE’s reference ratings would lower or raise its applicable margin depending on whether ratings improved or were lowered, respectively.

FirstEnergy Money Pools

FirstEnergy's utility operating subsidiary companies also have the ability to borrow from each other and FE to meet their short-term working capital requirements. Similar but separate arrangements exist among FirstEnergy's unregulated companies with AE Supply, FE, FET, FEV and certain other unregulated subsidiaries. FESC administers these money pools and tracks surplus funds of FE and the respective regulated and unregulated subsidiaries, as the case may be, as well as proceeds available from bank borrowings. Companies receiving a loan under the money pool agreements must repay the principal amount of the loan, together with accrued interest, within 364 days of borrowing the funds. The rate of interest is the same for each company receiving a loan from their respective pool and is based on the average cost of funds available through the pool. The average interest rate for borrowings in 2018 was 2.26% per annum for the regulated companies' money pool and 2.96% per annum for the unregulated companies' money pools.

Long-Term Debt Capacity

FE's and its subsidiaries' access to capital markets and costs of financing are influenced by the credit ratings of their securities. The following table displays FE's and its subsidiaries' credit ratings as of February 19, 2019:

	Senior Secured			Senior Unsecured		
Issuer	**S&P**	**Moody's**	**Fitch**	**S&P**	**Moody's**	**Fitch**
FE	—	—	—	BBB-	Baa3	BBB-
AGC	—	—	—	—	—	—
ATSI	—	—	—	BBB	Baa1	BBB+
CEI	A-	Baa1	A-	BBB	Baa3	BBB+
FET	—	—	—	BBB-	Baa2	BBB-
JCP&L	—	—	—	BBB	Baa2	BBB
ME	—	—	—	BBB	A3	BBB+
MAIT	—	—	—	BBB	Baa1	BBB+
MP	A-	A3	BBB+	BBB	Baa2	—
OE	A-	A2	A-	BBB	Baa1	BBB+
PN	—	—	—	BBB	Baa1	BBB+
Penn	—	A2	A-	—	—	—
PE	—	—	BBB+	—	—	—
TE	A-	Baa1	A-	—	—	—
TrAIL	—	—	—	BBB	A3	BBB+
WP	—	—	A-	—	—	—

Debt capacity is subject to the consolidated debt-to-total-capitalization limits in the credit facilities previously discussed. As of January 31, 2019, FE and its subsidiaries could issue additional debt of approximately $8.8 billion, or incur a $4.7 billion reduction to equity, and remain within the limitations of the financial covenants required by the FE Facility.

Changes in Cash Position

As of December 31, 2018, FirstEnergy had $367 million of cash and cash equivalents and approximately $62 million of restricted cash compared to $589 million of cash and cash equivalents ($1 million in discontinued operations) and approximately $54 million of restricted cash ($3 million in discontinued operations) as of December 31, 2017, on the Consolidated Balance Sheet.

Cash Flows From Operating Activities

FirstEnergy's most significant sources of cash are derived from electric service provided by its distribution and transmission operating subsidiaries. The most significant use of cash from operating activities is buying electricity to serve non-shopping customers and paying fuel suppliers, employees, tax authorities, lenders and others for a wide range of material and services.

FirstEnergy's Consolidated Statement of Cash Flows combines the cash flows from discontinued operations with cash flows from continuing operations within each cash flow statement category. The following table summarized the major classes of cash flow items as discontinued operations for the years ended December 31, 2018, 2017 and 2016:

	For the Years Ended December 31,		
(In millions)	**2018**	**2017**	**2016**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Income (loss) from discontinued operations	$ 326	$ (1,435)	$ (6,728)
Gain on disposal, net of tax	(435)	—	—
Depreciation and amortization, including nuclear fuel, regulatory assets, net, intangible assets and deferred debt-related costs	110	333	669
Deferred income taxes and investment tax credits, net	61	(842)	(3,582)
Unrealized (gain) loss on derivative transactions	(10)	81	9

Net cash provided from operating activities was $1,410 million during 2018, $3,808 million during 2017 and $3,383 million during 2016.

2018 compared with 2017

Cash flows from operations decreased $2,398 million in 2018 as compared with 2017. The year-over-year change in cash from operations decreased due to the following:

- the absence of FES' cash from operations in the last nine months of 2018;
- credit for shared services provided to FES and FENOC during the last nine months of 2018;
- payments of $52 million to FES and FENOC under the intercompany income tax allocation agreement;
- a $1.25 billion cash contribution to the qualified pension plan in 2018;
- a $93 million coal supply agreement dispute settlement payment by AE Supply in the first quarter of 2018;
- a $229 million increase in deferred storm restoration costs;
- a $72 million payment in connection with FE's guarantee of remaining payments on FG's settlement of a coal transportation contract dispute; partially offset by
- higher transmission revenue reflecting recovery of incremental operating expenses, a higher rate base at ATSI and MAIT and the implementation of new rates at JCP&L; and
- higher distribution services retail receipts reflecting higher weather-related usage and the implementation of approved rates in Ohio and Pennsylvania.

2017 compared with 2016

Cash flows from operations increased $425 million in 2017 compared with 2016 due to the following:

- the absence of $382 million in cash contributions to the qualified pension plan in 2016;
- higher transmission revenue, reflecting recovery of incremental operating expenses, a higher rate base at ATSI and TrAIL, and the implementation of new rates at MAIT and JCP&L;
- higher distribution services retail receipts reflecting implementation of approved rates in Ohio, Pennsylvania and New Jersey, as further described above; partially offset by
- lower receipts from a decrease in competitive business capacity revenue and contract sales at Corporate/Other (formerly CES).

Cash Flows From Financing Activities

In 2018, cash provided from financing activities was $1,394 million compared to cash used for financing activities of $702 million in 2017 and $34 million in 2016. The following table summarizes new equity and debt financing, redemptions, repayments, short-term borrowings and dividends:

	For the Years Ended December 31,		
Securities Issued or Redeemed / Repaid	**2018**	**2017**	**2016**
		(In millions)	
New Issues			
Preferred stock issuance	$ 1,616	$ —	$ —
Common stock issuance	850	—	—
Unsecured notes	850	3,800	—
PCRBs	74	—	471
FMBs	50	625	305
Term loan	500	250	1,200
	$ 3,940	$ 4,675	$ 1,976
Redemptions / Repayments			
Unsecured notes	$ (555)	$ (1,330)	$ (300)
PCRBs	(216)	(158)	(483)
FMBs	(325)	(725)	(246)
Term loan	(1,450)	—	(1,200)
Senior secured notes	(62)	(78)	(102)
	$ (2,608)	$ (2,291)	$ (2,331)
Tender premiums paid on debt redemptions	$ (89)	$ —	$ —
Short-term borrowings (repayments), net	$ 950	$ (2,375)	$ 975
Preferred stock dividend payments	$ (61)	$ —	$ —
Common stock dividend payments	$ (711)	$ (639)	$ (611)

On January 22, 2018, FE entered into agreements for the private placement of its equity securities representing an approximately $2.5 billion investment in the company, including $1.62 billion in mandatorily convertible preferred equity and $850 million of common equity.

On January 22, 2018, FE repaid $1.2 billion of a variable rate syndicated term loan and two separate $125 million term loans using the proceeds from the $2.5 billion equity investment as discussed above.

On May 3, 2018, AGC redeemed $100 million of 5.06% senior notes due 2021 and paid $5.7 million in related make-whole premiums in connection with the redemption.

On May 10, 2018, MAIT issued $450 million of 4.10% senior notes due 2028. Proceeds from the issuance of the notes were used to establish a capital structure, to finance capital improvements and for general corporate purposes, including funding working capital needs and day-to-day operations.

On June 4, 2018, AE Supply repaid approximately $155 million of 5.75% senior notes due 2019 and approximately $150 million of 6.75% senior notes due 2039, and paid $83.3 million in related make-whole premiums in connection with repayments.

On June 4, 2018, AE Supply and MP caused to be redeemed $73.5 million of 5.50% PCRBs due 2037. On July 10, 2018, such PCRBs were refinanced as MP issued $73.5 million of 3.0% PCRBs with an October 2021 mandatory put.

On June 11, 2018, AE Supply caused to be redeemed $142 million of 5.25% PCRBs due 2037.

On June 15, 2018, JCP&L retired $150 million of 4.8% senior notes at maturity.

On September 27, 2018, ATSI issued $100 million of 4.32% senior notes due 2030. Proceeds were used to refinance existing indebtedness, including amounts under the FE regulated utility money pool, and remaining proceeds will be used to fund working capital needs, and for other general corporate purposes.

On October 3, 2018, Penn issued $50 million of 4.37% first mortgage bonds due 2048. Proceeds were used to refinance existing indebtedness, including amounts under the FE regulated utility money pool, to fund capital expenditures; and for other general corporate purposes.

On October 15, 2018, OE repaid $25 million of 8.25% first mortgage bonds at maturity.

On October 19, 2018, FE entered into a $1.25 billion 364-day term loan due 2019 (classified as short-term borrowings). Proceeds were used for general corporate purposes. Additionally, on October 19, 2018, FE entered into a $500 million two-year variable rate term loan due 2020. Proceeds were used to reduce revolver borrowings.

On November 2, 2018, CEI issued $300 million of 4.55% senior unsecured notes due 2030. Proceeds were used to retire $300 million of 8.875% first mortgage bonds at maturity on November 15, 2018.

On January 10, 2019, ME issued $500 million of 4.30% senior note due 2029. Proceeds from the issuance of senior notes were used to refinance existing indebtedness, including ME's 7.70% senior notes due January 15, 2019, and borrowings outstanding under the FE regulated utility money pool, to fund capital expenditures, and for other general corporate purposes.

On February 8, 2019, JCP&L issued $400 million of 4.30% senior notes due 2026. Proceeds from the issuance of the senior notes were used to refinance existing indebtedness, including amounts under the FE regulated utility money pool incurred in connection with the repayment at maturity of JCP&L's 7.35% senior notes due 2019.

Cash Flows From Investing Activities

Cash used for investing activities in 2018 principally represented cash used for property additions. The following table summarizes investing activities for 2018, 2017 and 2016:

	For the Years Ended December 31,		
Cash Used for Investing Activities	**2018**	**2017**	**2016**
		(In millions)	
Property Additions:			
Regulated Distribution	$ 1,411	$ 1,191	$ 1,063
Regulated Transmission	1,104	1,030	1,101
Corporate/Other	160	366	671
Nuclear fuel	—	254	232
Proceeds from asset sales	(425)	(388)	(15)
Investments	54	98	111
Notes receivable from affiliated companies	500	—	—
Asset removal costs	218	172	145
Other	(4)	—	(6)
	$ 3,018	$ 2,723	$ 3,302

2018 compared with 2017

Cash used for investing activity in 2018 increased $295 million, as compared to 2017, primarily due to higher property additions and asset removal costs, partially offset by the absence of nuclear fuel purchases and higher proceeds from asset sales. Additionally, the increase in notes receivable from affiliated companies resulted from FES' borrowings from the committed line of credit available under the secured credit facility with FE. The increase in property additions was due to the following:

- an increase of $220 million at Regulated Distribution due to an increase in storm restoration work;
- an increase of $74 million at Regulated Transmission due to timing of capital investments associated with its *Energizing the Future* investment program*;* partially offset by,
- a decrease of $206 million at Corporate/Other due to lower competitive generation related investments.

2017 compared with 2016

Cash used for investing activity in 2017 decreased $579 million, compared to 2016, primarily due to lower property additions. The decline in property additions was due to the following:

- a decrease of $305 million at Corporate/Other, resulting from lower competitive generation capital investments associated with outages, MATS compliance and the Mansfield dewatering facility,
- a decrease of $71 million at Regulated Transmission due to timing of capital investments associated with its *Energizing the Future* investment program*;* partially offset by,
- an increase of $128 million at Regulated Distribution due to an increase in storm restoration work and smart meter investments in Pennsylvania.

CONTRACTUAL OBLIGATIONS

As of December 31, 2018, FirstEnergy's estimated cash payments under existing contractual obligations that it considers firm obligations are as follows:

Contractual Obligations	Total	2019	2020-2021	2022-2023	Thereafter
			(In millions)		
Long-term debt[1]	$ 18,305	$ 489	$ 996	$ 2,337	$ 14,483
Short-term borrowings	1,250	1,250	—	—	—
Interest on long-term debt[2]	11,307	850	1,632	1,487	7,338
Operating leases[3]	289	34	70	58	127
Capital leases[3]	96	24	35	21	16
Fuel and purchased power[4]	5,102	877	1,261	1,139	1,825
Capital expenditures [5]	1,841	576	905	360	—
Pension funding [6]	1,951	500	—	837	614
Total	$ 40,141	$ 4,600	$ 4,899	$ 6,239	$ 24,403

(1) Excludes unamortized discounts and premiums, fair value accounting adjustments and capital leases.
(2) Interest on variable-rate debt based on rates as of December 31, 2018.
(3) See Note 8, "Leases," of the Notes to Consolidated Financial Statements.
(4) Amounts under contract with fixed or minimum quantities based on estimated annual requirements.
(5) Amounts represent committed capital expenditures as of December 31, 2018.
(6) 2019 reflects voluntary cash contribution made to the qualified pension plan on February 1, 2019.

Excluded from the table above are estimates for the cash outlays from power purchase contracts entered into by most of the Utilities and under which they procure the power supply necessary to provide generation service to their customers who do not choose an alternative supplier. Although actual amounts will be determined by future customer behavior and consumption levels, management currently estimates these cash outlays will be approximately $2.6 billion in 2019.

The table above also excludes regulatory liabilities (see Note 16, "Regulatory Matters"), AROs (see Note 15, "Asset Retirement Obligations"), reserves for litigation, injuries and damages, environmental remediation, and annual insurance premiums, including nuclear insurance (see Note 17, "Commitments, Guarantees and Contingencies") since the amount and timing of the cash payments are uncertain. The table also excludes accumulated deferred income taxes and investment tax credits since cash payments for income taxes are determined based primarily on taxable income for each applicable fiscal year.

NUCLEAR INSURANCE

JCP&L, ME and PN maintain property damage insurance provided by NEIL for their interest in the retired TMI- 2 nuclear facility, a permanently shut down and defueled facility. Under these arrangements, up to $150 million of coverage for decontamination costs, decommissioning costs, debris removal and repair and/or replacement of property is provided. JCP&L, ME and PN pay annual premiums and are subject to retrospective premium assessments of up to approximately $1.2 million during a policy year.

JCP&L, ME and PN intend to maintain insurance against nuclear risks as long as it is available. To the extent that property damage, decontamination, decommissioning, repair and replacement costs and other such costs arising from a nuclear incident at any of JCP&L, ME or PN’s plants exceed the policy limits of the insurance in effect with respect to that plant, to the extent a nuclear incident is determined not to be covered by JCP&L, ME or PN’s insurance policies, or to the extent such insurance becomes unavailable in the future, JCP&L, ME or PN would remain at risk for such costs.

The Price-Anderson Act limits public liability relative to a single incident at a nuclear power plant. In connection with TMI-2, JCP&L, ME and PN carry the required ANI third party liability coverage and also have coverage under a Price Anderson indemnity agreement issued by the NRC. The total available coverage in the event of a nuclear incident is $560 million, which is also the limit of public liability for any nuclear incident involving TMI-2.

GUARANTEES AND OTHER ASSURANCES

FirstEnergy has various financial and performance guarantees and indemnifications which are issued in the normal course of business. These contracts include performance guarantees, stand-by letters of credit, debt guarantees, surety bonds and indemnifications. FirstEnergy enters into these arrangements to facilitate commercial transactions with third parties by enhancing the value of the transaction to the third party. The maximum potential amount of future payments FirstEnergy and its subsidiaries could be required to make under these guarantees as of December 31, 2018, was approximately $1.7 billion, as summarized below:

Guarantees and Other Assurances	Maximum Exposure
	(In millions)
FE's Guarantees on Behalf of FES and FENOC	
Energy and Energy-Related Contracts[1]	$ 5
Surety Bonds - FG[2]	200
Deferred compensation arrangements	140
	345
FE's Guarantees on Behalf of its Consolidated Subsidiaries	
AE Supply asset sales[3]	555
Deferred compensation arrangements	423
Fuel related contracts and other	21
	999
FE's Guarantees on Behalf of Business Ventures	
Global Holding Facility	190
Other Assurances	
Surety Bonds	130
LOCs[4]	10
	140
Total Guarantees and Other Assurances	$ 1,674

(1) Issued for open-ended terms, with a 10-day termination right by FirstEnergy. As of December 31, 2018, FE recorded an obligation for these guarantees in other non-current liabilities with a corresponding loss from discontinued operations.

(2) FE provides credit support for FG surety bonds for $169 million and $31 million for the benefit of the PA DEP with respect to LBR CCR impoundment closure and post-closure activities and the Hatfield's Ferry CCR disposal site, respectively.

(3) As a condition to closing AE Supply's sale of four natural gas generating plants in December 2017, FE provided the purchaser two limited three-year guarantees totaling $555 million of certain obligations of AE Supply and AGC. In connection with the FES Bankruptcy settlement agreement, FirstEnergy has also committed to provide certain additional guarantees to FG for retained environmental liabilities of AE Supply related to the Pleasants Power Station and the McElroy's Run CCR disposal facility.

(4) Includes $10 million issued for various terms pursuant to LOC capacity available under FirstEnergy's revolving credit facilities.

Collateral and Contingent-Related Features

In the normal course of business, FE and its subsidiaries routinely enter into physical or financially settled contracts for the sale and purchase of electric capacity, energy, fuel and emission allowances. Certain bilateral agreements and derivative instruments contain provisions that require FE or its subsidiaries to post collateral. This collateral may be posted in the form of cash or credit support with thresholds contingent upon FE's or its subsidiaries' credit rating from each of the major credit rating agencies. The collateral and credit support requirements vary by contract and by counterparty. The incremental collateral requirement allows for the offsetting of assets and liabilities with the same counterparty, where the contractual right of offset exists under applicable master netting agreements.

Bilateral agreements and derivative instruments entered into by FE and its subsidiaries have margining provisions that require posting of collateral. Based on AE Supply's power portfolio exposure as of December 31, 2018, AE Supply has posted no collateral. The Utilities and Transmission Companies have posted collateral totaling $2 million.

These credit-risk-related contingent features, or the margining provisions within bilateral agreements, stipulate that if the subsidiary were to be downgraded or lose its investment grade credit rating (based on its senior unsecured debt rating), it would be required

to provide additional collateral. Depending on the volume of forward contracts and future price movements, higher amounts for margining, which is the ability to secure additional collateral when needed, could be required. The following table discloses the potential additional credit rating contingent contractual collateral obligations as of December 31, 2018:

Potential Collateral Obligations	AE Supply	Utilities and FET	FE	Total
		(In millions)		
Contractual Obligations for Additional Collateral				
At Current Credit Rating	$ 1	$ —	$ —	$ 1
Upon Further Downgrade	—	62	—	62
Surety Bonds (Collateralized Amount)[1]	1	59	246	306
Total Exposure from Contractual Obligations	$ 2	$ 121	$ 246	$ 369

[1] Surety Bonds are not tied to a credit rating. Surety Bonds' impact assumes maximum contractual obligations (typical obligations require 30 days to cure). FE provides credit support for FG surety bonds for $169 million and $31 million for the benefit of the PA DEP with respect to LBR CCR impoundment closure and post-closure activities and the Hatfield's Ferry CCR disposal site, respectively.

Other Commitments and Contingencies

FE is a guarantor under a $300 million syndicated senior secured term loan facility due March 3, 2020, under which Global Holding's outstanding principal balance is $190 million as of December 31, 2018. In addition to FE, Signal Peak, Global Rail, Global Mining Group, LLC and Global Coal Sales Group, LLC, each being a direct or indirect subsidiary of Global Holding, continue to provide their joint and several guaranties of the obligations of Global Holding under the facility.

In connection with the facility, 69.99% of Global Holding's direct and indirect membership interests in Signal Peak, Global Rail and their affiliates along with FEV's and WMB Marketing Ventures, LLC's respective 33-1/3% membership interests in Global Holding, are pledged to the lenders under the current facility as collateral.

MARKET RISK INFORMATION

FirstEnergy uses various market risk sensitive instruments, including derivative contracts, primarily to manage the risk of price and interest rate fluctuations. FirstEnergy's Risk Policy Committee, comprised of members of senior management, provides general oversight for risk management activities throughout the company.

Commodity Price Risk

FirstEnergy has limited exposure to financial risks resulting from fluctuating commodity prices, including prices for electricity, natural gas, coal and energy transmission. FirstEnergy's Risk Management Committee is responsible for promoting the effective design and implementation of sound risk management programs and oversees compliance with corporate risk management policies and established risk management practice.

The valuation of derivative contracts is based on observable market information. As of December 31, 2018, FirstEnergy has a net liability of $44 million in non-hedge derivative contracts that are primarily related to NUG contracts at certain of the Utilities. NUG contracts are subject to regulatory accounting and do not impact earnings.

Equity Price Risk

As of December 31, 2018, the FirstEnergy pension plan assets were allocated approximately as follows: 36% in equity securities, 34% in fixed income securities, 11% in absolute return strategies, 10% in real estate, 2% in private equity, 2% in derivatives and 5% in cash and short-term securities. A decline in the value of pension plan assets could result in additional funding requirements. FirstEnergy's funding policy is based on actuarial computations using the projected unit credit method. In January 2018, FirstEnergy satisfied its minimum required funding obligations to its qualified pension plan of $500 million and addressed anticipated required funding obligations through 2020 to its pension plan with an additional contribution of $750 million. On February 1, 2019, FirstEnergy made a $500 million voluntary cash contribution to the qualified pension plan. As a result of this contribution, FirstEnergy expects no required contributions through 2021. See Note 5, "Pension and Other Postemployment Benefits," of the Notes to Consolidated Financial Statements for additional details on FirstEnergy's pension and OPEB plans. Through December 31, 2018, FirstEnergy's pension plan assets had losses of approximately (4.2)% as compared to an annual expected return on plan assets of 7.5%.

As of December 31, 2018, FirstEnergy's OPEB plans were invested in fixed income and equity securities. Through December 31, 2018, FirstEnergy's OPEB plans have earned approximately (1.0)% as compared to an annual expected return on plan assets of 7.5%.

NDT funds have been established to satisfy JCP&L, ME and PN's nuclear decommissioning obligations associated with TMI-2. As of December 31, 2018, approximately 55% of the funds were invested in fixed income securities, 43% of the funds were invested in equity securities and 2% were invested in short-term investments, with limitations related to concentration and investment grade ratings. The investments are carried at their market values of approximately $438 million, $338 million and $13 million for fixed income securities, equity securities and short-term investments, respectively, as of December 31, 2018, excluding $(1) million of net receivables, payables and accrued income. A hypothetical 10% decrease in prices quoted by stock exchanges would result in a $34 million reduction in fair value as of December 31, 2018. A decline in the value of JCP&L, ME and PN's NDTs or a significant escalation in estimated decommissioning costs could result in additional funding requirements. During 2018, JCP&L, ME and PN made no contributions to the NDTs.

Interest Rate Risk

FirstEnergy's exposure to fluctuations in market interest rates is reduced since a significant portion of debt has fixed interest rates, as noted in the table below. FirstEnergy is subject to the inherent interest rate risks related to refinancing maturing debt by issuing new debt securities.

Comparison of Carrying Value to Fair Value

Year of Maturity	2019	2020	2021	2022	2023	There-after	Total	Fair Value
				(In millions)				
Assets:								
Investments Other Than Cash and Cash Equivalents:								
Fixed Income	$ —	$ —	$ —	$ —	$ —	$ 688	$ 688	$ 688
Average interest rate	—%	—%	—%	—%	—%	3.1%	3.1%	
Liabilities:								
Long-term Debt:								
Fixed rate	$ 489	$ 364	$ 58	$ 1,100	$ 1,150	$ 14,654	$ 17,815	$ 18,766
Average interest rate	6.7%	5.4%	4.7%	4.1%	4.2%	5.0%	4.9%	
Variable rate	$ —	$ 500	$ —	$ —	$ —	$ —	$ 500	$ 500
Average interest rate	—%	3.3%	—%	—%	—%	—%	3.3%	

CREDIT RISK

Credit risk is the risk that FirstEnergy would incur a loss as a result of nonperformance by counterparties of their contractual obligations. FirstEnergy maintains credit policies and procedures with respect to counterparty credit (including requirement that counterparties maintain specified credit ratings) and require other assurances in the form of credit support or collateral in certain circumstance in order to limit counterparty credit risk. However, FirstEnergy, as applicable, has concentrations of suppliers and customers among electric utilities, financial institutions and energy marketing and trading companies. These concentrations may impact FirstEnergy's overall exposure to credit risk, positively or negatively, as counterparties may be similarly affected by changes in economic, regulatory or other conditions. In the event an energy supplier of the Ohio Companies, Pennsylvania Companies, JCP&L or PE defaults on its obligation, the Ohio Companies, Pennsylvania Companies, JCP&L and PE would be required to seek replacement power in the market. In general, subject to regulatory review or other processes, appropriate incremental costs incurred by these entities would be recoverable from customers through applicable rate mechanisms, thereby mitigating the financial risk for these entities. FirstEnergy's credit policies to manage credit risk include the use of an established credit approval process, daily credit mitigation provisions, such as margin, prepayment or collateral requirements. FirstEnergy and its subsidiaries may request additional credit assurance, in certain circumstances, in the event that the counterparties' credit ratings fall below investment grade, their tangible net worth falls below specified percentages or their exposures exceed an established credit limit.

OUTLOOK

STATE REGULATION

Each of the Utilities' retail rates, conditions of service, issuance of securities and other matters are subject to regulation in the states in which it operates - in Maryland by the MDPSC, in Ohio by the PUCO, in New Jersey by the NJBPU, in Pennsylvania by the PPUC, in West Virginia by the WVPSC and in New York by the NYPSC. The transmission operations of PE in Virginia are subject to certain regulations of the VSCC. In addition, under Ohio law, municipalities may regulate rates of a public utility, subject to appeal to the PUCO if not acceptable to the utility. Further, if any of the FirstEnergy affiliates were to engage in the construction of significant new transmission facilities, depending on the state, they may be required to obtain state regulatory authorization to site, construct and operate the new transmission facility.

The following table summarizes the key terms of distribution rate orders in effect for the Utilities.

Company	Rates Effective	Allowed Debt/Equity	Allowed ROE
CEI	May 2009	51% / 49%	10.5%
ME[1]	January 2017	48.8% / 51.2%	Settled[2]
MP	February 2015	54% / 46%	Settled[2]
JCP&L	January 2017	55% / 45%	9.6%
OE	January 2009	51% / 49%	10.5%
PE-West Virginia	February 2015	54% / 46%	Settled[2]
PE-Maryland	November 1994	48% / 52%	11.9%
PN[1]	January 2017	47.4% / 52.6%	Settled[2]
Penn[1]	January 2017	49.9% / 50.1%	Settled[2]
TE	January 2009	51% / 49%	10.5%
WP[1]	January 2017	49.7% / 50.3%	Settled[2]

[1] Reflects filed debt/equity as final settlement/orders do not specifically include capital structure.
[2] Commission-approved settlement agreements did not disclose ROE rates.

MARYLAND

PE operates under MDPSC approved base rates that were effective as of November 11, 1994. PE also provides SOS pursuant to a combination of settlement agreements, MDPSC orders and regulations, and statutory provisions. SOS supply is competitively procured in the form of rolling contracts of varying lengths through periodic auctions that are overseen by the MDPSC and a third-party monitor. Although settlements with respect to SOS supply for PE customers have expired, service continues in the same manner until changed by order of the MDPSC. PE recovers its costs plus a return for providing SOS.

The EmPOWER Maryland program requires each electric utility to file a plan to reduce electric consumption and demand 0.2% per year, up to the ultimate goal of 2% annual savings, for the duration of the 2018-2020 and 2021-2023 EmPOWER Maryland program cycles, to the extent the MDPSC determines that cost-effective programs and services are available. PE's 2016 starting goal under this requirement was 0.97%. PE's approved 2018-2020 EmPOWER Maryland plan continues and expands upon prior years' programs, and adds new programs, for a projected total cost of $116 million over the three-year period. PE recovers program costs subject to a five-year amortization. Maryland law only allows for the utility to recover lost distribution revenue attributable to energy efficiency or demand reduction programs through a base rate case proceeding, and to date, such recovery has not been sought or obtained by PE.

In 2013, the MDPSC required Maryland electric utilities to submit analyses relating to the costs and benefits of making further system and staffing enhancements in order to attempt to reduce storm outage durations. PE's submitted analysis projected that it would require up to approximately $2.7 billion in infrastructure investments over 15 years to attempt to achieve the quickest level of response for the largest storm projected in MDPSC's scenarios. The MDPSC conducted a hearing September 2014, but has not taken further action on this matter.

On January 19, 2018, PE filed a joint petition along with other utility companies, work group stakeholders and the MDPSC electric vehicle work group leader to implement a statewide electric vehicle portfolio in connection with a 2016 MDPSC proceeding to consider an array of issues relating to electric distribution system design, including matters relating to electric vehicles, distributed energy resources, advanced metering infrastructure, energy storage, system planning, rate design, and impacts on low-income customers. PE proposed an electric vehicle charging infrastructure program at a projected total cost of $12 million, to be recovered over a five-year amortization. On January 14, 2019, the MDPSC approved the petition subject to certain reductions in the scope of the program.

On January 12, 2018, the MDPSC instituted a proceeding to examine the impacts of the Tax Act on the rates and charges of Maryland utilities. PE must track and apply regulatory accounting treatment for the impacts beginning January 1, 2018, and submitted a report to the MDPSC on February 15, 2018, estimating that the Tax Act impacts would be approximately $7 million to $8 million annually for PE’s customers. On August 17, 2018, the Staff of the MDPSC filed a reply that recommended the MDPSC instead direct PE to reduce base rates by $6.5 million to reflect reduced federal tax costs pending resolution of PE's upcoming rate case and further direct that PE pay customers a one-time credit for what the Staff estimated were the tax savings to PE through the end of July 2018. On October 5, 2018, the MDPSC issued an order requiring PE to pay a one-time credit for tax savings through September 30, 2018, which totaled approximately $5 million, and reserved all other Tax Act impacts to be resolved in the pending rate case.

On August 24, 2018, PE filed a base rate case with the MDPSC, which it supplemented on October 22, 2018, to update the partially forecasted test year with a full twelve months of actual data. The rate case requested an annual increase in base distribution rates of $19.7 million, plus creation of an EDIS to fund four enhanced service reliability programs. In responding to discovery, PE revised its request for an annual increase in base rates to $17.6 million. The proposed rate increase reflects $7.3 million in annual savings

for customers resulting from the recent federal tax law changes. On November 20, 2018, the Staff of the MDPSC filed testimony recommending an increase in base rates of $12.9 million and conditional approval of the EDIS, while the Maryland Office of People's Counsel filed testimony recommending a reduction in rates of $11.1 million and rejection of the EDIS. The evidentiary hearing concluded on January 28, 2019, and a final order is expected by March 23, 2019.

NEW JERSEY

JCP&L operates under NJBPU approved rates that were effective as of January 1, 2017. In addition, on January 25, 2017, the NJBPU approved the acceleration of the amortization of JCP&L's 2012 major storm expenses that are recovered through the SRC in order for JCP&L to achieve full recovery by December 31, 2019. JCP&L provides BGS for retail customers who do not choose a third-party EGS and for customers of third-party EGSs that fail to provide the contracted service. All New Jersey EDCs participate in this competitive BGS procurement process and recover BGS costs directly from customers as a charge separate from base rates.

In December 2017, the NJBPU issued proposed rules to modify its current CTA policy in base rate cases to: (i) calculate savings using a five-year look back from the beginning of the test year; (ii) allocate savings with 75% retained by the company and 25% allocated to rate payers; and (iii) exclude transmission assets of electric distribution companies in the savings calculation, which were published in the NJ Register in the first quarter of 2018. JCP&L filed comments supporting the proposed rulemaking. On January 17, 2019, the NJBPU approved the proposed CTA rules with no changes.

Also in December 2017, the NJBPU approved its IIP rulemaking. The IIP creates a financial incentive for utilities to accelerate the level of investment needed to promote the timely rehabilitation and replacement of certain non-revenue producing components that enhance reliability, resiliency, and/or safety. On July 13, 2018, JCP&L filed an infrastructure plan, JCP&L Reliability Plus, which proposed to accelerate $386.8 million of electric distribution infrastructure investment over four years to enhance the reliability and resiliency of its distribution system and reduce the frequency and duration of power outages. On August 29, 2018, the NJBPU retained the petition for hearing and, on November 22, 2018, issued a procedural schedule. On December 17, 2018, the Division of Rate Counsel recommended a $97 million program, a return on equity of 8.75%, and 5.38% cost of debt. On January 23, 2019, the NJBPU granted JCP&L's request to temporarily suspend procedural schedule in the matter pending settlement discussions. There can be no assurance that a definitive settlement agreement will be reached and, if so, will be approved by the NJBPU.

On January 31, 2018, the NJBPU instituted a proceeding to examine the impacts of the Tax Act on the rates and charges of New Jersey utilities. The NJBPU ordered New Jersey utilities to: (1) defer on their books the impacts of the Tax Act effective January 1, 2018; (2) to file tariffs effective April 1, 2018, reflecting the rate impacts of changes in current taxes; and (3) to file tariffs effective July 1, 2018, reflecting the rate impacts of changes in deferred taxes. On March 2, 2018, JCP&L filed a petition with the NJBPU, which included proposed tariffs for a base rate reduction of $28.6 million effective April 1, 2018, and a rider to reflect $1.3 million in rate impacts of changes in deferred taxes. On March 26, 2018, the NJBPU approved JCP&L's rate reduction effective April 1, 2018, on an interim basis subject to refund, pending the outcome of this proceeding. The NJBPU, however, did not address refunds and other proposed rider tariffs at such time.

OHIO

The Ohio Companies currently operate under ESP IV through May 31, 2024. ESP IV includes Rider DMR, which provides for the Ohio Companies to collect $132.5 million annually for three years, with the possibility of a two-year extension and is grossed up for federal income taxes, resulting in an approved amount of approximately $168 million annually in 2018 and 2019. Revenues from Rider DMR will be excluded from the significantly excessive earnings test for the initial three-year term but the exclusion will be reconsidered upon application for a potential two-year extension. The PUCO set three conditions for continued recovery under Rider DMR: (1) retention of the corporate headquarters and nexus of operations in Akron, Ohio; (2) no change in control of the Ohio Companies; and (3) a demonstration of sufficient progress in the implementation of grid modernization programs approved by the PUCO. ESP IV also continues a base distribution rate freeze through May 31, 2024. In addition, ESP IV continues the supply of power to non-shopping customers at a market-based price set through an auction process. On February 1, 2019, the Ohio Companies filed with the PUCO an application requesting a two-year extension of Rider DMR at the same amount and conditions.

ESP IV also continues Rider DCR, which supports continued investment related to the distribution system for the benefit of customers, with increased revenue caps of $30 million per year through May 31, 2019; $20 million per year from June 1, 2019 through May 31, 2022; and $15 million per year from June 1, 2022 through May 31, 2024. ESP IV also includes: (1) the collection of lost distribution revenues associated with energy efficiency and peak demand reduction programs; (2) an agreement to file a Grid Modernization Business Plan for PUCO consideration and approval, which was filed in February 2016, and remains pending as part of the grid modernization settlement described below; (3) a goal across FirstEnergy to reduce CO_2 emissions by 90% below 2005 levels by 2045; (4) contributions, totaling $51 million to: (a) fund energy conservation programs, economic development and job retention in the Ohio Companies' service territories; (b) establish a fuel-fund in each of the Ohio Companies' service territories to assist low-income customers; and (c) establish a Customer Advisory Council to ensure preservation and growth of the competitive market in Ohio; and (5) an agreement to file an application to transition to a straight fixed variable cost recovery mechanism for residential customers' base distribution rates, which filing the PUCO denied on June 13, 2018.

Several parties, including the Ohio Companies, filed applications for rehearing regarding the Ohio Companies' ESP IV with the PUCO. On August 16, 2017, the PUCO denied all remaining intervenor applications for rehearing, denied the Ohio Companies' challenges to the modifications to Rider DMR and added a third-party monitor to ensure that Rider DMR funds are spent appropriately. The Ohio Companies then filed an application for rehearing of the PUCO's August 16, 2017 ruling on the issues of the third-party monitor and the ROE calculation for advanced metering infrastructure, which the PUCO denied. In October 2017, the Sierra Club and the OMAEG filed notices of appeal with the Supreme Court of Ohio appealing various PUCO entries on their applications for rehearing. The Ohio Companies intervened in the appeal, and additional parties subsequently filed notices of appeal with the Supreme Court of Ohio challenging various PUCO entries on their applications for rehearing. On September 26, 2018, the Supreme Court of Ohio denied a July 30, 2018 joint motion filed by the OCC, the NOAC, and the OMAEG to stay the portions of the PUCO's orders and entries under appeal that authorized Rider DMR. Oral argument on the appeals was held on January 9, 2019.

Under Ohio law, the Ohio Companies are required to implement energy efficiency programs that achieve certain annual energy savings and total peak demand reductions. The Ohio Companies' 2017-2019 plan, as proposed in April 2016, includes a portfolio of energy efficiency programs targeted to a variety of customer segments, including residential customers, low income customers, small commercial customers, large commercial and industrial customers and governmental entities. In December 2016, the Ohio Companies filed a Stipulation and Recommendation with several parties that contained changes to the plan and a decrease in the plan costs. The Ohio Companies anticipate the cost of the plans will be approximately $268 million over the life of the portfolio plans and such costs are expected to be recovered through the Ohio Companies' existing rate mechanisms. On November 21, 2017, the PUCO issued an order that approved the proposed plans with several modifications, including a cap on the Ohio Companies' collection of program costs and shared savings set at 4% of the Ohio Companies' total sales to customers. On December 21, 2017, the Ohio Companies filed an application for rehearing challenging the PUCO's modifications, which the PUCO denied on January 10, 2018. On March 12, 2018, the Ohio Companies appealed to the Supreme Court of Ohio challenging the PUCO's imposition of a 4% cost cap. Various other parties also appealed challenging various PUCO entries on their applications for rehearing. Oral argument on the appeals is scheduled for February 20, 2019.

Ohio law requires electric utilities and electric service companies in Ohio to serve part of their load from renewable energy resources measured by an annually increasing percentage, which in 2017 was 3.5%, and increases 1% each year through 2026 (to 12.5%) and shall remain at 12.5% in 2027 and each year thereafter. The Ohio Companies conducted RFPs in 2009, 2010 and 2011 to secure RECs to help meet these renewable energy requirements. In September 2011, the PUCO opened a docket to review the Ohio Companies' alternative energy recovery rider through which the Ohio Companies recover the costs of acquiring these RECs. In August 2013, the PUCO approved the Ohio Companies' REC acquisitions except for certain purchases arising from one auction and directed the Ohio Companies to credit non-shopping customers in the amount of $43.4 million, plus interest, on the basis that the Ohio Companies did not prove such purchases were prudent. Following appeals, on January 24, 2018, the Supreme Court of Ohio reversed the PUCO order finding that the order violated the rule against retroactive ratemaking. After the OCC and ELPC filed a motion for reconsideration, to which the Ohio Companies responded in opposition, on April 25, 2018, the Supreme Court of Ohio denied the motion for reconsideration. As a result, in the second quarter of 2018, the Ohio Companies recognized a pre-tax benefit to earnings (within the Amortization (deferral) of regulatory assets, net line on the Consolidated Statement of Income (Loss)) of approximately $72 million to reverse the liability associated with the PUCO opinion and order.

On December 1, 2017, the Ohio Companies filed an application with the PUCO for approval of a DPM Plan. The DPM Plan is a portfolio of approximately $450 million in distribution platform investment projects, which are designed to modernize the Ohio Companies' distribution grid, prepare it for further grid modernization projects, and provide customers with immediate reliability benefits. On November 9, 2018, the Ohio Companies filed a settlement agreement that provides for the implementation of the first phase of grid modernization plans, including the investment of $516 million over three years to modernize the Ohio Companies' electric distribution system, and for all tax savings associated with the Tax Act, discussed below, to flow back to customers. On January 25, 2019, the Ohio Companies filed a supplemental settlement agreement that keeps intact the provisions of the settlement described above and adds further customer benefits and protections, which broadened support for the settlement. The settlement has broad support, including PUCO Staff, the OCC, representatives of industrial and commercial customers, a low-income advocate, environmental advocates, hospitals, competitive generation suppliers and other parties. The PUCO conducted a hearing and the settlement agreement remains subject to PUCO approval.

On January 10, 2018, the PUCO opened a case to consider the impacts of the Tax Act and determine the appropriate course of action to pass benefits on to customers. The Ohio Companies, effective January 1, 2018, were required to establish a regulatory liability for the estimated reduction in federal income tax resulting from the Tax Act, and filed comments on February 15, 2018, explaining that customers will save nearly $40 million annually as a result of updating tariff riders for the tax rate changes and that the Ohio Companies' base distribution rates are not impacted by the Tax Act changes because they are frozen through May 2024. On October 24, 2018, the PUCO entered an Order in its investigation into the impacts of the Tax Act on Ohio's utilities directing that by January 1, 2019, all Ohio rate-regulated utility companies, unless ordered otherwise, file applications not for an increase in rates to reflect the impact of the Tax Act on each specific utility's current rates. On October 30, 2018, the Ohio Companies filed an application to open a new proceeding for the implementation of matters relating to the impact of the Tax Act. As discussed further above, on November 9, 2018, the Ohio Companies filed a settlement agreement that provides for all tax savings associated with the Tax Act to flow back to customers and for the implementation of the first phase of grid modernization plans. As part of the agreement, the Ohio Companies also filed an application for approval of a rider to return the remaining tax savings to customers following PUCO approval of the settlement. On December 19, 2018, the PUCO upheld its January 10, 2018 ruling that utilities should be required to establish a deferred tax liability, effective January 1, 2018, in response to the Tax Act. On January 25, 2019,

the Ohio Companies filed a supplemental settlement agreement that keeps intact the provisions of the settlement described above and adds further customer benefits and protections, which broadened support for the settlement. The PUCO conducted a hearing and the settlement agreement remains subject to PUCO approval.

PENNSYLVANIA

The Pennsylvania Companies operate under rates approved by the PPUC, effective as of January 27, 2017. The Pennsylvania Companies operate under DSPs for the June 1, 2017 through May 31, 2019 delivery period, which provide for the competitive procurement of generation supply for customers who do not choose an alternative EGS or for customers of alternative EGSs that fail to provide the contracted service. Under the DSPs, the supply will be provided by wholesale suppliers through a mix of 12 and 24-month energy contracts, as well as one RFP for 2-year SREC contracts for ME, PN and Penn. The DSPs include modifications to the Pennsylvania Companies' POR programs in order to reduce the level of uncollectible expense the Pennsylvania Companies experience associated with alternative EGS charges.

The Pennsylvania Companies' DSPs for the June 1, 2019 through May 31, 2023 delivery period were approved by the PPUC in September 2018. Under the 2019-2023 DSPs, the supply will be provided by wholesale suppliers through a mix of 3, 12 and 24-month energy contracts, as well as two RFPs for 2-year SREC contracts for ME, PN and Penn. The 2019-2023 DSPs also include modifications to the Pennsylvania Companies' POR programs in order to continue their clawback pilot program as a long-term, permanent program term, and modifications to the Pennsylvania Companies' customer class definitions to allow for the introduction of hourly priced default service to customers at or above 100kW. The PPUC directed a working group to further discuss the implementation of customer assistance program shopping limitations and appropriate scripting for the Pennsylvania Companies' customer referral programs, and in November 2018, issued a subsequent order to approve additional customer assistance program shopping parameters and further limit the scope of the working group discussion. On December 21, 2018, the PPUC issued a tentative order proposing a model to incorporate the directed shopping restrictions. Comments on the proposal were filed January 22, 2019.

Pursuant to Pennsylvania's EE&C legislation in Act 129 of 2008 and PPUC orders, Pennsylvania EDCs implement energy efficiency and peak demand reduction programs. The Pennsylvania Companies' Phase III EE&C plans for the June 2016 through May 2021 period, which were approved in March 2016, with expected costs up to $390 million, are designed to achieve the targets established in the PPUC's Phase III Final Implementation Order with full recovery through the reconcilable EE&C riders.

Pennsylvania EDCs may establish a DSIC to recover costs of infrastructure improvements and costs related to highway relocation projects with PPUC approval. LTIIPs outlining infrastructure improvement plans for PPUC review and approval must be filed prior to approval of a DSIC. On June 14, 2017, the PPUC approved modified LTIIPs for ME, PN and Penn for the remaining years of 2017 through 2020 to provide additional support for reliability and infrastructure investments. On September 20, 2018, following a periodic review of the LTIIPs as required by regulation once every five years, the PPUC entered an Order concluding that the Pennsylvania Companies have substantially adhered to the schedules and expenditures outlined in their LTIIPs, but that changes to the LTIIPs as designed are necessary to maintain and improve reliability and directed the Pennsylvania Companies to file modified or new LTIIPs. On January 18, 2019, the Pennsylvania Companies filed modifications to their current LTIIPs that would terminate those LTIIPs at the end of 2019, and proposed revised LTIIP spending in 2019 of $44.52 million by ME, $24.72 million by PN, $26.06 million by Penn and $50.85 million by WP. The Pennsylvania Companies also committed to making filings later in 2019, which would propose new LTIIPs for the 2020 through 2024 period.

The Pennsylvania Companies' approved DSIC riders for quarterly cost recovery went into effect July 1, 2016, subject to hearings and refund or reallocation among customer classes. In the January 19, 2017 order approving the Pennsylvania Companies' general rate cases, the PPUC added an additional issue to the DSIC proceeding to include whether ADIT should be included in DSIC calculations. On February 2, 2017, the parties to the DSIC proceeding submitted a Joint Settlement to the ALJ that resolved the issues that were pending from the order issued on June 9, 2016. On April 19, 2018, the PPUC approved the Joint Settlement without modification and reversed the ALJ's previous decision that would have required the Pennsylvania Companies to reflect all federal and state income tax deductions related to DSIC-eligible property in currently effective DSIC rates. On May 21, 2018, the Pennsylvania OCA filed an appeal with the Pennsylvania Commonwealth Court of the PPUC's decision of April 19, 2018. On June 11, 2018, the Pennsylvania Companies filed a Notice of Intervention in the Pennsylvania OCA's appeal to the Commonwealth Court. Briefing is complete and oral argument is scheduled for June 3, 2019.

On February 12, 2018, the PPUC initiated a proceeding to determine the effects of the Tax Act on the tax liability of utilities and the feasibility of reflecting such impacts in rates charged to customers. On March 9, 2018, the Pennsylvania Companies submitted their calculation of the net annual effect of the Tax Act on income tax expense and rate base to be $37 million for ME, $40 million for PN, $9 million for Penn, and $30 million for WP. The Pennsylvania Companies also filed comments proposing that rates be adjusted to reflect the tax rate changes prospectively from the date of a final PPUC order via a reconcilable rider, with the amount that would otherwise accrue between January 1, 2018 and the date of a final order being used to invest in the Pennsylvania Companies' infrastructure. On March 15, 2018, the PPUC issued a Temporary Rates Order making the Pennsylvania Companies' rates temporary and subject to refund for six months. On May 17, 2018, the PPUC issued orders directing that the Pennsylvania Companies implement a reconcilable negative surcharge mechanism in order to refund to customers the net effect of the Tax Act for the period July 1, 2018 through December 31, 2018, to be prospectively updated for new rates effective January 1, 2019. The Pennsylvania Companies were also directed to establish a regulatory liability for the net impact of the Tax Act for the period of January 1, 2018

through June 30, 2018. On June 14, 2018, the PPUC issued an order revising this directive such that the Pennsylvania Companies must instead establish accounts to track tax savings for the period January 1, 2018 through March 14, 2018, and record regulatory liabilities associated with tax savings for only the period March 15, 2018 through June 30, 2018. The cumulative value of the tracked amounts and the regulatory liability is expected to amount to $12 million for ME, $13 million for PN, $3 million for Penn, and $10 million for WP. These amounts are expected to be addressed in the Pennsylvania Companies' next available rate proceedings, or independent filings to be made within three years, whichever comes sooner. The Pennsylvania Companies filed voluntary surcharges on June 1, 2018, to adjust rates for the reduced tax rate, which were effective for bills rendered starting July 1, 2018. For the first six-month period, the surcharge returned to customers was approximately $22 million for ME, $23 million for PN, $6 million for Penn, and $18 million for WP.

WEST VIRGINIA

MP and PE provide electric service to all customers through traditional cost-based, regulated utility ratemaking and operates under rates approved by the WVPSC effective February 2015. MP and PE recover net power supply costs, including fuel costs, purchased power costs and related expenses, net of related market sales revenue through the ENEC. MP's and PE's ENEC rate is updated annually.

In September 2016, the WVPSC approved the Phase II energy efficiency program for MP and PE as reflected in a unanimous settlement, which included three energy efficiency programs to meet the Phase II requirement of energy efficiency reductions of 0.5% of 2013 distribution sales for the January 1, 2017 through May 31, 2018 period. On December 15, 2017, the WVPSC approved MP's and PE's proposed annual decrease in their EE&C rates, effective January 1, 2018, which is not material to FirstEnergy. This Phase II energy efficiency program ended May 31, 2018.

Previously, AE Supply was the winning bidder of a December 2016 RFP to address MP’s generation shortfall and on March 6, 2017, MP and AE Supply signed an asset purchase agreement for MP to acquire AE Supply's Pleasants Power Station (1,300 MWs), subject to customary and other closing conditions, including regulatory approvals. In January 2018, FERC issued an order denying authorization for the transaction and the WVPSC issued an order approving the transfer of Pleasants Power Station conditioned on MP assuming significant commodity risk. Based on the adverse FERC ruling and the conditions included in the WVPSC order, MP and AE Supply terminated the asset purchase agreement.

On August 31, 2018, MP and PE filed a $100.9 million decrease in their ENEC rates proposed to be effective January 1, 2019, which included a $25.6 million annual decrease impact associated with the settlement regarding the impact of the Tax Act on West Virginia rates, as noted below. Additionally, the August 31, 2018 filing included an elimination of the Energy Efficiency Cost Rate Surcharge effective January 1, 2019, equating to an additional $2.1 million decrease. The rate decreases represent an approximate 7.2% annual decrease in rates versus those in effect on August 31, 2018. A unanimous settlement was filed with the WVPSC on November 20, 2018, and a hearing was held on November 27, 2018. An order adopting the settlement in full without modification was issued on January 2, 2019.

On January 3, 2018, the WVPSC initiated a proceeding to investigate the effects of the Tax Act on the revenue requirements of utilities. MP and PE must track the tax savings resulting from the Tax Act on a monthly basis, effective January 1, 2018. On January 26, 2018, the WVPSC issued an order clarifying that regulatory accounting should be implemented as of January 1, 2018, including the recording of any regulatory liabilities resulting from the Tax Act. MP and PE filed written testimony on May 30, 2018, explaining the impact of the Tax Act on federal income tax and revenue requirements and showing an annual rate impact of $26.2 million. MP and PE, the Staff of the WVPSC, the WV Consumer Advocate and a coalition of industrial customers entered into a settlement agreement on August 23, 2018, to have $25.6 million in rate reductions flow through to customers beginning September 1, 2018, and to defer to the next base rate case (or a separate proceeding if a base rate case is not filed by August 31, 2020) the amount and classification of the excess ADITs resulting from the Tax Act and the issue of whether MP and PE should be required to credit to customers any of the reduced income tax expense occurring between January 1, 2018 and August 31, 2018. The WVPSC approved the settlement on August 24, 2018.

FERC REGULATORY MATTERS

Under the FPA, FERC regulates rates for interstate wholesale sales, transmission of electric power, accounting and other matters, including construction and operation of hydroelectric projects. With respect to their wholesale services and rates, the Utilities, AE Supply, AGC, and the Transmission Companies are subject to regulation by FERC. FERC regulations require JCP&L, MP, PE, WP and the Transmission Companies to provide open access transmission service at FERC-approved rates, terms and conditions. Transmission facilities of JCP&L, MP, PE, WP and the Transmission Companies are subject to functional control by PJM and transmission service using their transmission facilities is provided by PJM under the PJM Tariff.

The following table summarizes the key terms of rate orders in effect for transmission customer billings for FirstEnergy's transmission owner entities:

Company	Rates Effective	Capital Structure	Allowed ROE
ATSI	January 1, 2015	Actual (13 month average)	10.38%
JCP&L	June 1, 2017	Settled[1]	Settled[1]
MP	March 21, 2018[2]	Settled[1]	Settled[1]
PE	March 21, 2018[2]	Settled[1]	Settled[1]
WP	March 21, 2018[2]	Settled[1]	Settled[1]
MAIT	July 1, 2017	50% / 50% (hypothetical)[3]	10.3%
TrAIL	July 1, 2008	Actual (year-end)	12.7% (TrAIL the Line & Black Oak SVC) 11.7% (All other projects)

[1] FERC-approved settlement agreements did not specify.
[2] See FERC Actions on Tax Act below.
[3] Effective January 2019, converts to lower of actual (13 month average) or 60%.

FERC regulates the sale of power for resale in interstate commerce in part by granting authority to public utilities to sell wholesale power at market-based rates upon showing that the seller cannot exert market power in generation or transmission or erect barriers to entry into markets. The Utilities and AE Supply each have been authorized by FERC to sell wholesale power in interstate commerce at market-based rates and have a market-based rate tariff on file with FERC, although major wholesale purchases remain subject to regulation by the relevant state commissions.

Federally-enforceable mandatory reliability standards apply to the bulk electric system and impose certain operating, record-keeping and reporting requirements on the Utilities, AE Supply, and the Transmission Companies. NERC is the ERO designated by FERC to establish and enforce these reliability standards, although NERC has delegated day-to-day implementation and enforcement of these reliability standards to eight regional entities, including RFC. All of the facilities that FirstEnergy operates are located within the RFC region. FirstEnergy actively participates in the NERC and RFC stakeholder processes, and otherwise monitors and manages its companies in response to the ongoing development, implementation and enforcement of the reliability standards implemented and enforced by RFC.

FirstEnergy believes that it is in compliance with all currently-effective and enforceable reliability standards. Nevertheless, in the course of operating its extensive electric utility systems and facilities, FirstEnergy occasionally learns of isolated facts or circumstances that could be interpreted as excursions from the reliability standards. If and when such occurrences are found, FirstEnergy develops information about the occurrence and develops a remedial response to the specific circumstances, including in appropriate cases “self-reporting” an occurrence to RFC. Moreover, it is clear that NERC, RFC and FERC will continue to refine existing reliability standards as well as to develop and adopt new reliability standards. Any inability on FirstEnergy's part to comply with the reliability standards for its bulk electric system could result in the imposition of financial penalties, or obligations to upgrade or build transmission facilities, that could have a material adverse effect on its financial condition, results of operations and cash flows.

PJM Transmission Rates

PJM and its stakeholders have been debating the proper method to allocate costs for a certain class of new transmission facilities since 2005. While FirstEnergy and other parties advocated for a traditional "beneficiary pays" (or usage based) approach, others advocated for “socializing” the costs on a load-ratio share basis, where each customer in the zone would pay based on its total usage of energy within PJM. On May 31, 2018, FERC issued an order approving a settlement agreement among various parties, including ATSI and the Utilities, agreeing to apply a combined usage based/socialization approach to cost allocation for charges to transmission customers in the PJM Region for transmission projects operating at or above 500 kV. For historical transmission costs prior to January 1, 2016, the settlement agreement provides a “black-box” schedule of credits to and payments from customers across PJM’s transmission zones. From January 1, 2016 forward, PJM will collect a charge for the revenue requirement associated with each transmission enhancement through a “50/50” calculation, with 50% based on a load-ratio share and the other 50% solution-based distribution factor (DFAX) hybrid method. As a result of the settlement, FirstEnergy recorded a pre-tax benefit of approximately $115 million in 2018 (within the Other operating expenses line on the Consolidated Statement of Income), relating to the amount of refund the Ohio Companies will receive and retain from PJM, of which $73 million is associated with the "black box" calculation of historical transmission costs prior to January 1, 2016, and $42 million is associated with the "50/50" calculation of historical transmission costs from January 1, 2016 to June 30, 2018. PJM implemented the settlement for transmission service in August 2018. Requests for rehearing or clarification of FERC's May 31, 2018, orders and related responses remain pending before FERC. FirstEnergy does not expect a material impact from implementation of the settlement agreement going forward.

RTO Realignment

On June 1, 2011, ATSI and the ATSI zone transferred from MISO to PJM. While many of the matters involved with the move have been resolved, FERC denied recovery under ATSI's transmission rate for certain charges that collectively can be described as "exit fees" and certain other transmission cost allocation charges totaling approximately $78.8 million until such time as ATSI submits a cost/benefit analysis demonstrating net benefits to customers from the transfer to PJM. Subsequently, FERC rejected a proposed settlement agreement to resolve the exit fee and transmission cost allocation issues, stating that its action is without prejudice to ATSI submitting a cost/benefit analysis demonstrating that the benefits of the RTO realignment decisions outweigh the exit fee and transmission cost allocation charges. In a subsequent order, FERC affirmed its prior ruling that ATSI must submit the cost/benefit analysis. ATSI is evaluating the cost/benefit approach.

Separately, FirstEnergy joined certain other PJM TOs in a protest of MISO's proposal to allocate MVP costs to energy transactions that cross MISO's borders into the PJM Region. On September 20, 2018, FERC denied rehearing with respect to its 2016 order regarding allocation of MVP costs and affirmed and clarified its prior decision that MISO may allocate MVP costs to PJM customers for power withdrawals from MISO to PJM as such exports occur.

MAIT Transmission Formula Rate

MAIT previously submitted an application to FERC requesting authorization to implement a forward-looking formula transmission rate to recover and earn a return on transmission assets effective February 1, 2017. Following various protests to the proposed MAIT formula transmission rate, on March 10, 2017, FERC issued an order accepting the MAIT formula transmission rate for filing, suspending the formula transmission rate for five months to become effective July 1, 2017, and establishing hearing and settlement judge procedures. On May 21, 2018, FERC issued an order accepting a settlement agreement as filed by MAIT and certain parties, without conditions. The settlement agreement provides for certain changes to MAIT's formula rate, including changing MAIT's ROE from 11% to 10.3%, setting the recovery amount for certain regulatory assets, and establishing that MAIT's capital structure will not exceed 60% equity over the period ending December 31, 2021. The settlement agreement further provides that the ROE and the 60% cap on the equity component of MAIT's capital structure will remain in effect unless changed pursuant to section 205 or 206 of the FPA provided the effective date for any change shall be no earlier than January 1, 2022. Refunds for the difference between the filed rate and the settlement rate will be handled through MAIT's true-up process.

JCP&L Transmission Formula Rate

In October 2016, after withdrawing its request to the NJBPU to transfer its transmission assets to MAIT, JCP&L submitted an application to FERC requesting authorization to implement a forward-looking formula transmission rate to recover and earn a return on transmission assets effective January 1, 2017. Following various protests to the proposed formula transmission rate, on March 10, 2017, FERC issued an order accepting the JCP&L formula transmission rate for filing, suspending the transmission rate for five months to become effective June 1, 2017, and establishing hearing and settlement judge procedures. On February 20, 2018, FERC issued an order accepting a settlement agreement filed by JCP&L and certain parties, with an effective date of June 1, 2017. The settlement agreement provides for a $135 million stated annual revenue requirement for Network Integration Transmission Service and an average of $20 million stated annual revenue requirement for certain projects listed on the PJM Tariff where the costs are allocated in part beyond the JCP&L transmission zone within the PJM Region. The revenue requirements are subject to a moratorium on additional revenue requirements proceedings through December 31, 2019, other than limited filings to seek recovery for certain additional costs. Refunds for the difference between the filed rate and the settlement rate were paid out ratably in 2018.

FERC Actions on Tax Act

On March 15, 2018, FERC took action to address the impact of the Tax Act on FERC-jurisdictional rates, including transmission and electric wholesale rates. FERC directed MP, PE and WP to either submit a joint filing to adjust their stated transmission rates to address the impact of the Tax Act changes in effective tax rate, or to “show cause” as to why such action is not required. FERC established a refund effective date of March 21, 2018, for any refunds as a result of the change in tax rate. On May 14, 2018, MP, PE and WP submitted revisions to their joint stated transmission rate to reflect the reduction in the federal corporate income tax rate. The revisions reduced the stated rate by 6.70%. FERC issued an order on November 15, 2018, accepting the revisions without modifications or conditions.

Also, on March 15, 2018, FERC issued a Notice of Inquiry seeking information regarding whether and how FERC should address possible changes to ADIT and bonus depreciation as a result of the Tax Act. Such possible changes could impact FERC-jurisdictional rates, including transmission rates. On November 15, 2018, FERC issued a NOPR suggesting mechanisms to revise transmission rates to address the Tax Act’s effect on ADIT. Specifically, FERC proposed utilities with transmission formula rates would include mechanisms to (i) deduct any excess ADIT from or add any deficient ADIT to their rate bases; (ii) raise or lower their income tax allowances by any amortized excess or deficient ADIT; and (iii) incorporate a new permanent worksheet into their rates that will annually track information related to excess or deficient ADIT. Utilities with transmission stated rates would determine the amount of excess and deferred income tax caused by the reduced federal corporate income tax rate and return or recover this amount to or from customers. To assist with implementation of the proposed rule, FERC also issued on November 15, 2018, a policy statement providing accounting and ratemaking guidance for treatment of ADIT for all FERC-jurisdictional public utilities. The policy statement also addresses the accounting and ratemaking treatment of ADIT following the sale or retirement of an asset after December 31,

2017. FESC, on behalf of its affiliated transmission owners, supported comments submitted by Edison Electric Institute requesting additional clarification on the ratemaking and accounting treatment for ADIT in formula and stated transmission rates. FERC's final rule remains pending.

Transmission ROE Methodology

In June 2014, FERC issued Opinion No. 531 revising its approach for calculating the discounted cash flow element of FERC's ROE methodology and announcing the potential for a qualitative adjustment to the ROE methodology results. Parties appealed to the D.C. Circuit, and on April 14, 2017, that court issued a decision vacating FERC's order and remanding the matter to FERC for further review. On October 16, 2018, FERC issued its order on remand, in which it proposed a revised ROE methodology. Specifically, in complaint proceedings alleging that an existing ROE is not just and reasonable, FERC proposes to rely on three financial models-discounted cash flow, capital-asset pricing, and expected earnings-to establish a composite zone of reasonableness to identity a range of just and reasonable ROEs. FERC then will utilize the transmission utility's risk relative to other utilities within that zone of reasonableness to assign the transmission utility to one of three quartiles within the zone. FERC would take no further action (i.e., dismiss the complaint) if the existing ROE falls within the identified quartile. However, if the ROE falls outside the quartile, FERC would deem the existing ROE presumptively unjust and unreasonable and would determine the replacement ROE. FERC would add a fourth financial model risk premium to the analysis to calculate a ROE based on the average point of central tendency for each of the four financial models. FERC established a paper hearing on how the new methodology should apply to the remanded proceedings. FirstEnergy is monitoring the proceedings.

ENVIRONMENTAL MATTERS

Various federal, state and local authorities regulate FirstEnergy with regard to air and water quality and other environmental matters. Pursuant to a March 28, 2017 executive order, the EPA and other federal agencies are to review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law. FirstEnergy cannot predict the timing or ultimate outcome of any of these reviews or how any future actions taken as a result thereof, in particular with respect to existing environmental regulations, may materially impact its business, results of operations, cash flows and financial condition.

Compliance with environmental regulations could have a material adverse effect on FirstEnergy's earnings, cash flow and competitive position to the extent that FirstEnergy competes with companies that are not subject to such regulations and, therefore, do not bear the risk of costs associated with compliance, or failure to comply, with such regulations.

Clean Air Act

FirstEnergy complies with SO_2 and NOx emission reduction requirements under the CAA and SIP(s) by burning lower-sulfur fuel, utilizing combustion controls and post-combustion controls and/or using emission allowances.

CSAPR requires reductions of NOx and SO_2 emissions in two phases (2015 and 2017), ultimately capping SO_2 emissions in affected states to 2.4 million tons annually and NOx emissions to 1.2 million tons annually. CSAPR allows trading of NOx and SO_2 emission allowances between power plants located in the same state and interstate trading of NOx and SO_2 emission allowances with some restrictions. The D.C. Circuit ordered the EPA on July 28, 2015, to reconsider the CSAPR caps on NOx and SO_2 emissions from power plants in 13 states, including Ohio, Pennsylvania and West Virginia. This follows the 2014 U.S. Supreme Court ruling generally upholding the EPA's regulatory approach under CSAPR, but questioning whether the EPA required upwind states to reduce emissions by more than their contribution to air pollution in downwind states. The EPA issued a CSAPR update rule on September 7, 2016, reducing summertime NOx emissions from power plants in 22 states in the eastern U.S., including Ohio, Pennsylvania and West Virginia, beginning in 2017. Various states and other stakeholders appealed the CSAPR update rule to the D.C. Circuit in November and December 2016. On September 6, 2017, the D.C. Circuit rejected the industry's bid for a lengthy pause in the litigation and set a briefing schedule. Depending on the outcome of the appeals, the EPA's reconsideration of the CSAPR update rule and how the EPA and the states ultimately implement CSAPR, the future cost of compliance may be material and changes to FirstEnergy's operations may result.

The EPA tightened the primary and secondary NAAQS for ozone from the 2008 standard levels of 75 PPB to 70 PPB on October 1, 2015. The EPA stated the vast majority of U.S. counties will meet the new 70 PPB standard by 2025 due to other federal and state rules and programs but on April 30, 2018, the EPA designated fifty-one areas in twenty-two states as non-attainment; however, FirstEnergy has no power plants operating in those areas. States have roughly three years to develop implementation plans to attain the new 2015 ozone NAAQS. Depending on how the EPA and the states implement the new 2015 ozone NAAQS, the future cost of compliance may be material and changes to FirstEnergy's operations may result. In August 2016, the State of Delaware filed a CAA Section 126 petition with the EPA alleging that the Harrison generating facility's NOx emissions significantly contribute to Delaware's inability to attain the ozone NAAQS. The petition sought a short-term NOx emission rate limit of 0.125 lb/mmBTU over an averaging period of no more than 24 hours. In November 2016, the State of Maryland filed a CAA Section 126 petition with the EPA alleging that NOx emissions from 36 EGUs, including Harrison Units 1, 2 and 3 and Pleasants Units 1 and 2, significantly contribute to Maryland's inability to attain the ozone NAAQS. The petition sought NOx emission rate limits for the 36 EGUs by May 1, 2017. On September 14, 2018, the EPA denied both the States of Delaware and Maryland petitions under CAA Section 126.

In October 2018, Delaware and Maryland appealed the denials of their petitions to the D.C. Circuit. In March 2018, the State of New York filed a CAA Section 126 petition with the EPA alleging that NOx emissions from nine states (including Ohio, Pennsylvania and West Virginia) significantly contribute to New York's inability to attain the ozone NAAQS. The petition seeks suitable emission rate limits for large stationary sources that are affecting New York's air quality within the three years allowed by CAA Section 126. On May 3, 2018, the EPA extended the time frame for acting on the CAA Section 126 petition by six months to November 9, 2018, but has not taken any further action. FirstEnergy is unable to predict the outcome of these matters or estimate the loss or range of loss.

On May 1, 2017, FE and FG, and CSX and BNSF entered into a definitive settlement agreement, which resolved all claims related to a coal transportation contract dispute as a result of MATS. Pursuant to the settlement agreement, FG agreed to pay CSX and BNSF an aggregate amount equal to $109 million, payable in three annual installments, the first of which was made on May 1, 2017. FE agreed to unconditionally and continually guarantee the settlement payments due by FG pursuant to the terms of the settlement agreement. The settlement agreement further provided that in the event of the initiation of bankruptcy proceedings or failure to make timely settlement payments, the unpaid settlement amount will immediately accelerate and become due and payable in full. On April 6, 2018, FE paid the remaining $72 million under the settlement agreement as a result of the FES Bankruptcy.

As to a specific coal supply agreement, AE Supply, the party thereto, asserted termination rights effective in 2015 as a result of MATS. In response to notification of the termination, on January 15, 2015, Tunnel Ridge, LLC, the coal supplier, commenced litigation in the Court of Common Pleas of Allegheny County, Pennsylvania, alleging AE Supply did not have sufficient justification to terminate the agreement and seeking damages for the difference between the market and contract price of the coal, or lost profits plus incidental damages. On February 18, 2018, the parties reached an agreement in principle settling all claims in dispute. The agreement in principle includes, among other matters, a $93 million payment by AE Supply, as well as certain coal supply commitments for Pleasants Power Station during its remaining operation by AE Supply. Certain aspects of the final settlement agreement are guaranteed by FE, including the $93 million payment, which was paid in the first quarter of 2018. The parties executed the final settlement agreement on March 9, 2018, and the plaintiff dismissed the matter with prejudice on March 15, 2018.

Climate Change

FirstEnergy has established a goal to reduce CO_2 emissions by 90% below 2005 levels by 2045. There are a number of initiatives to reduce GHG emissions at the state, federal and international level. Certain northeastern states are participating in the RGGI and western states led by California, have implemented programs, primarily cap and trade mechanisms, to control emissions of certain GHGs. Additional policies reducing GHG emissions, such as demand reduction programs, renewable portfolio standards and renewable subsidies have been implemented across the nation.

The EPA released its final "Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act," in December 2009, concluding that concentrations of several key GHGs constitutes an "endangerment" and may be regulated as "air pollutants" under the CAA and mandated measurement and reporting of GHG emissions from certain sources, including electric generating plants. The EPA released its final CPP regulations in August 2015 to reduce CO_2 emissions from existing fossil fuel-fired EGUs and also finalized separate regulations imposing CO_2 emission limits for new, modified, and reconstructed fossil fuel fired EGUs. Numerous states and private parties filed appeals and motions to stay the CPP with the D.C. Circuit in October 2015. On January 21, 2016, a panel of the D.C. Circuit denied the motions for stay and set an expedited schedule for briefing and argument. On February 9, 2016, the U.S. Supreme Court stayed the rule during the pendency of the challenges to the D.C. Circuit and U.S. Supreme Court. On March 28, 2017, an executive order, entitled "Promoting Energy Independence and Economic Growth," instructed the EPA to review the CPP and related rules addressing GHG emissions and suspend, revise or rescind the rules if appropriate. On October 16, 2017, the EPA issued a proposed rule to repeal the CPP. To replace the CPP, the EPA proposed the ACE rule on August 21, 2018, which would establish emission guidelines for states to develop plans to address GHG emissions from existing coal-fired power plants. Depending on the outcomes of the review pursuant to the executive order, of further appeals and how any final rules are ultimately implemented, the future cost of compliance may be material.

At the international level, the United Nations Framework Convention on Climate Change resulted in the Kyoto Protocol requiring participating countries, which does not include the U.S., to reduce GHGs commencing in 2008 and has been extended through 2020. The Obama Administration submitted in March 2015, a formal pledge for the U.S. to reduce its economy-wide GHG emissions by 26 to 28 percent below 2005 levels by 2025, and in September 2016, joined in adopting the agreement reached on December 12, 2015, at the United Nations Framework Convention on Climate Change meetings in Paris. The Paris Agreement was ratified by the requisite number of countries (i.e., at least 55 countries representing at least 55% of global GHG emissions) in October 2016 and its non-binding obligations to limit global warming to well below two degrees Celsius became effective on November 4, 2016. On June 1, 2017, the Trump Administration announced that the U.S. would cease all participation in the Paris Agreement. FirstEnergy cannot currently estimate the financial impact of climate change policies, although potential legislative or regulatory programs restricting CO_2 emissions, or litigation alleging damages from GHG emissions, could require material capital and other expenditures or result in changes to its operations.

Clean Water Act

Various water quality regulations, the majority of which are the result of the federal CWA and its amendments, apply to FirstEnergy's plants. In addition, the states in which FirstEnergy operates have water quality standards applicable to FirstEnergy's operations.

The EPA finalized CWA Section 316(b) regulations in May 2014, requiring cooling water intake structures with an intake velocity greater than 0.5 feet per second to reduce fish impingement when aquatic organisms are pinned against screens or other parts of a cooling water intake system to a 12% annual average and requiring cooling water intake structures exceeding 125 million gallons per day to conduct studies to determine site-specific controls, if any, to reduce entrainment, which occurs when aquatic life is drawn into a facility's cooling water system. Depending on any final action taken by the states with respect to impingement and entrainment, the future capital costs of compliance with these standards may be material.

On September 30, 2015, the EPA finalized new, more stringent effluent limits for the Steam Electric Power Generating category (40 CFR Part 423) for arsenic, mercury, selenium and nitrogen for wastewater from wet scrubber systems and zero discharge of pollutants in ash transport water. The treatment obligations phase-in as permits are renewed on a five-year cycle from 2018 to 2023. On April 13, 2017, the EPA granted a Petition for Reconsideration and administratively stayed all deadlines in the effluent limits rule pending a new rulemaking. On September 18, 2017, the EPA replaced the administrative stay with a rulemaking which postponed only certain compliance deadlines for two years. Depending on the outcome of appeals and how any final rules are ultimately implemented, the future costs of compliance with these standards may be substantial and changes to FirstEnergy's operations may result.

In October 2009, the WVDEP issued an NPDES water discharge permit for the Fort Martin plant, which imposes TDS, sulfate concentrations and other effluent limitations for heavy metals, as well as temperature limitations. Concurrent with the issuance of the Fort Martin NPDES permit, WVDEP also issued an administrative order setting deadlines for MP to meet certain of the effluent limits that were effective immediately under the terms of the NPDES permit. MP appealed, and a stay of certain conditions of the NPDES permit and order have been granted pending a final decision on the appeal and subject to WVDEP moving to dissolve the stay. The Fort Martin NPDES permit could require an initial capital investment ranging from $150 million to $300 million in order to install technology to meet the TDS and sulfate limits, which technology may also meet certain of the other effluent limits. March 2018, the WVDEP issued a draft NPDES Permit Renewal that, if finalized as proposed, would moot the appeal and reduce the estimated capital investment requirements. MP intends to vigorously pursue these issues but cannot predict the outcome of the appeal or estimate the possible loss or range of loss.

FirstEnergy intends to vigorously defend against the CWA matters described above but, except as indicated above, cannot predict their outcomes or estimate the loss or range of loss.

Regulation of Waste Disposal

Federal and state hazardous waste regulations have been promulgated as a result of the RCRA, as amended, and the Toxic Substances Control Act. Certain CCRs, such as coal ash, were exempted from hazardous waste disposal requirements pending the EPA's evaluation of the need for future regulation.

In April 2015, the EPA finalized regulations for the disposal of CCRs (non-hazardous), establishing national standards for landfill design, structural integrity design and assessment criteria for surface impoundments, groundwater monitoring and protection procedures and other operational and reporting procedures to assure the safe disposal of CCRs from electric generating plants. On September 13, 2017, the EPA announced that it would reconsider certain provisions of the final regulations. On July 17, 2018, the EPA Administrator signed a final rule extending the deadline for certain CCR facilities to cease disposal and commence closure activities, as well as, establishing less stringent groundwater monitoring and protection requirements. On August 21, 2018, the D.C. Circuit remanded sections of the CCR Rule to the EPA to provide additional safeguards for unlined CCR impoundments that are more protective of human health and the environment. AE Supply assessed the changes in timing and closure plan requirements associated with the McElroy's Run impoundment site and increased the ARO by approximately $43 million in the third quarter of 2018.

Pursuant to a 2013 consent decree, PA DEP issued a 2014 permit for the Little Blue Run CCR impoundment requiring the Bruce Mansfield plant to cease disposal of CCRs by December 31, 2016, and FG to provide bonding for 45 years of closure and post-closure activities and to complete closure within a 12-year period, but authorizing FG to seek a permit modification based on "unexpected site conditions that have or will slow closure progress." The permit does not require active dewatering of the CCRs, but does require a groundwater assessment for arsenic and abatement if certain conditions in the permit are met. The CCRs from the Bruce Mansfield plant are being beneficially reused with the majority used for reclamation of a site owned by the Marshall County Coal Company in Moundsville, West Virginia, and the remainder recycled into drywall by National Gypsum. These beneficial reuse options are expected to be sufficient for ongoing plant operations, however, the Bruce Mansfield plant is pursuing other options. On May 22, 2015 and September 21, 2015, the PA DEP reissued a permit for the Hatfield's Ferry CCR disposal facility and then modified that permit to allow disposal of Bruce Mansfield plant CCR. The Sierra Club's Notices of Appeal before the Pennsylvania Environmental Hearing Board challenging the renewal, reissuance and modification of the permit for the Hatfield’s Ferry CCR disposal facility were resolved through a Consent Adjudication between FG, PA DEP and the Sierra Club requiring operational changes that became effective November 3, 2017. As noted above, FE provides credit support for FG surety bonds of $169 million and $31 million for the benefit of the PA DEP with respect to LBR and the Hatfield's Ferry disposal site, respectively.

FirstEnergy or its subsidiaries have been named as potentially responsible parties at waste disposal sites, which may require cleanup under the CERCLA. Allegations of disposal of hazardous substances at historical sites and the liability involved are often

unsubstantiated and subject to dispute; however, federal law provides that all potentially responsible parties for a particular site may be liable on a joint and several basis. Environmental liabilities that are considered probable have been recognized on the Consolidated Balance Sheets as of December 31, 2018, based on estimates of the total costs of cleanup, FirstEnergy's proportionate responsibility for such costs and the financial ability of other unaffiliated entities to pay. Total liabilities of approximately $121 million have been accrued through December 31, 2018, including approximately $85 million for environmental remediation of former manufactured gas plants and gas holder facilities in New Jersey, which are being recovered by JCP&L through a non-bypassable SBC. FE or its subsidiaries could be found potentially responsible for additional amounts or additional sites, but the loss or range of losses cannot be determined or reasonably estimated at this time.

OTHER LEGAL PROCEEDINGS

Nuclear Plant Matters

Under NRC regulations, JCP&L, ME and PN must ensure that adequate funds will be available to decommission their retired nuclear facility, TMI-2. As of December 31, 2018, JCP&L, ME and PN had in total approximately $790 million invested in external trusts to be used for the decommissioning and environmental remediation of their retired TMI-2 nuclear generating facility. The values of these NDTs also fluctuate based on market conditions. If the values of the trusts decline by a material amount, the obligation to JCP&L, ME and PN to fund the trusts may increase. Disruptions in the capital markets and their effects on particular businesses and the economy could also affect the values of the NDTs.

FES Bankruptcy

On March 31, 2018, FES, including its consolidated subsidiaries, FG, NG, FE Aircraft Leasing Corp., Norton Energy Storage L.L.C. and FGMUC, and FENOC filed voluntary petitions for bankruptcy protection under Chapter 11 of the United States Bankruptcy Code in the Bankruptcy Court. See Note 3, "Discontinued Operations," for additional information.

Other Legal Matters

There are various lawsuits, claims (including claims for asbestos exposure) and proceedings related to FirstEnergy's normal business operations pending against FE or its subsidiaries. The loss or range of loss in these matters is not expected to be material to FE or its subsidiaries. The other potentially material items not otherwise discussed above are described under Note 16, "Regulatory Matters," of the Notes to Consolidated Financial Statements.

FirstEnergy accrues legal liabilities only when it concludes that it is probable that it has an obligation for such costs and can reasonably estimate the amount of such costs. In cases where FirstEnergy determines that it is not probable, but reasonably possible that it has a material obligation, it discloses such obligations and the possible loss or range of loss if such estimate can be made. If it were ultimately determined that FE or its subsidiaries have legal liability or are otherwise made subject to liability based on any of the matters referenced above, it could have a material adverse effect on FE's or its subsidiaries' financial condition, results of operations and cash flows.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

FirstEnergy prepares consolidated financial statements in accordance with GAAP. Application of these principles often requires a high degree of judgment, estimates and assumptions that affect financial results. FirstEnergy's accounting policies require significant judgment regarding estimates and assumptions underlying the amounts included in the financial statements. Additional information regarding the application of accounting policies is included in the Notes to Consolidated Financial Statements.

Revenue Recognition

FirstEnergy follows the accrual method of accounting for revenues, recognizing revenue for electricity that has been delivered to customers but not yet billed through the end of the accounting period. The determination of electricity sales to individual customers is based on meter readings, which occur on a systematic basis throughout the month. At the end of each month, electricity delivered to customers since the last meter reading is estimated and a corresponding accrual for unbilled sales is recognized. The determination of unbilled sales and revenues requires management to make estimates regarding electricity available for retail load, transmission and distribution line losses, demand by customer class, applicable billing demands, weather-related impacts, number of days unbilled and tariff rates in effect within each customer class. In connection with adopting the new revenue recognition guidance in 2018, FirstEnergy has elected the optional invoice practical expedient for most of its revenues and, with the exception of JCP&L transmission revenues, utilizes the optional short-term contract exemption for transmission revenues due to the annual establishment of revenue requirements, which eliminates the need to provide certain revenue disclosures regarding unsatisfied performance obligations. See Note 2, "Revenue," for additional information.

Regulatory Accounting

FirstEnergy’s Regulated Distribution and Regulated Transmission segments are subject to regulations that set the prices (rates) the Utilities, AGC, and the Transmission Companies are permitted to charge customers based on costs that the regulatory agencies

determine are permitted to be recovered. At times, regulators permit the future recovery through rates of costs that would be currently charged to expense by an unregulated company. This ratemaking process results in the recording of regulatory assets and liabilities based on anticipated future cash inflows and outflows. Certain regulatory assets are recorded based on prior precedent or anticipated recovery based on rate making premises without a specific rate order. FirstEnergy regularly reviews these assets to assess their ultimate recoverability within the approved regulatory guidelines. Impairment risk associated with these assets relates to potentially adverse legislative, judicial or regulatory actions in the future. See Note 16, "Regulatory Matters," for additional information.

FirstEnergy reviews the probability of recovery of regulatory assets at each balance sheet date and whenever new events occur. Similarly, FirstEnergy records regulatory liabilities when a determination is made that a refund is probable or when ordered by a commission. Factors that may affect probability include changes in the regulatory environment, issuance of a regulatory commission order or passage of new legislation. If recovery of a regulatory asset is no longer probable, FirstEnergy will write off that regulatory asset as a charge against earnings. FirstEnergy considers the entire regulatory asset balance as the unit of account for the purposes of balance sheet classification rather than the next years recovery and as such net regulatory assets and liabilities are presented in the non-current section on the FirstEnergy Consolidated Balance Sheets.

Pension and OPEB Accounting

FirstEnergy provides noncontributory qualified defined benefit pension plans that cover substantially all of its employees and non-qualified pension plans that cover certain employees. The plans provide defined benefits based on years of service and compensation levels.

FirstEnergy provides some non-contributory pre-retirement basic life insurance for employees who are eligible to retire. Health care benefits and/or subsidies to purchase health insurance, which include certain employee contributions, deductibles and co-payments, may also be available upon retirement to certain employees, their dependents and, under certain circumstances, their survivors. FirstEnergy also has obligations to former or inactive employees after employment, but before retirement, for disability-related benefits.

FirstEnergy recognizes a pension and OPEB mark-to-market adjustment for the change in the fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each fiscal year and whenever a plan is determined to qualify for a remeasurement. The remaining components of pension and OPEB expense, primarily service costs, interest on obligations, assumed return on assets and prior service costs, are recorded on a monthly basis. The pre-tax pension and OPEB mark-to-market adjustment charged to earnings for the years ended December 31, 2018, 2017, and 2016, were $145 million, $141 million, and $147 million, respectively, of these amounts, approximately $1 million, $39 million, and $45 million are included in discontinued operations.

In selecting an assumed discount rate, FirstEnergy considers currently available rates of return on high-quality fixed income investments expected to be available during the period to maturity of the pension and OPEB obligations. The assumed discount rates for pension were 4.44%, 3.75% and 4.25% as of December 31, 2018, 2017 and 2016, respectively. The assumed discount rates for OPEB were 4.30%, 3.50% and 4.00% as of December 31, 2018, 2017 and 2016, respectively.

Effective in 2019, FirstEnergy changed the approach utilized to estimate the service cost and interest cost components of net periodic benefit cost for pension and OPEB plans. Historically, FirstEnergy estimated these components utilizing a single, weighted average discount rate derived from the yield curve used to measure the benefit obligation. FirstEnergy has elected to use a spot rate approach in the estimation of the components of benefit cost by applying specific spot rates along the full yield curve to the relevant projected cash flows, as this provides a better estimate of service and interest costs by improving the correlation between projected benefit cash flows to the corresponding spot yield curve rates. This change did not affect the measurement of total benefit obligations or annual net period benefit cost and the change in service and interest cost is offset in the actuarial mark-to-market adjustment reported. This election is considered a change in estimate and, accordingly, accounted prospectively.

FirstEnergy's assumed rate of return on pension plan assets considers historical market returns and economic forecasts for the types of investments held by the pension trusts. In 2018, FirstEnergy's qualified pension and OPEB plan assets experienced losses of $371 million or (4.0)%, compared to gains of $999 million, or 15.1% in 2017, and losses of $472 million, or 8.2% in 2016 and assumed a 7.50% rate of return on plan assets in 2018, 2017 and 2016, which generated $605 million, $478 million and $429 million of expected returns on plan assets, respectively. The expected return on pension and OPEB assets is based on the trusts' asset allocation targets and the historical performance of risk-based and fixed income securities. The gains or losses generated as a result of the difference between expected and actual returns on plan assets will increase or decrease future net periodic pension and OPEB cost as the difference is recognized annually in the fourth quarter of each fiscal year or whenever a plan is determined to qualify for remeasurement. The expected return on plan assets for 2019 is 7.50%.

During 2018, the Society of Actuaries released its updated mortality improvement scale for pension plans, MP-2018, incorporating SSA mortality data from 2014-2016. The updated improvement scale indicates a slight decline in life expectancy. Due to the additional data on population mortality, the RP2014 mortality table with the projection scale MP-2018 was utilized to determine the 2018 benefit cost and obligation as of December 31, 2018, for the FirstEnergy pension and OPEB plans. The impact of using the projection scale MP-2018 resulted in a decrease in the projected pension benefit obligation of approximately $16 million and was included in the 2018 pension and OPEB mark-to-market adjustment.

Based on discount rates of 4.44% for pension, 4.30% for OPEB and an estimated return on assets of 7.50%, FirstEnergy expects its 2019 pre-tax net periodic benefit credit to be approximately $28 million (excluding any actuarial mark-to-market adjustments that would be recognized in 2019). The following table reflects the portion of pension and OPEB costs that were charged to expense, including any pension and OPEB mark-to-market adjustments, in the three years ended December 31, 2018, 2017, and 2016:

Postemployment Benefits Expense (Credits)	2018	2017	2016
		(In millions)	
Pension	$ 200	$ 247	$ 277
OPEB	(158)	(45)	(40)
Total	$ 42	$ 202	$ 237

Health care cost trends continue to increase and will affect future OPEB costs. The composite health care trend rate assumptions were approximately 6.0-5.5% in 2018 and 2017, gradually decreasing to 4.5% in later years. In determining FirstEnergy's trend rate assumptions, included are the specific provisions of FirstEnergy's health care plans, the demographics and utilization rates of plan participants, actual cost increases experienced in FirstEnergy's health care plans, and projections of future medical trend rates. The effects on 2019 pension and OPEB net periodic benefit costs from changes in key assumptions are as follows:

Increase in Net Periodic Benefit Costs from Adverse Changes in Key Assumptions

Assumption	Adverse Change	Pension	OPEB	Total
			(In millions)	
Discount rate	Decrease by 0.25%	$ 288	$ 15	$ 303
Long-term return on assets	Decrease by 0.25%	$ 18	$ 1	$ 19
Health care trend rate	Increase by 1.0%	N/A	$ 22	$ 22

See Note 5, "Pension and Other Postemployment Benefits," for additional information.

Long-Lived Assets

FirstEnergy evaluates long-lived assets classified as held and used for impairment when events or changes in circumstances indicate the carrying value of the long-lived assets may not be recoverable. First, the estimated undiscounted future cash flows attributable to the assets is compared with the carrying value of the assets. If the carrying value is greater than the undiscounted future cash flows, an impairment charge is recognized equal to the amount the carrying value of the assets exceeds its estimated fair value. See Note 1, "Organization and Basis of Presentation."

See Note 1, "Organization and Basis of Presentation - Asset impairments," for impairments recognized in 2018, 2017 and 2016.

Asset Retirement Obligations

FE recognizes an ARO for the future decommissioning of its nuclear power plant and future remediation of other environmental liabilities associated with all of its long-lived assets. The ARO liability represents an estimate of the fair value of FirstEnergy's current obligation related to nuclear decommissioning and the retirement or remediation of environmental liabilities of other assets. A fair value measurement inherently involves uncertainty in the amount and timing of settlement of the liability. FirstEnergy uses an expected cash flow approach to measure the fair value of the nuclear decommissioning and environmental remediation AROs, considering the expected timing of settlement of the ARO based on the expected economic useful life of associated asset and/or regulatory requirements. The fair value of an ARO is recognized in the period in which it is incurred. The associated asset retirement costs are capitalized as part of the carrying value of the long-lived asset and are depreciated over the life of the related asset. In certain circumstances, FirstEnergy has recovery of asset retirement costs and, as such, certain accretion and depreciation is offset against regulatory assets.

Conditional retirement obligations associated with tangible long-lived assets are recognized at fair value in the period in which they are incurred if a reasonable estimate can be made, even though there may be uncertainty about timing or method of settlement. When settlement is conditional on a future event occurring, it is reflected in the measurement of the liability, not the timing of the liability recognition.

AROs as of December 31, 2018, are described further in Note 15, "Asset Retirement Obligations."

Income Taxes

FirstEnergy records income taxes in accordance with the liability method of accounting. Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts recognized for tax purposes. Investment tax credits, which were deferred when utilized, are being amortized over the

recovery period of the related property. Deferred income tax liabilities related to temporary tax and accounting basis differences and tax credit carryforward items are recognized at the statutory income tax rates in effect when the liabilities are expected to be paid. Deferred tax assets are recognized based on income tax rates expected to be in effect when they are settled.

FirstEnergy accounts for uncertainty in income taxes in its financial statements using a benefit recognition model with a two-step approach, a more-likely-than-not recognition criterion and a measurement attribute that measures the position as the largest amount of tax benefit that is greater than 50% likely of being ultimately realized upon settlement. If it is not more likely than not that the benefit will be sustained on its technical merits, no benefit will be recorded. Uncertain tax positions that relate only to timing of when an item is included on a tax return are considered to have met the recognition threshold. FirstEnergy recognizes interest expense or income related to uncertain tax positions by applying the applicable statutory interest rate to the difference between the tax position recognized and the amount previously taken, or expected to be taken, on the tax return. FirstEnergy includes net interest and penalties in the provision for income taxes. See Note 7, "Taxes," for additional information.

On December 22, 2017, the President signed into law the Tax Act, which included significant changes to the Internal Revenue Code of 1986 (as amended, the Code). The more significant changes that impacted FirstEnergy were as follows:

- Reduction of the corporate federal income tax rate from 35% to 21%, effective in 2018;
- Full expensing of qualified property, excluding rate regulated utilities, through 2022 with a phase down beginning in 2023;
- Limitations on interest deductions with an exception for rate regulated utilities;
- Limitation of the utilization of federal NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward;
- Repeal of the corporate AMT and allowing taxpayers to claim a refund on any AMT credit carryovers.

At December 31, 2017, FirstEnergy completed its assessment of the accounting for certain effects of the provisions in the Tax Act, and as allowed under SEC Staff Accounting Bulletin 118 (SAB 118), recorded provisional income tax amounts related to depreciation for which the impacts of the Tax Act could not be finalized, but for which a reasonable estimate could be determined. Under the Tax Act, qualified property acquired and placed into service after September 27, 2017 would be eligible for full expensing for all taxpayers other than regulated utilities. On August 3, 2018, the IRS released proposed regulations clarifying the immediate expensing of qualified property, specifically addressing that regulated utility property acquired after September 27, 2017, and placed into service by December 31, 2017, qualifies for full expensing. While not final as of December 31, 2018, corporate taxpayers may rely on the proposed regulations for tax years ending after September 27, 2017. As of December 31, 2018, FirstEnergy has now completed its accounting for all of the enactment-date income tax effects of the Tax Act, resulting in an immaterial adjustment to the provisional income tax amounts recorded at December 31, 2017.

The Tax Act also amended Section 163(j) of the Code, limiting interest expense deductions for corporations, with exemption for certain regulated utilities. On November 26, 2018, the IRS issued proposed regulations implementing Section 163(j), including its application of the rules to consolidated groups with both regulated utility and non-regulated members. Based on its interpretation of these proposed regulations, FirstEnergy has estimated the amount of deductible interest for its consolidated group in 2018 and has recorded a deferred tax asset on the nondeductible portion as it is carried forward with an indefinite life. The deferred tax asset related to the indefinite lived carryforward of nondeductible interest has a full valuation allowance ($60 million) recorded against it as future profitability from sources other than regulated utility businesses is required for utilization. Of this tax effected nondeductible interest, $27 million has been reflected as an uncertain tax position. All tax expense related to nondeductible interest in 2018 has been recorded in discontinued operations as it is entirely attributed to the anticipated inclusion of entities reported in discontinued operations in FirstEnergy's consolidated federal tax return.

Goodwill

In a business combination, the excess of the purchase price over the estimated fair values of the assets acquired and liabilities assumed is recognized as goodwill. FirstEnergy evaluates goodwill for impairment annually on July 31 and more frequently if indicators of impairment arise. In evaluating goodwill for impairment, FirstEnergy assesses qualitative factors to determine whether it is more likely than not (that is, likelihood of more than 50%) that the fair value of a reporting unit is less than its carrying value (including goodwill). If FirstEnergy concludes that it is not more likely than not that the fair value of a reporting unit is less than its carrying value, then no further testing is required. However, if FirstEnergy concludes that it is more likely than not that the fair value of a reporting unit is less than its carrying value or bypasses the qualitative assessment, then the quantitative goodwill impairment test is performed to identify a potential goodwill impairment and measure the amount of impairment to be recognized, if any.

As of July 31, 2018, FirstEnergy performed a qualitative assessment of the Regulated Distribution and Regulated Transmission reporting units' goodwill, assessing economic, industry and market considerations in addition to the reporting units' overall financial performance. Key factors used in the assessment include: growth rates, interest rates, expected capital expenditures, utility sector market performance and other market considerations. It was determined that the fair values of these reporting units were, more likely than not, greater than their carrying values and a quantitative analysis was not necessary.

See Note 3, "Discontinued Operations", for further discussion of CES' goodwill impairment charges recognized in 2016.

NEW ACCOUNTING PRONOUNCEMENTS

ASU 2014-09, *"Revenue from Contracts with Customers"* (Issued May 2014 and subsequently updated to address implementation questions): The new revenue recognition guidance establishes a new control-based revenue recognition model, changes the basis for deciding when revenue is recognized over time or at a point in time, provides new and more detailed guidance on specific topics and expands and improves disclosures about revenue. FirstEnergy evaluated its revenues and determined the new guidance had immaterial impacts to recognition practices upon adoption on January 1, 2018. As part of the adoption, FirstEnergy elected to apply the new guidance on a modified retrospective basis. FirstEnergy did not record a cumulative effect adjustment to retained earnings for initially applying the new guidance as no revenue recognition differences were identified in the timing or amount of revenue. In addition, upon adoption, certain immaterial financial statement presentation changes were implemented. See Note 2, "Revenue," for additional information on FirstEnergy's revenues.

ASU 2016-01, *"Financial Instruments-Overall: Recognition and Measurement of Financial Assets and Financial Liabilities"* (Issued January 2016 and subsequently updated in 2018): ASU 2016-01 primarily affects the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. FirstEnergy adopted this standard on January 1, 2018, and recognizes all gains and losses for equity securities in income with the exception of those that are accounted for under the equity method of accounting. The NDT equity portfolios of JCP&L, ME and PN will not be impacted as unrealized gains and losses will continue to be offset against regulatory assets or liabilities. As a result of adopting this standard, FirstEnergy recorded a cumulative effect adjustment to retained earnings of $57 million on January 1, 2018, representing unrealized gains on equity securities with FES NDTs that were previously recorded to AOCI. Following deconsolidation of the FES Debtors, the adoption of this standard is not expected to have a material impact on FirstEnergy's financial statements as the majority of its gains and losses on equity securities are offset against a regulatory asset or liability.

ASU 2016-18, "*Restricted Cash"* (Issued November 2016): ASU 2016-18 addresses the presentation of changes in restricted cash and restricted cash equivalents in the statement of cash flows. The guidance is required to be applied retrospectively. As a result of adopting this standard, FirstEnergy's statement of cash flows reports changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents. Prior periods have been recast to conform to the current year presentation.

ASU 2017-01, *"Business Combinations: Clarifying the Definition of a Business"* (Issued January 2017)*:* ASU 2017-01 assists entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. FirstEnergy adopted ASU 2017-01 on January 1, 2018. The ASU will be applied prospectively to future transactions.

ASU 2017-04, *"Goodwill Impairment"* (Issued January 2017): ASU 2017-04 simplifies the accounting for goodwill impairment by removing Step 2 of the current test, which requires calculation of a hypothetical purchase price allocation. Under the revised guidance, goodwill impairment will be measured as the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill (currently Step 1 of the two-step impairment test). Entities will continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary. FirstEnergy has elected to early adopt ASU 2017-04 as of January 1, 2018, and will apply this standard on a prospective basis.

ASU 2017-07, *"Compensation-Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost"* (Issued March 2017)*:* ASU 2017-07 requires entities to retrospectively (1) disaggregate the current-service-cost component from the other components of net benefit cost (the other components) and present it with other current compensation costs for related employees in the income statement and (2) present the other components elsewhere in the income statement and outside of income from operations if such a subtotal is presented. In addition, only service costs are eligible for capitalization on a prospective basis. FirstEnergy adopted ASU 2017-07 on January 1, 2018. Because the non-service cost components of net benefit cost are no longer eligible for capitalization after December 31, 2017, FirstEnergy has recognized these components in income as a result of adopting this standard. FirstEnergy reclassified approximately $27 million and $6 million of non-service costs from Other operating expenses to Miscellaneous income, net, for the years ended December 31, 2017 and December 31, 2016, respectively.

ASU 2018-02, "*Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*" (Issued February 2018): ASU 2018-02 allows entities to reclassify from AOCI to retained earnings stranded tax effects resulting from the Tax Act. FirstEnergy early adopted this standard during the first quarter of 2018 and has elected to present the change in the period of adoption. Upon adoption, FirstEnergy recorded a $22 million cumulative effect adjustment for stranded tax effects, such as pension and OPEB prior service costs and losses on derivative hedges, to retained earnings on January 1, 2018, of which $8 million was related to the FES Debtors.

ASU 2018-05, "*Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118*" (Issued March 2018): ASU 2018-05, effective 2018, expands income tax accounting and disclosure guidance to include SAB 118 issued by the SEC in December 2017. SAB 118 provides guidance on accounting for the income tax effects of the Tax Act and among other things allows for a measurement period not to exceed one year for companies to finalize the provisional amounts recorded as of December 31, 2017. See Note 7, "Taxes," for additional information on FirstEnergy's accounting for the Tax Act.

ASU 2018-13, "*Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement*" (Issued August 2018): ASU 2018-13 eliminates, adds and modifies certain disclosure requirements for fair

value measurements as part of the FASB's disclosure framework project. Entities will no longer be required to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, but public companies will be required to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. Entities are permitted to early adopt either the entire standard or only the provisions that eliminate or modify the requirements. FirstEnergy early adopted all the provisions of this standard as of December 31, 2018 which are reflected in Note 11, "Fair Value Measurements".

ASU 2018-14, "*Compensation-Retirement Benefits-Defined Benefit Plans-General (Subtopic 715-20): Disclosure Framework-Changes to the Disclosure Requirements for Defined Benefit Plans*" (Issued August 2018): ASU 2018-14 amends ASC 715 to add, remove, and clarify disclosure requirements related to defined benefit pension and other postretirement plans. FirstEnergy early adopted ASU 2018-14 as of December 31, 2018 and the provisions of this standard are reflected within Note 5, "Pension and Other Postemployment Benefits".

Recently Issued Pronouncements - The following new authoritative accounting guidance issued by the FASB was not adopted in 2018. Unless otherwise indicated, FirstEnergy is currently assessing the impact such guidance may have on its financial statements and disclosures, as well as the potential to early adopt where applicable. FirstEnergy has assessed other FASB issuances of new standards not described below and has not included these standards based upon the current expectation that such new standards will not significantly impact FirstEnergy's financial reporting.

ASU 2016-02, *"Leases (Topic 842)*" (Issued February 2016 and subsequently updated to address implementation questions): The new guidance will require organizations that lease assets with lease terms of more than 12 months to recognize assets and liabilities for the rights and obligations created by those leases on their balance sheets as well as new qualitative and quantitative disclosures. FirstEnergy has implemented a third-party software tool that will assist with the initial adoption and ongoing compliance. The standard provides a number of transition practical expedients that entities may elect. These include a "package of three" expedients that must be taken together and allow entities to (1) not reassess whether existing contracts contain leases, (2) carryforward the existing lease classification, and (3) not reassess initial direct costs associated with existing leases. A separate practical expedient allows entities to not evaluate land easements under the new guidance at adoption if they were not previously accounted for as leases. Additionally, entities have the option to apply the requirements of the standard in the period of adoption (January 1, 2019) with no restatement of prior periods. FirstEnergy elected all of these practical expedients. Upon adoption, on January 1, 2019, FirstEnergy increased assets and liabilities by approximately $190 million, with no impact to results of operations or cash flows.

ASU 2016-13, "*Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*" (issued June 2016 and subsequently updated): ASU 2016-13 removes all recognition thresholds and will require companies to recognize an allowance for credit losses for the difference between the amortized cost basis of a financial instrument and the amount of amortized cost that the company expects to collect over the instrument's contractual life. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted for fiscal years beginning after December 15, 2018.

ASU 2018-15, "*Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*" (Issued August 2018): ASU 2018-15 requires implementation costs incurred by customers in cloud computing arrangements to be deferred and recognized over the term of the arrangement, if those costs would be capitalized by the customers in a software licensing arrangement. The guidance will be effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information required by Item 7A relating to market risk is set forth in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of FirstEnergy Corp.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of FirstEnergy Corp. and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of income (loss), of comprehensive income (loss), of stockholders' equity, and of cash flows for each of the three years in the period ended December 31, 2018, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP
Cleveland, Ohio
February 19, 2019

We have served as the Company's auditor since 2002.

FIRSTENERGY CORP.
CONSOLIDATED STATEMENTS OF INCOME (LOSS)

(In millions, except per share amounts)	For the Years Ended December 31, 2018	2017	2016
REVENUES:			
Distribution services and retail generation	$ 8,937	$ 8,685	$ 8,685
Transmission	1,335	1,307	1,123
Other	989	936	892
Total revenues[1]	11,261	10,928	10,700
OPERATING EXPENSES:			
Fuel	538	497	571
Purchased power	3,109	2,926	3,310
Other operating expenses	3,133	2,761	2,579
Provision for depreciation	1,136	1,027	933
Amortization (deferral) of regulatory assets, net	(150)	308	297
General taxes	993	940	913
Impairment of assets (Note 1)	—	41	43
Total operating expenses	8,759	8,500	8,646
OPERATING INCOME	2,502	2,428	2,054
OTHER INCOME (EXPENSE):			
Miscellaneous income, net	205	53	44
Pension and OPEB mark-to-market adjustment	(144)	(102)	(102)
Interest expense	(1,116)	(1,005)	(973)
Capitalized financing costs	65	52	55
Total other expense	(990)	(1,002)	(976)
INCOME BEFORE INCOME TAXES	1,512	1,426	1,078
INCOME TAXES	490	1,715	527
INCOME (LOSS) FROM CONTINUING OPERATIONS	1,022	(289)	551
Discontinued operations (Note 3)[2]	326	(1,435)	(6,728)
NET INCOME (LOSS)	$ 1,348	$ (1,724)	$ (6,177)
INCOME ALLOCATED TO PREFERRED STOCKHOLDERS (Note 1)	367	—	—
NET INCOME (LOSS) ATTRIBUTABLE TO COMMON STOCKHOLDERS	$ 981	$ (1,724)	$ (6,177)
EARNINGS (LOSS) PER SHARE OF COMMON STOCK:			
Basic - Continuing Operations	$ 1.33	$ (0.65)	$ 1.29
Basic - Discontinued Operations	0.66	(3.23)	(15.78)
Basic - Net Income (Loss) Attributable to Common Stockholders	$ 1.99	$ (3.88)	$ (14.49)
Diluted - Continuing Operations	$ 1.33	$ (0.65)	$ 1.29
Diluted - Discontinued Operations	0.66	(3.23)	(15.78)
Diluted - Net Income (Loss) Attributable to Common Stockholders	$ 1.99	$ (3.88)	$ (14.49)
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:			
Basic	492	444	426
Diluted	494	444	426

(1) Includes excise and gross receipts tax collections of $386 million, $370 million and $378 million in 2018, 2017 and 2016, respectively.

(2) Net of income tax benefit of $1,251 million, $820 million, and $3,582 million in 2018, 2017 and 2016, respectively.

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

FIRSTENERGY CORP.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(In millions)	For the Years Ended December 31, 2018	2017	2016
NET INCOME (LOSS)	$ 1,348	$ (1,724)	$ (6,177)
OTHER COMPREHENSIVE INCOME (LOSS):			
Pension and OPEB prior service costs	(83)	(85)	(59)
Amortized losses on derivative hedges	21	10	8
Change in unrealized gains on available-for-sale securities	(106)	22	55
Other comprehensive income (loss)	(168)	(53)	4
Income taxes (benefits) on other comprehensive income (loss)	(67)	(21)	1
Other comprehensive income (loss), net of tax	(101)	(32)	3
COMPREHENSIVE INCOME (LOSS)	$ 1,247	$ (1,756)	$ (6,174)

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

FIRSTENERGY CORP.
CONSOLIDATED BALANCE SHEETS

(In millions, except share amounts)	December 31, 2018	December 31, 2017
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 367	$ 588
Restricted cash	62	51
Receivables-		
Customers, net of allowance for uncollectible accounts of $50 in 2018 and $49 in 2017	1,221	1,282
Affiliated companies, net of allowance for uncollectible accounts of $920 in 2018	20	—
Other, net of allowance for uncollectible accounts of $2 in 2018 and $1 in 2017	270	170
Materials and supplies, at average cost	252	236
Prepaid taxes and other	175	151
Current assets - discontinued operations	25	632
	2,392	3,110
PROPERTY, PLANT AND EQUIPMENT:		
In service	39,469	37,113
Less — Accumulated provision for depreciation	10,793	10,011
	28,676	27,102
Construction work in progress	1,235	999
	29,911	28,101
PROPERTY, PLANT AND EQUIPMENT, NET - DISCONTINUED OPERATIONS	—	1,132
INVESTMENTS:		
Nuclear plant decommissioning trusts	790	822
Nuclear fuel disposal trust	256	251
Other	253	255
Investments - discontinued operations	—	1,875
	1,299	3,203
DEFERRED CHARGES AND OTHER ASSETS:		
Goodwill	5,618	5,618
Regulatory assets	91	40
Other	752	697
Deferred charges and other assets - discontinued operations	—	356
	6,461	6,711
	$ 40,063	$ 42,257
LIABILITIES AND CAPITALIZATION		
CURRENT LIABILITIES:		
Currently payable long-term debt	$ 503	$ 558
Short-term borrowings	1,250	300
Accounts payable	965	827
Accrued taxes	533	533
Accrued compensation and benefits	318	257
Collateral	39	39
Other	1,026	621
Current liabilities - discontinued operations	—	978
	4,634	4,113
CAPITALIZATION:		
Stockholders' Equity-		
Common stock, $0.10 par value, authorized 700,000,000 shares - 511,915,450 and 445,334,111 shares outstanding as of December 31, 2018 and December 31, 2017, respectively	51	44
Preferred stock, $100 par value, authorized 5,000,000 shares, of which 1,616,000 are designated Series A Convertible Preferred - 704,589 shares outstanding as of December 31, 2018	71	—
Other paid-in capital	11,530	10,001
Accumulated other comprehensive income	41	142
Accumulated deficit	(4,879)	(6,262)
Total stockholders' equity	6,814	3,925
Long-term debt and other long-term obligations	17,751	18,687
	24,565	22,612
NONCURRENT LIABILITIES:		
Accumulated deferred income taxes	2,502	3,171

Retirement benefits	2,906	3,975
Regulatory liabilities	2,498	2,720
Asset retirement obligations	812	570
Adverse power contract liability	89	130
Other	2,057	1,438
Noncurrent liabilities - discontinued operations	—	3,528
	10,864	15,532
COMMITMENTS, GUARANTEES AND CONTINGENCIES (Note 17)		
	$ 40,063	$ 42,257

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

FIRSTENERGY CORP.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In millions)	Series A Convertible Preferred Stock Shares	Series A Convertible Preferred Stock Amount	Common Stock Shares	Common Stock Amount	OPIC	AOCI	Retained Earnings (Accumulated Deficit)	Total Stockholders' Equity
Balance, January 1, 2016	—	$ —	424	$ 42	$ 9,952	$ 171	$ 2,256	$ 12,421
Net loss							(6,177)	(6,177)
Other comprehensive income, net of tax						3		3
Stock-based compensation					49			49
Cash dividends declared on common stock							(611)	(611)
Stock Investment Plan and certain share-based benefit plans			2		56			56
Stock issuance (Note 13)			16	2	498			500
Balance, December 31, 2016	—	$ —	442	$ 44	$ 10,555	$ 174	$ (4,532)	6,241
Net loss							(1,724)	(1,724)
Other comprehensive loss, net of tax						(32)		(32)
Stock-based compensation					36			36
Cash dividends declared on common stock					(639)			(639)
Stock Investment Plan and certain share-based benefit plans			3		56			56
Reclass to liability awards					(7)			(7)
Share-based compensation accounting change							(6)	(6)
Balance, December 31, 2017	—	$ —	445	$ 44	$ 10,001	$ 142	$ (6,262)	3,925
Net income							1,348	1,348
Other comprehensive loss, net of tax						(101)		(101)
Stock-based compensation					60			60
Stock Investment Plan and certain share-based benefit plans			4	1	61			62
Stock issuance (Note 13)[1]	1.6	162	30	3	2,297			2,462
Cash dividends declared on common stock					(906)			(906)
Cash dividends declared on preferred stock					(71)			(71)
Conversion of Series A Convertible Stock (Note 13)	(0.9)	$ (91)	33	3	88			—
Impact of adopting new accounting pronouncements							35	35
Balance, December 31, 2018	0.7	$ 71	512	$ 51	$ 11,530	$ 41	$ (4,879)	$ 6,814

[1] The Preferred Stock included an embedded conversion option at a price that is below the fair value of the Common Stock on the commitment date. This beneficial conversion feature (BCF), which was approximately $296 million, was recorded to OPIC as well as the amortization of the BCF (deemed dividend) through the period from the issue date to the first allowable conversion date (July 22, 2018) and as such there is no net impact to OPIC for the year ended December 31, 2018. See Note 1, "Organization and Basis of Presentation - Earnings per share," and Note 13,"Capitalization" for additional information on the BCF and the equity issuance.

Dividends declared for each share of common stock and as converted share of preferred stock was $1.82 during 2018 and $1.44 during each 2017 and 2016.

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

FIRSTENERGY CORP.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)	For the Years Ended December 31, 2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	$ 1,348	$ (1,724)	$ (6,177)
Adjustments to reconcile net income (loss) to net cash from operating activities-			
Gain on disposal, net of tax (Note 3)	(435)	—	—
Depreciation and amortization, including nuclear fuel, regulatory assets, net, intangible assets and deferred debt-related costs	1,384	1,700	1,974
Impairment of assets and related charges	—	2,399	10,665
Pension trust contributions	(1,250)	—	(382)
Retirement benefits, net of payments	(137)	29	64
Pension and OPEB mark-to-market adjustment	144	141	147
Deferred income taxes and investment tax credits, net	485	839	(3,063)
Asset removal costs charged to income	42	22	54
Unrealized (gain) loss on derivative transactions	(5)	81	9
Gain on sale of investment securities held in trusts	(9)	(63)	(50)
Changes in current assets and liabilities-			
Receivables	(248)	(39)	(11)
Materials and supplies	24	(6)	41
Prepaid taxes and other	(61)	30	27
Accounts payable	109	72	(37)
Accrued taxes	—	(9)	61
Accrued compensation and benefits	37	(27)	29
Other current liabilities	(146)	20	56
Cash collateral, net	(1)	27	(116)
Other	129	316	92
Net cash provided from operating activities	1,410	3,808	3,383
CASH FLOWS FROM FINANCING ACTIVITIES:			
New Financing-			
Long-term debt	1,474	4,675	1,976
Short-term borrowings, net	950	—	975
Preferred stock issuance	1,616	—	—
Common stock issuance	850	—	—
Redemptions and Repayments-			
Long-term debt	(2,608)	(2,291)	(2,331)
Short-term borrowings, net	—	(2,375)	—
Tender premiums paid on debt redemptions	(89)	—	—
Preferred stock dividend payments	(61)	—	—
Common stock dividend payments	(711)	(639)	(611)
Other	(27)	(72)	(43)
Net cash provided from (used for) financing activities	1,394	(702)	(34)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Property additions	(2,675)	(2,587)	(2,835)
Nuclear fuel	—	(254)	(232)
Proceeds from asset sales	425	388	15
Sales of investment securities held in trusts	909	2,170	1,678
Purchases of investment securities held in trusts	(963)	(2,268)	(1,789)
Notes receivable from affiliated companies	(500)	—	—
Asset removal costs	(218)	(172)	(145)
Other	4	—	6
Net cash used for investing activities	(3,018)	(2,723)	(3,302)
Net change in cash, cash equivalents and restricted cash	(214)	383	47
Cash, cash equivalents, and restricted cash at beginning of period	643	260	213
Cash, cash equivalents, and restricted cash at end of period	$ 429	$ 643	$ 260
SUPPLEMENTAL CASH FLOW INFORMATION:			
Non-cash transaction: stock contribution to pension plan	$ —	$ —	$ 500
Non-cash transaction: beneficial conversion feature (Note1)	$ 296	$ —	$ —

Non-cash transaction: deemed dividend convertible preferred stock (Note 1)	$ (296)	$ —	$ —
Cash paid (received) during the year -			
Interest (net of amounts capitalized)	$ 1,071	$ 1,039	$ 1,050
Income taxes, net of refunds	$ 49	$ 53	$ (16)

The accompanying Notes to Consolidated Financial Statements are an integral part of these financial statements.

FIRSTENERGY CORP. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION AND BASIS OF PRESENTATION

Unless otherwise indicated, defined terms and abbreviations used herein have the meanings set forth in the accompanying Glossary of Terms.

FE was incorporated under Ohio law in 1996. FE's principal business is the holding, directly or indirectly, of all of the outstanding equity of its principal subsidiaries: OE, CEI, TE, Penn (a wholly owned subsidiary of OE), JCP&L, ME, PN, FESC, AE Supply, MP, PE, WP, and FET and its principal subsidiaries (ATSI, MAIT and TrAIL). In addition, FE holds all of the outstanding equity of other direct subsidiaries including: FirstEnergy Properties, Inc., FEV, FELHC, Inc., GPU Nuclear, Inc., AESC and Allegheny Ventures, Inc.

FE and its subsidiaries are principally involved in the transmission, distribution and generation of electricity. FirstEnergy's ten utility operating companies comprise one of the nation's largest investor-owned electric systems, based on serving over six million customers in the Midwest and Mid-Atlantic regions. FirstEnergy's transmission operations include approximately 24,500 miles of lines and two regional transmission operation centers. AGC, JCP&L and MP control 3,790 MWs of total capacity.

FE and its subsidiaries follow GAAP and comply with the related regulations, orders, policies and practices prescribed by the SEC, FERC, and, as applicable, the NRC, the PUCO, the PPUC, the MDPSC, the NYPSC, the WVPSC, the VSCC and the NJBPU. The preparation of financial statements in conformity with GAAP requires management to make periodic estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and disclosure of contingent assets and liabilities. Actual results could differ from these estimates. The reported results of operations are not necessarily indicative of results of operations for any future period. FE and its subsidiaries have evaluated events and transactions for potential recognition or disclosure through the date the financial statements were issued.

FE and its subsidiaries consolidate all majority-owned subsidiaries over which they exercise control and, when applicable, entities for which they have a controlling financial interest. Intercompany transactions and balances are eliminated in consolidation as appropriate and permitted pursuant to GAAP. FE and its subsidiaries consolidate a VIE when it is determined that it is the primary beneficiary (see Note 10, "Variable Interest Entities"). Investments in affiliates over which FE and its subsidiaries have the ability to exercise significant influence, but do not have a controlling financial interest, follow the equity method of accounting. Under the equity method, the interest in the entity is reported as an investment in the Consolidated Balance Sheets and the percentage of FE's ownership share of the entity's earnings is reported in the Consolidated Statements of Income (Loss) and Comprehensive Income (Loss).

Certain prior year amounts have been reclassified to conform to the current year presentation, as discussed in "New Accounting Pronouncements" and Note 3, "Discontinued Operations."

FES and FENOC Chapter 11 Filing

On March 31, 2018, the FES Debtors announced that, in order to facilitate an orderly financial restructuring, they filed voluntary petitions under Chapter 11 of the United States Bankruptcy Code with the Bankruptcy Court (which is referred to throughout as the FES Bankruptcy). As a result of the bankruptcy filings, FirstEnergy concluded that it no longer had a controlling interest in the FES Debtors as the entities are subject to the jurisdiction of the Bankruptcy Court and, accordingly, as of March 31, 2018, the FES Debtors were deconsolidated from FirstEnergy's consolidated financial statements. Since such time, FE has accounted and will account for its investments in the FES Debtors at fair values of zero. FE concluded that in connection with the disposal, FES and FENOC became discontinued operations.

On September 26, 2018, the Bankruptcy Court approved a FES Bankruptcy settlement agreement dated August 26, 2018, by and among FirstEnergy, two groups of key FES creditors (collectively, the FES Key Creditor Groups), the FES Debtors and the UCC. The FES Bankruptcy settlement agreement resolves certain claims by FirstEnergy against the FES Debtors and all claims by the FES Debtors and their creditors against FirstEnergy, and includes the following terms, among others:

- FE will pay certain pre-petition FES and FENOC employee-related obligations, which include unfunded pension obligations and other employee benefits.
- FE will waive all pre-petition claims (other than those claims under the Tax Allocation Agreement for the 2018 tax year) and certain post-petition claims, against the FES Debtors related to the FES Debtors and their businesses, including the full borrowings by FES under the $500 million secured credit facility, the $200 million credit agreement being used to support surety bonds, the BNSF/CSX rail settlement guarantee, and the FES Debtors' unfunded pension obligations.
- The full release of all claims against FirstEnergy by the FES Debtors and their creditors.
- A $225 million cash payment from FirstEnergy.
- A $628 million aggregate principal amount note issuance by FirstEnergy to the FES Debtors, which may be decreased by the amount, if any, of cash paid by FirstEnergy to the FES Debtors under the Intercompany Income Tax Allocation Agreement for the tax benefits related to the sale or deactivation of certain plants.

- Transfer of the Pleasants Power Station and related assets, including the economic interests therein as of January 1, 2019, and a requirement that FE continue to provide access to the McElroy's Run CCR Impoundment Facility, which is not being transferred. FE will provide certain guarantees for retained environmental liabilities of AE Supply, including the McElroy's Run CCR Impoundment Facility.
- FirstEnergy agrees to waive all pre-petition claims related to shared services and credit nine-months of the FES Debtors' shared service costs beginning as of April 1, 2018 through December 31, 2018, in an amount not to exceed $112.5 million, and FirstEnergy agrees to extend the availability of shared services until no later than June 30, 2020.
- FirstEnergy agrees to fund through its pension plan a pension enhancement, subject to a cap, should FES offer a voluntary enhanced retirement package in 2019 and to offer certain other employee benefits.
- FirstEnergy agrees to perform under the Intercompany Tax Allocation Agreement through the FES Debtors' emergence from bankruptcy, at which time FirstEnergy will waive a 2017 overpayment for NOLs of approximately $71 million, reverse 2018 estimated payments for NOLs of approximately $88 million and pay the FES Debtors for the use of NOLs in an amount no less than $66 million for 2018 (of which approximately $52 million has been paid through December 31, 2018).

FirstEnergy determined a loss is probable with respect to the FES Bankruptcy and recorded pre-tax charges totaling $877 million in 2018. See Note 3, "Discontinued Operations," for additional information.

The FES Bankruptcy settlement agreement remains subject to satisfaction of certain conditions, most notably the issuance of a final order by the Bankruptcy Court approving the plan or plans of reorganization for the FES Debtors that are acceptable to FirstEnergy consistent with the requirements of the FES Bankruptcy settlement agreement. There can be no assurance that such conditions will be satisfied or the FES Bankruptcy settlement agreement will be otherwise consummated, and the actual outcome of this matter may differ materially from the terms of the agreement described herein. FirstEnergy will continue to evaluate the impact of any new factors on the settlement and their relative impact on the financial statements.

In connection with the FES Bankruptcy settlement agreement, FirstEnergy entered into a separation agreement with the FES Debtors to implement the separation of the FES Debtors and their businesses from FirstEnergy. A business separation committee was established between FirstEnergy and the FES Debtors to review and determine issues that arise in the context of the separation of the FES Debtors' businesses from those of FirstEnergy.

As contemplated under the FES Bankruptcy settlement agreement, AE Supply entered into an agreement on December 31, 2018, to transfer the 1,300 MW Pleasants Power Station and related assets to FG, while retaining certain specified liabilities. Under the terms of the agreement, FG acquired the economic interests in Pleasants as of January 1, 2019, and AE Supply will operate Pleasants until the transfer is completed. After closing, AE Supply will continue to provide access to the McElroy's Run CCR Impoundment Facility, which is not being transferred, and FE will provide certain guarantees for retained environmental liabilities of AE Supply, including the McElroy's Run CCR Impoundment Facility. The transfer of the Pleasants Power Station is subject to various customary and other closing conditions, including FERC approval of the transaction, the Bankruptcy Court's approval of the agreement, effectiveness of the FES Bankruptcy settlement agreement and the effectiveness of a plan of reorganization for the FES Debtors in connection with the FES Bankruptcy. There can be no assurance that all closing conditions will be satisfied or that the transfer will be consummated.

Restricted Cash

Restricted cash primarily relates to the consolidated VIE's discussed in Note 10, "Variable Interest Entities." The cash collected from JCP&L, MP, PE and the Ohio Companies' customers is used to service debt of their respective funding companies.

ACCOUNTING FOR THE EFFECTS OF REGULATION

FirstEnergy accounts for the effects of regulation through the application of regulatory accounting to the Utilities, AGC, and the Transmission Companies since their rates are established by a third-party regulator with the authority to set rates that bind customers, are cost-based and can be charged to and collected from customers.

FirstEnergy records regulatory assets and liabilities that result from the regulated rate-making process that would not be recorded under GAAP for non-regulated entities. These assets and liabilities are amortized in the Consolidated Statements of Income (Loss) concurrent with the recovery or refund through customer rates. FirstEnergy believes that it is probable that its regulatory assets and liabilities will be recovered and settled, respectively, through future rates. FirstEnergy and the Utilities net their regulatory assets and liabilities based on federal and state jurisdictions.

The following table provides information about the composition of net regulatory assets and liabilities as of December 31, 2018 and December 31, 2017, and the changes during the year ended December 31, 2018:

Net Regulatory Assets (Liabilities) by Source	December 31, 2018	December 31, 2017	Change
		(In millions)	
Regulatory transition costs	$ 49	$ 46	$ 3
Customer payables for future income taxes	(2,725)	(2,765)	40
Nuclear decommissioning and spent fuel disposal costs	(148)	(323)	175
Asset removal costs	(787)	(774)	(13)
Deferred transmission costs	170	187	(17)
Deferred generation costs	202	198	4
Deferred distribution costs	208	258	(50)
Contract valuations	62	118	(56)
Storm-related costs	500	329	171
Other	62	46	16
Net Regulatory Liabilities included on the Consolidated Balance Sheets	$ (2,407)	$ (2,680)	$ 273

Approximately $503 million and $223 million of regulatory assets, primarily related to storm damage costs, do not earn a current return as of December 31, 2018 and 2017, respectively, and a majority of which are currently being recovered through rates over varying periods depending on the nature of the deferral and the jurisdiction. Additionally, certain regulatory assets, totaling approximately $141 million as of December 31, 2018, are recorded based on prior precedent or anticipated recovery based on rate making premises without a specific order.

CUSTOMER RECEIVABLES

Receivables from customers include retail electric sales and distribution deliveries to residential, commercial and industrial customers for the Utilities. There was no material concentration of receivables as of December 31, 2018 and 2017, with respect to any particular segment of FirstEnergy's customers. Billed and unbilled customer receivables as of December 31, 2018 and 2017, net of allowance for uncollectible accounts, are included below.

Customer Receivables	December 31, 2018	December 31, 2017
	(In millions)	
Billed	$ 686	$ 754
Unbilled	535	528
Total	$ 1,221	$ 1,282

EARNINGS (LOSS) PER SHARE OF COMMON STOCK

The convertible preferred stock issued in January 2018 (see Note 13, "Capitalization") is considered participating securities since these shares participate in dividends on common stock on an "as-converted" basis. As a result, EPS of common stock is computed using the two-class method required for participating securities.

The two-class method uses an earnings allocation formula that treats participating securities as having rights to earnings that otherwise would have been available only to common stockholders. Under the two-class method, net income attributable to common stockholders is derived by subtracting the following from income from continuing operations:

- preferred stock dividends,
- deemed dividends for the amortization of the beneficial conversion feature recognized at issuance of the preferred stock (if any), and
- an allocation of undistributed earnings between the common stock and the participating securities (convertible preferred stock) based on their respective rights to receive dividends.

Net losses are not allocated to the convertible preferred stock as they do not have a contractual obligation to share in the losses of FirstEnergy. FirstEnergy allocates undistributed earnings based upon income from continuing operations.

The preferred stock includes an embedded conversion option at a price that is below the fair value of the common stock on the commitment date. This beneficial conversion feature, which was approximately $296 million, represents the difference between the fair value per share of the common stock and the conversion price, multiplied by the number of common shares issuable upon conversion. The beneficial conversion feature was amortized as a deemed dividend over the period from the issue date to the first

allowable conversion date (July 22, 2018) as a charge to OPIC, since FE is in an accumulated deficit position with no retained earnings to declare a dividend. As noted above, for EPS reporting purposes, this beneficial conversion feature will be reflected in net income (loss) attributable to common stockholders as a deemed dividend. The amount amortized for the year ended December 31, 2018, was $296 million.

Basic EPS available to common stockholders is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding during the period. Participating securities are excluded from basic weighted average ordinary shares outstanding. Diluted EPS available to common stockholders is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding, including all potentially dilutive common shares, if the effect of such common shares is dilutive.

Diluted EPS reflects the dilutive effect of potential common shares from share-based awards and convertible preferred shares. The dilutive effect of outstanding share-based awards is computed using the treasury stock method, which assumes any proceeds that could be obtained upon the exercise of the award would be used to purchase common stock at the average market price for the period. The dilutive effect of the convertible preferred stock is computed using the if-converted method, which assumes conversion of the convertible preferred stock at the beginning of the period, giving income recognition for the add-back of the preferred share dividends, amortization of beneficial conversion feature, and undistributed earnings allocated to preferred stockholders.

	Year Ended December 31,		
Reconciliation of Basic and Diluted EPS of Common Stock	**2018**	**2017**	**2016**
(In millions, except per share amounts)			
EPS of Common Stock			
Income from continuing operations	$ 1,022	$ (289)	$ 551
Less: Preferred dividends	(71)	—	—
Less: Amortization of beneficial conversion feature	(296)	—	—
Less: Undistributed earnings allocated to preferred stockholders[(1)]	—	—	—
Income from continuing operations available to common stockholders	655	(289)	551
Discontinued operations, net of tax	326	(1,435)	(6,728)
Less: Undistributed earnings allocated to preferred stockholders [(1)]	—	—	—
Income (loss) from discontinued operations available to common stockholders	326	(1,435)	(6,728)
Net Income (loss) attributable to common stockholders, basic and diluted	$ 981	$ (1,724)	$ (6,177)
Share Count information:			
Weighted average number of basic shares outstanding	492	444	426
Assumed exercise of dilutive stock options and awards	2	—	—
Weighted average number of diluted shares outstanding	494	444	426
Net Income (loss) attributable to common stockholders, per share:			
Income from continuing operations, basic	$ 1.33	$ (0.65)	$ 1.29
Discontinued operations, basic	0.66	(3.23)	(15.78)
Net income (loss) attributable to common stockholders, basic	$ 1.99	$ (3.88)	$ (14.49)
Income from continuing operations, diluted	$ 1.33	$ (0.65)	$ 1.29
Discontinued operations, diluted	0.66	(3.23)	(15.78)
Net income (loss) attributable to common stockholders, diluted	$ 1.99	$ (3.88)	$ (14.49)

(1) Undistributed earnings were not allocated to participating securities for the year ended December 31, 2018, as income from continuing operations less dividends declared (common and preferred) and deemed dividends were negative.

For the years ended December 31, 2018, 2017 and 2016, approximately 1 million, 3 million and 3 million shares from stock options and awards were excluded from the calculation of diluted shares outstanding, respectively, as their inclusion would be antidilutive, and, in the case of 2017 and 2016, a result of the net loss for the period. Additionally, 26 million shares associated with the assumed conversion of preferred stock were excluded, as their inclusion would be antidilutive to basic EPS from continuing operations.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment reflects original cost (net of any impairments recognized), including payroll and related costs such as taxes, employee benefits, administrative and general costs, and interest costs incurred to place the assets in service. The costs of normal maintenance, repairs and minor replacements are expensed as incurred. FirstEnergy recognizes liabilities for planned major maintenance projects as they are incurred. Property, plant and equipment balances by segment as of December 31, 2018 and 2017, were as follows:

	December 31, 2018				
Property, Plant and Equipment	**In Service[1]**	**Accum. Depr.**	**Net Plant**	**CWIP**	**Total**
			(In millions)		
Regulated Distribution	$ 27,520	$ (8,132)	$ 19,388	$ 628	$ 20,016
Regulated Transmission	11,041	(2,210)	8,831	545	9,376
Corporate/Other	908	(451)	457	62	519
Total	$ 39,469	$ (10,793)	$ 28,676	$ 1,235	$ 29,911

	December 31, 2017				
Property, Plant and Equipment	**In Service[1]**	**Accum. Depr.**	**Net Plant**	**CWIP**	**Total**
			(In millions)		
Regulated Distribution	$ 25,950	$ (7,503)	$ 18,447	$ 469	$ 18,916
Regulated Transmission	10,102	(2,055)	8,047	480	8,527
Corporate/Other	1,061	(453)	608	50	658
Total	$ 37,113	$ (10,011)	$ 27,102	$ 999	$ 28,101

[1] Includes capital leases of $173 million and $190 million as of December 31, 2018 and 2017, respectively.

The major classes of Property, plant and equipment are largely consistent with the segment disclosures above. Regulated Distribution has approximately $2 billion of total regulated generation property, plant and equipment.

FirstEnergy provides for depreciation on a straight-line basis at various rates over the estimated lives of property included in plant in service. The respective annual composite depreciation rates for FirstEnergy were 2.6%, 2.4% and 2.3% in 2018, 2017 and 2016, respectively.

During the third quarter of 2016, FirstEnergy recorded a reduction to depreciation expense of $21 million ($19 million prior to January 1, 2016) that related to prior periods. The out-of-period adjustment related to the utilization of an accelerated useful life for a component of a certain power station. Management determined this adjustment was not material to 2016 or any prior periods.

For the years ended December 31, 2018, 2017 and 2016, capitalized financing costs on FirstEnergy's Consolidated Statements of Income (Loss) include $46 million, $35 million and $37 million, respectively, of allowance for equity funds used during construction and $19 million, $17 million and $18 million, respectively, of capitalized interest.

Jointly Owned Plants

FE, through its subsidiary, AGC, owns an undivided 16.25% interest (487 MWs) in a 3,003 MW pumped storage, hydroelectric station and a 40% interest in its connecting transmission facilities in Bath County, Virginia, operated by the 60% owner, VEPCO, a non-affiliated utility. Net Property, plant and equipment includes $188 million representing AGC's share in this facility as of December 31, 2018. AGC is obligated to pay its share of the costs of this jointly-owned facility in the same proportion as its ownership interests using its own financing. AGC's share of direct expenses of the joint plant is included in FE's operating expenses on the Consolidated Statements of Income (Loss). AGC provides the generation capacity from this facility to its owner, MP.

Asset Retirement Obligations

FE recognizes an ARO for the future decommissioning of its nuclear power plant and future remediation of other environmental liabilities associated with all of its long-lived assets. The ARO liability represents an estimate of the fair value of FirstEnergy's current obligation related to nuclear decommissioning and the retirement or remediation of environmental liabilities of other assets. A fair value measurement inherently involves uncertainty in the amount and timing of settlement of the liability. FirstEnergy uses an expected cash flow approach to measure the fair value of the nuclear decommissioning and environmental remediation AROs, considering the expected timing of settlement of the ARO based on the expected economic useful life of associated asset and/or regulatory requirements. The fair value of an ARO is recognized in the period in which it is incurred. The associated asset retirement

costs are capitalized as part of the carrying value of the long-lived asset and are depreciated over the life of the related asset. In certain circumstances, FirstEnergy has recovery of asset retirement costs and, as such, certain accretion and depreciation is offset against regulatory assets.

Conditional retirement obligations associated with tangible long-lived assets are recognized at fair value in the period in which they are incurred if a reasonable estimate can be made, even though there may be uncertainty about timing or method of settlement. When settlement is conditional on a future event occurring, it is reflected in the measurement of the liability, not the timing of the liability recognition.

AROs as of December 31, 2018, are described further in Note 15, "Asset Retirement Obligations."

ASSET IMPAIRMENTS

FirstEnergy evaluates long-lived assets classified as held and used for impairment when events or changes in circumstances indicate the carrying value of the long-lived assets may not be recoverable. First, the estimated undiscounted future cash flows attributable to the assets is compared with the carrying value of the assets. If the carrying value is greater than the undiscounted future cash flows, an impairment charge is recognized equal to the amount the carrying value of the assets exceeds its estimated fair value.

Asset impairments associated with a discontinued operation (a portion of AE Supply, FES, FENOC and BSPC) are recognized in discontinued operations. See Note 3, "Discontinued Operations".

2017 Impairments

As described in Note 16, "Regulatory Matters," on October 13, 2017, MAIT and certain parties filed a settlement agreement with FERC. As a result of the settlement agreement, MAIT recorded a pre-tax impairment charge of $13 million in the third quarter of 2017.

As described in Note 16, "Regulatory Matters," on December 21, 2017, JCP&L and certain parties filed a settlement agreement with FERC. As a result of the settlement agreement, JCP&L recorded a pre-tax impairment charge of $28 million in the fourth quarter of 2017.

2016 Impairments

During 2016, FirstEnergy recognized an impairment of approximately $43 million primarily associated with AE Supply's investment in OVEC.

GOODWILL

In a business combination, the excess of the purchase price over the estimated fair value of the assets acquired and liabilities assumed is recognized as goodwill. FirstEnergy's reporting units are consistent with its reportable segments and consist of Regulated Distribution and Regulated Transmission. The following table presents goodwill by reporting unit as of December 31, 2018:

	Regulated Distribution	Regulated Transmission	Consolidated
		(In millions)	
Goodwill	$ 5,004	$ 614	$ 5,618

FirstEnergy tests goodwill for impairment annually as of July 31 and considers more frequent testing if indicators of potential impairment arise.

As of July 31, 2018, FirstEnergy performed a qualitative assessment of the Regulated Distribution and Regulated Transmission reporting units' goodwill, assessing economic, industry and market considerations in addition to the reporting units' overall financial performance. Key factors used in the assessment include: growth rates, interest rates, expected capital expenditures, utility sector market performance and other market considerations. It was determined that the fair values of these reporting units were, more likely than not, greater than their carrying values and a quantitative analysis was not necessary.

INVESTMENTS

All temporary cash investments purchased with an initial maturity of three months or less are reported as cash equivalents on the Consolidated Balance Sheets at cost, which approximates their fair market value. Investments other than cash and cash equivalents include equity securities, AFS debt securities and other investments. FirstEnergy has no debt securities held for trading purposes.

Generally, unrealized gains and losses on equity securities are recognized in income whereas unrealized gains and losses on AFS debt securities are recognized in AOCI. However, the NDTs of JCP&L, ME and PN are subject to regulatory accounting with all

gains and losses on equity and AFS debt securities offset against regulatory assets. The fair values of FirstEnergy's investments are disclosed in Note 11, "Fair Value Measurements."

The investment policy for the NDT funds restricts or limits the trusts' ability to hold certain types of assets including private or direct placements, warrants, securities of FirstEnergy, investments in companies owning nuclear power plants, financial derivatives, securities convertible into common stock and securities of the trust funds' custodian or managers and their parents or subsidiaries.

INVENTORY

Materials and supplies inventory includes fuel inventory and the distribution, transmission and generation plant materials, net of reserve for excess and obsolete inventory. Materials are generally charged to inventory at weighted average cost when purchased and expensed or capitalized, as appropriate, when used or installed. Fuel inventory is accounted for at weighted average cost when purchased, and recorded to fuel expense when consumed.

NEW ACCOUNTING PRONOUNCEMENTS

Recently Adopted Pronouncements

ASU 2014-09, *"Revenue from Contracts with Customers"* (Issued May 2014 and subsequently updated to address implementation questions): The new revenue recognition guidance establishes a new control-based revenue recognition model, changes the basis for deciding when revenue is recognized over time or at a point in time, provides new and more detailed guidance on specific topics and expands and improves disclosures about revenue. FirstEnergy evaluated its revenues and determined the new guidance had immaterial impacts to recognition practices upon adoption on January 1, 2018. As part of the adoption, FirstEnergy elected to apply the new guidance on a modified retrospective basis. FirstEnergy did not record a cumulative effect adjustment to retained earnings for initially applying the new guidance as no revenue recognition differences were identified in the timing or amount of revenue. In addition, upon adoption, certain immaterial financial statement presentation changes were implemented. See Note 2, "Revenue," for additional information on FirstEnergy's revenues.

ASU 2016-01, *"Financial Instruments-Overall: Recognition and Measurement of Financial Assets and Financial Liabilities"* (Issued January 2016 and subsequently updated in 2018): ASU 2016-01 primarily affects the accounting for equity investments, financial liabilities under the fair value option, and the presentation and disclosure requirements for financial instruments. FirstEnergy adopted this standard on January 1, 2018, and recognizes all gains and losses for equity securities in income with the exception of those that are accounted for under the equity method of accounting. The NDT equity portfolios of JCP&L, ME and PN will not be impacted as unrealized gains and losses will continue to be offset against regulatory assets or liabilities. As a result of adopting this standard, FirstEnergy recorded a cumulative effect adjustment to retained earnings of $57 million on January 1, 2018, representing unrealized gains on equity securities with FES NDTs that were previously recorded to AOCI. Following deconsolidation of the FES Debtors, the adoption of this standard is not expected to have a material impact on FirstEnergy's financial statements as the majority of its gains and losses on equity securities are offset against a regulatory asset or liability.

ASU 2016-18, "*Restricted Cash"* (Issued November 2016): ASU 2016-18 addresses the presentation of changes in restricted cash and restricted cash equivalents in the statement of cash flows. The guidance is required to be applied retrospectively. As a result of adopting this standard, FirstEnergy's statement of cash flows reports changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents. Prior periods have been recast to conform to the current year presentation.

ASU 2017-01, *"Business Combinations: Clarifying the Definition of a Business"* (Issued January 2017)*:* ASU 2017-01 assists entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. FirstEnergy adopted ASU 2017-01 on January 1, 2018. The ASU will be applied prospectively to future transactions.

ASU 2017-04, *"Goodwill Impairment"* (Issued January 2017): ASU 2017-04 simplifies the accounting for goodwill impairment by removing Step 2 of the current test, which requires calculation of a hypothetical purchase price allocation. Under the revised guidance, goodwill impairment will be measured as the amount by which a reporting unit’s carrying value exceeds its fair value, not to exceed the carrying amount of goodwill (currently Step 1 of the two-step impairment test). Entities will continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary. FirstEnergy has elected to early adopt ASU 2017-04 as of January 1, 2018, and will apply this standard on a prospective basis.

ASU 2017-07, *"Compensation-Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost"* (Issued March 2017)*:* ASU 2017-07 requires entities to retrospectively (1) disaggregate the current-service-cost component from the other components of net benefit cost (the other components) and present it with other current compensation costs for related employees in the income statement and (2) present the other components elsewhere in the income statement and outside of income from operations if such a subtotal is presented. In addition, only service costs are eligible for capitalization on a prospective basis. FirstEnergy adopted ASU 2017-07 on January 1, 2018. Because the non-service cost components of net benefit cost are no longer eligible for capitalization after December 31, 2017, FirstEnergy has recognized these components in income as a result of adopting this standard. FirstEnergy reclassified approximately $27 million and $6 million of non-service costs from Other operating expenses to Miscellaneous income, net, for the years ended December 31, 2017 and December 31, 2016, respectively.

ASU 2018-02, "*Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*" (Issued February 2018): ASU 2018-02 allows entities to reclassify from AOCI to retained earnings stranded tax effects resulting from the Tax Act. FirstEnergy early adopted this standard during the first quarter of 2018 and has elected to present the change in the period of adoption. Upon adoption, FirstEnergy recorded a $22 million cumulative effect adjustment for stranded tax effects, such as pension and OPEB prior service costs and losses on derivative hedges, to retained earnings on January 1, 2018, of which $8 million was related to the FES Debtors.

ASU 2018-05, "*Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118*" (Issued March 2018): ASU 2018-05, effective 2018, expands income tax accounting and disclosure guidance to include SAB 118 issued by the SEC in December 2017. SAB 118 provides guidance on accounting for the income tax effects of the Tax Act and among other things allows for a measurement period not to exceed one year for companies to finalize the provisional amounts recorded as of December 31, 2017. See Note 7, "Taxes," for additional information on FirstEnergy's accounting for the Tax Act.

ASU 2018-13, "*Fair Value Measurement (Topic 820): Disclosure Framework-Changes to the Disclosure Requirements for Fair Value Measurement*" (Issued August 2018): ASU 2018-13 eliminates, adds and modifies certain disclosure requirements for fair value measurements as part of the FASB's disclosure framework project. Entities will no longer be required to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, but public companies will be required to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. Entities are permitted to early adopt either the entire standard or only the provisions that eliminate or modify the requirements. FirstEnergy early adopted all the provisions of this standard as of December 31, 2018 which are reflected in Note 11, "Fair Value Measurements".

ASU 2018-14, "*Compensation-Retirement Benefits-Defined Benefit Plans-General (Subtopic 715-20): Disclosure Framework-Changes to the Disclosure Requirements for Defined Benefit Plans*" (Issued August 2018): ASU 2018-14 amends ASC 715 to add, remove, and clarify disclosure requirements related to defined benefit pension and other postretirement plans. FirstEnergy early adopted ASU 2018-14 as of December 31, 2018 and the provisions of this standard are reflected within Note 5, "Pension and Other Postemployment Benefits".

Recently Issued Pronouncements - The following new authoritative accounting guidance issued by the FASB was not adopted in 2018. Unless otherwise indicated, FirstEnergy is currently assessing the impact such guidance may have on its financial statements and disclosures, as well as the potential to early adopt where applicable. FirstEnergy has assessed other FASB issuances of new standards not described below and has not included these standards based upon the current expectation that such new standards will not significantly impact FirstEnergy's financial reporting.

ASU 2016-02, *"Leases (Topic 842)*" (Issued February 2016 and subsequently updated to address implementation questions): The new guidance will require organizations that lease assets with lease terms of more than 12 months to recognize assets and liabilities for the rights and obligations created by those leases on their balance sheets as well as new qualitative and quantitative disclosures. FirstEnergy has implemented a third-party software tool that will assist with the initial adoption and ongoing compliance. The standard provides a number of transition practical expedients that entities may elect. These include a "package of three" expedients that must be taken together and allow entities to (1) not reassess whether existing contracts contain leases, (2) carryforward the existing lease classification, and (3) not reassess initial direct costs associated with existing leases. A separate practical expedient allows entities to not evaluate land easements under the new guidance at adoption if they were not previously accounted for as leases. Additionally, entities have the option to apply the requirements of the standard in the period of adoption (January 1, 2019) with no restatement of prior periods. FirstEnergy elected all of these practical expedients. Upon adoption, on January 1, 2019, FirstEnergy increased assets and liabilities by approximately $190 million, with no impact to results of operations or cash flows.

ASU 2016-13, "*Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*" (issued June 2016 and subsequently updated): ASU 2016-13 removes all recognition thresholds and will require companies to recognize an allowance for credit losses for the difference between the amortized cost basis of a financial instrument and the amount of amortized cost that the company expects to collect over the instrument's contractual life. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early adoption is permitted for fiscal years beginning after December 15, 2018.

ASU 2018-15, "*Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract*" (Issued August 2018): ASU 2018-15 requires implementation costs incurred by customers in cloud computing arrangements to be deferred and recognized over the term of the arrangement, if those costs would be capitalized by the customers in a software licensing arrangement. The guidance will be effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted.

2. REVENUE

FirstEnergy accounts for revenues from contracts with customers under ASC 606, Revenue from Contracts with Customers, which became effective January 1, 2018. As part of the adoption of ASC 606, FirstEnergy applied the new standard on a modified retrospective basis analyzing open contracts as of January 1, 2018. However, no cumulative effect adjustment to retained earnings

was necessary as no revenue recognition differences were identified when comparing the revenue recognition criteria under ASC 606 to previous requirements.

Revenue from leases, financial instruments, other contractual rights or obligations and other revenues that are not from contracts with customers are outside the scope of the new standard and accounted for under other existing GAAP. FirstEnergy has elected to exclude sales taxes and other similar taxes collected on behalf of third parties from revenue as prescribed in the new standard. As a result, tax collections and remittances within the scope of this election are excluded from recognition in the income statement and instead recorded through the balance sheet, consistent with FirstEnergy's accounting process prior to the adoption of ASC 606. Excise and gross receipts taxes that are assessed on FirstEnergy are not subject to the election and are included in revenue. FirstEnergy has elected the optional invoice practical expedient for most of its revenues and, with the exception of JCP&L transmission, utilizes the optional short-term contract exemption for transmission revenues due to the annual establishment of revenue requirements, which eliminates the need to provide certain revenue disclosures regarding unsatisfied performance obligations. For a qualitative overview of FirstEnergy's performance obligations, see below.

FirstEnergy's revenues are primarily derived from electric service provided by its Utilities and Transmission subsidiaries.

The following tables represent a disaggregation of revenue from contracts with customers for the year ended December 31, 2018, by type of service from each reportable segment:

Revenues by Type of Service	Regulated Distribution	Regulated Transmission	Corporate/Other and Reconciling Adjustments [1]	Total
		(In millions)		
Distribution services[2]	$ 5,159	$ —	$ (104)	$ 5,055
Retail generation	3,936	—	(54)	3,882
Wholesale sales[2]	502	—	22	524
Transmission[2]	—	1,335	—	1,335
Other	144		4	148
Total revenues from contracts with customers	$ 9,741	$ 1,335	$ (132)	$ 10,944
ARP	254	—	—	254
Other non-customer revenue	108	18	(63)	63
Total revenues	$ 10,103	$ 1,353	$ (195)	$ 11,261

[1] Includes eliminations and reconciling adjustments of inter-segment revenues.
[2] Includes $147 million in net reductions to revenue related to amounts subject to refund resulting from the Tax Act ($131 million at Regulated Distribution and $16 million at Regulated Transmission).

Other non-customer revenue primarily includes revenue from derivatives and late payment charges of $18 million and $39 million, respectively, for the year ended December 31, 2018.

Regulated Distribution

The **Regulated Distribution** segment distributes electricity through FirstEnergy's ten utility operating companies and also controls 3,790 MWs of regulated electric generation capacity located primarily in West Virginia, Virginia and New Jersey. Each of the Utilities earns revenue from state-regulated rate tariffs under which it provides distribution services to residential, commercial and industrial customers in its service territory. The Utilities are obligated under the regulated construct to deliver power to customers reliably, as it is needed, which creates an implied monthly contract with the end-use customer. See Note 16 "Regulatory Matters," for additional information on rate recovery mechanisms. Distribution and electric revenues are recognized over time as electricity is distributed and delivered to the customer and the customers consume the electricity immediately as delivery occurs.

Retail generation sales relate to POLR, SOS, SSO and default service requirements in Ohio, Pennsylvania, New Jersey and Maryland, as well as generation sales in West Virginia that are regulated by the WVPSC. Certain of the Utilities have default service obligations to provide power to non-shopping customers who have elected to continue to receive service under regulated retail tariffs. The volume of these sales varies depending on the level of shopping that occurs. Supply plans vary by state and by service territory. Default service for the Ohio Companies, Pennsylvania Companies, JCP&L and PE's Maryland jurisdiction are provided through a competitive procurement process approved by each state's respective commission. Retail generation revenues are recognized over time as electricity is delivered and consumed immediately by the customer.

The following table represents a disaggregation of the Regulated Distribution segment revenue from contracts with **distribution service and retail generation** customers for the year ended December 31, 2018, by class:

Revenues by Customer Class		
		(In millions)
Residential	$	5,598
Commercial		2,350
Industrial		1,056
Other		91
Total	$	9,095

Wholesale sales primarily consist of generation and capacity sales into the PJM market from FirstEnergy's regulated electric generation capacity and NUGs. Certain of the Utilities may also purchase power from PJM to supply power to their customers. Generally, these power sales from generation and purchases to serve load are netted hourly and reported gross as either revenues or purchased power on the Consolidated Statements of Income (Loss) based on whether the entity was a net seller or buyer each hour. Capacity revenues are recognized ratably over the PJM planning year at prices cleared in the annual BRA and incremental auctions. Capacity purchases and sales through PJM capacity auctions are reported within revenues on the Consolidated Statements of Income (Loss). Certain capacity income (bonuses) and charges (penalties) related to the availability of units that have cleared in the auctions are unknown and not recorded in revenue until, and unless, they occur.

The Utilities' distribution customers are metered on a cycle basis. An estimate of unbilled revenues is calculated to recognize electric service provided from the last meter reading through the end of the month. This estimate includes many factors, among which are historical customer usage, load profiles, estimated weather impacts, customer shopping activity and prices in effect for each class of customer. In each accounting period, the Utilities accrue the estimated unbilled amount as revenue and reverses the related prior period estimate. Customer payments vary by state but are generally due within 30 days.

ASC 606 excludes industry-specific accounting guidance for recognizing revenue from ARPs as these programs represent contracts between the utility and its regulators, as opposed to customers. Therefore, revenue from these programs are not within the scope of ASC 606 and regulated utilities are permitted to continue to recognize such revenues in accordance with existing practice but are presented separately from revenue arising from contracts with customers. FirstEnergy currently has ARPs in Ohio, primarily under rider DMR, and in New Jersey.

Regulated Transmission

The **Regulated Transmission** segment provides transmission infrastructure owned and operated by the Transmission Companies and certain of FirstEnergy's utilities (JCP&L, MP, PE and WP) to transmit electricity from generation sources to distribution facilities. The segment's revenues are primarily derived from forward-looking formula rates at the Transmission Companies, as well as stated transmission rates at JCP&L, MP, PE and WP. Both the forward-looking formula and stated rates recover costs that the regulatory agencies determine are permitted to be recovered and provide a return on transmission capital investment. Under forward-looking formula rates, the revenue requirement is updated annually based on a projected rate base and projected costs, which is subject to an annual true-up based on actual costs. Revenue requirements under stated rates are calculated annually by multiplying the highest one-hour peak load in each respective transmission zone by the approved, stated rate in that zone. Revenues and cash receipts for the stand-ready obligation of providing transmission service are recognized ratably over time.

Effective January 1, 2018, JCP&L is subject to a FERC-approved settlement agreement that provides an annual revenue requirement of $155 million through December 31, 2019 which is recognized ratably as revenue over time.

The following table represents a disaggregation of revenue from contracts with regulated transmission customers for the year ended December 31, 2018, by transmission owner:

Revenues from Contracts with Customers by Transmission Asset Owner		
		(In millions)
ATSI	$	664
TrAIL		237
MAIT		150
Other		284
Total	$	1,335

3. DISCONTINUED OPERATIONS

FES, FENOC, BSPC and a portion of AE Supply (including the Pleasants Power Station), representing substantially all of FirstEnergy's operations that previously comprised the CES reportable operating segment, are presented as discontinued operations in FirstEnergy's consolidated financial statements resulting from the FES Bankruptcy and actions taken as part of the strategic review to exit commodity-exposed generation, as discussed below. During the third quarter of 2018, the Pleasants Power Station was reclassified to discontinued operations following its inclusion in the FES Bankruptcy settlement agreement for the benefit of FES' creditors. Prior period results have been reclassified to conform with such presentation as discontinued operations.

FES and FENOC Chapter 11 Bankruptcy Filing

As discussed in Note 1, "Organization and Basis of Presentation," on March 31, 2018, FES and FENOC announced the FES Bankruptcy. FirstEnergy concluded that it no longer has a controlling interest in the FES Debtors, as the entities are subject to the jurisdiction of the Bankruptcy Court and, accordingly, as of March 31, 2018, FES and FENOC were deconsolidated from FirstEnergy's consolidated financial statements, and FirstEnergy has accounted and will account for its investments in FES and FENOC at fair values of zero. In connection with the disposal and the FES Bankruptcy settlement agreement approved by the Bankruptcy Court in September 2018, as further discussed in Note 1, "Organization and Basis of Presentation," FE recorded an after-tax gain on disposal of $435 million in 2018.

By eliminating a significant portion of its competitive generation fleet with the deconsolidation of the FES Debtors, FirstEnergy has concluded the FES Debtors meet the criteria for discontinued operations, as this represents a significant event in management's strategic review to exit commodity-exposed generation and transition to a fully regulated company.

FES Borrowings from FE

On March 9, 2018, FES borrowed $500 million from FE under the secured credit facility, dated as of December 6, 2016, among FES, as Borrower, FG and NG as guarantors, and FE, as lender, which fully utilized the committed line of credit available under the secured credit facility. Following deconsolidation of FES, FE fully reserved for the $500 million associated with the borrowings under the secured credit facility. Under the terms of the FES Bankruptcy settlement agreement discussed below, FE will release any and all claims against the FES Debtors with respect to the $500 million borrowed under the secured credit facility.

On March 16, 2018, FES and FENOC withdrew from the unregulated companies' money pool, which included FE, FES and FENOC. Under the terms of the FES Bankruptcy settlement agreement, FE reinstated $88 million for 2018 estimated payments for NOLs applied against the FES Debtor's position in the unregulated companies' money pool prior to their withdrawal on March 16, 2018, which increased the amount the FES Debtors owed FE under the money pool to $92 million. In addition, as of March 31, 2018, AE Supply had a $102 million outstanding unsecured promissory note owed from FES. Following deconsolidation of FES and FENOC on March 31, 2018 and given the terms of the FES Bankruptcy settlement agreement, FE fully reserved the $92 million associated with the outstanding unsecured borrowings under the unregulated companies' money pool and the $102 million associated with the AE Supply unsecured promissory note, under the terms of the FES Bankruptcy settlement agreement, FirstEnergy will release any and all claims against the FES Debtors with respect to the $92 million owed under the unregulated money pool and $102 million unsecured promissory note. As of December 31, 2018, approximately $24 million of interest was accrued and subsequently reserved.

Services Agreements

Pursuant to the FES Bankruptcy settlement agreement, FirstEnergy entered into an amended and restated shared services agreement with the FES Debtors to extend the availability of shared services until no later than June 30, 2020, subject to reductions in services if requested by the FES Debtors. Under the amended shared services agreement, and consistent with the prior shared services agreements, costs are directly billed or assigned at no more than cost. In addition to providing for certain notice requirements and other terms and conditions, the agreement provides for a credit to the FES Debtors in an amount up to $112.5 million for charges incurred for services provided under prior shared services agreements and the amended shared services agreement from April 1, 2018 through December 31, 2018. As of December 31, 2018, approximately $169 million has been incurred since April 2018, which fully utilized the agreed credit and beyond and which $1 million has been paid by FES. The entire credit for shared services provided to the FES Debtors ($112.5 million) has been recognized by FE as a loss from discontinued operations as of December 31, 2018.

In addition, on March 16, 2018, FES, FENOC and FESC entered into the FirstEnergy Solutions Money Pool Agreement for FESC to assist FES and FENOC with certain treasury support services under the shared service agreement. FESC is a party to the FirstEnergy Solutions Money Pool Agreement solely in the role as administrator of the money pool arrangement thereunder.

Benefit Obligations

FirstEnergy will retain certain obligations for the FES Debtors' employees for services provided prior to emergence from bankruptcy. The retention of this obligation at March 31, 2018, resulted in a net liability of $820 million (including EDCP, pension and OPEB) with a corresponding loss from discontinued operations. EDCP and pension/OPEB service costs earned by the FES Debtors' employees during bankruptcy are billed under the shared services agreement. As FE continues to provide pension benefits to FES/FENOC employees, all components of pension cost, including the mark to market, are seen as providing ongoing services and are reported in the continuing operations of FE, subsequent to the bankruptcy filing.

Guarantees provided by FE

FE previously guaranteed FG's remaining payments due to CSX and BNSF in connection with the definitive settlement of a coal transportation agreement dispute. As of March 31, 2018, FE recorded an obligation for this guarantee in other current liabilities with a corresponding loss from discontinued operations. On April 6, 2018, FE paid the remaining $72 million owed under the FES Bankruptcy settlement agreement. In addition, as of March 31, 2018, FE recorded, and on May 11, 2018, paid a $58 million obligation for a sale-leaseback indemnity in other current liabilities with a corresponding loss from discontinued operations. Under the terms of the FES Bankruptcy settlement agreement, FE will release all claims against the FES Debtors with respect to these guaranteed amounts.

Purchase Power

FES at times provides power through affiliated company power sales to meet a portion of the Utilities' POLR and default service requirements and provide power to certain affiliates' facilities. As of December 31, 2018, the Utilities owed FES approximately $27 million related to these purchases. The terms and conditions of the power purchase agreements are generally consistent with industry practices and other similar third-party arrangements. The Utilities purchased and recognized in continuing operations approximately $318 million of power purchases from FES for the year ended December 31, 2018.

Income Taxes

Until the FES Debtors emerge from bankruptcy, the FES Debtors will remain parties to the intercompany income tax allocation agreement with FE and its other subsidiaries, which provides for the allocation of consolidated tax liabilities. Net tax benefits attributable to FE are generally reallocated to the subsidiaries of FirstEnergy that have taxable income. Under the terms of the FES Bankruptcy settlement agreement, FE agreed to waive settlement of the 2017 overpayment made to the FES Debtors and pay a minimum of $66 million to the FES Debtors for the 2018 tax year (approximately $52 million in estimated tax payments have been paid through December 31, 2018).

For U.S. federal income taxes, until emergence from bankruptcy, the FES Debtors will continue to be consolidated in FirstEnergy's tax return and taxable income will be determined based on the tax basis of underlying individual net assets. Deferred taxes previously recorded on the inside basis differences may not represent the actual tax consequence for the outside basis difference, causing a recharacterization of an existing consolidated-return NOL as a future worthless stock deduction. FirstEnergy currently estimates a future worthless stock deduction of approximately $4.8 billion ($1.0 billion, net of tax) and is net of unrecognized tax benefits of $418 million ($88 million, net of tax). The estimated worthless stock deduction is contingent upon the emergence of the FES Debtors from the FES Bankruptcy and such amounts may be materially impacted by future events.

Because the FES Debtors remain part of FirstEnergy's consolidated tax return until emergence from bankruptcy, certain impacts of the Tax Act that otherwise would not occur on a consolidated basis have been reflected in discontinued operations. Specifically, all tax expense ($60 million) related to nondeductible interest in 2018 has been recorded in discontinued operations as it is entirely attributed to the anticipated inclusion of the FES Debtors in the FirstEnergy consolidated tax return. See further discussion in Note 7, "Taxes".

See Note 1, "Organization and Basis of Presentation," for further discussion of the settlement among FirstEnergy, the FES Key Creditor Groups, the FES Debtors and the UCC.

Competitive Generation Asset Sales

FirstEnergy announced in January 2017 that AE Supply and AGC had entered into an asset purchase agreement with a subsidiary of LS Power, as amended and restated in August 2017, to sell four natural gas generating plants, AE Supply's interest in the Buchanan Generating facility and approximately 59% of AGC's interest in Bath County (1,615 MWs of combined capacity). On December 13, 2017, AE Supply completed the sale of the natural gas generating plants. On March 1, 2018, AE Supply completed the sale of the Buchanan Generating Facility. On May 3, 2018, AE Supply and AGC completed the sale of approximately 59% of AGC's interest in Bath County. In connection with its obligations under the asset purchase agreement, proceeds from the sales were used to redeem $405 million aggregate principal amount of outstanding AE Supply and AGC senior notes, which required payment of approximately $89 million in make-whole premiums, and AE Supply caused the redemption of approximately $142 million aggregate principal amount of PCRBs. Also, on May 3, 2018, following closing of the sale by AGC of a portion of its ownership interest in Bath County, AGC completed the redemption of AE Supply's shares in AGC and AGC became a wholly owned subsidiary of MP.

On March 9, 2018, BSPC and FG entered into an asset purchase agreement with Walleye Power, LLC (formerly Walleye Energy, LLC), for the sale of the Bay Shore Generating Facility, including the 136 MW Bay Shore Unit 1 and other retired coal-fired generating equipment owned by FG. The Bankruptcy Court approved the sale on July 13, 2018, and the transaction was completed on July 31, 2018.

As contemplated under the FES Bankruptcy settlement agreement, AE Supply entered into an agreement on December 31, 2018, to transfer the 1,300 MW Pleasants Power Station and related assets to FG, while retaining certain specified liabilities. Under the terms of the agreement, FG acquired the economic interests in Pleasants as of January 1, 2019, and AE Supply will operate Pleasants until the transfer is completed. After closing, AE Supply will continue to provide access to the McElroy's Run CCR Impoundment Facility, which is not being transferred, and FE will provide certain guarantees for retained environmental liabilities

of AE Supply, including the McElroy's Run CCR Impoundment Facility. The transfer of the Pleasants Power Station is subject to various customary and other closing conditions, including FERC approval of the transaction, the Bankruptcy Court's approval of the agreement, effectiveness of the FES Bankruptcy settlement agreement and the effectiveness of a plan of reorganization for the FES Debtors in connection with the FES Bankruptcy. There can be no assurance that all closing conditions will be satisfied or that the transfer will be consummated.

Individually, the AE Supply and BSPC asset sales and Pleasants Power Station transfer did not qualify for reporting as discontinued operations. However, in the aggregate, the transactions were part of management's strategic review to exit commodity-exposed generation and, when considered with FES' and FENOC's bankruptcy filings on March 31, 2018, represent a collective elimination of substantially all of FirstEnergy's competitive generation fleet and meet the criteria for discontinued operations.

Summarized Results of Discontinued Operations

Summarized results of discontinued operations for the years ended December 31, 2018, 2017 and 2016 were as follows:

	For the Years Ended December 31,		
(In millions)	**2018**	**2017**	**2016**
Revenues	$ 989	$ 3,055	$ 3,794
Fuel	(304)	(879)	(1,073)
Purchased power	(84)	(268)	(533)
Other operating expenses	(435)	(1,499)	(1,263)
Provision for depreciation	(96)	(109)	(378)
General taxes	(35)	(103)	(129)
Impairment of assets[(2)]	—	(2,358)	(10,622)
Other expense, net	(83)	(94)	(106)
Loss from discontinued operations, before tax	(48)	(2,255)	(10,310)
Income tax expense (benefit)[(1)]	61	(820)	(3,582)
Loss from discontinued operations, net of tax	(109)	(1,435)	(6,728)
Gain on disposal of FES and FENOC, net of tax	435	—	—
Income (Loss) from discontinued operations	$ 326	$ (1,435)	$ (6,728)

[(1)] In conjunction with the sale of an interest in Bath County, AGC wrote off and recognized as a benefit in discontinued operations in the second quarter of 2018 its excess deferred tax liabilities of $32 million, created from the Tax Act, since they are not required to be refunded to ratepayers. Nondeductible interest of $60 million in 2018 has been recorded in discontinued operations as it is entirely attributed to the anticipated inclusion of the FES Debtors in the FirstEnergy consolidated tax return. See further discussion in Note 7, "Taxes".

[(2)] Impairment of assets included in discontinued operations for the year ended December 31, 2017 include amounts related to impairment of the FES nuclear facilities, the Pleasants Power Station ($120 million in the fourth quarter of 2017), and the competitive asset generation sale ($193 million during 2017). Amounts included for the year ended December 31, 2016, include impairment of FES coal and nuclear plants and goodwill associated with AE Supply and FES, as well as other competitive assets including materials and supplies.

The gain on disposal that was recognized in the year ended December 31, 2018, consisted of the following:

(In millions)	
Removal of investment in FES and FENOC	$ 2,193
Assumption of benefit obligations retained at FE	(820)
Guarantees and credit support provided by FE	(139)
Reserve on receivables and allocated Pension/OPEB mark-to-market	(914)
Settlement consideration and services credit	(1,197)
Loss on disposal of FES and FENOC, before tax	(877)
Income tax benefit, including estimated worthless stock deduction	1,312
Gain on disposal of FES and FENOC, net of tax	$ 435

The following table summarizes the major classes of assets and liabilities as discontinued operations as of December 31, 2018, and 2017:

(In millions)	December 31, 2018	December 31, 2017
Carrying amount of the major classes of assets included in discontinued operations:		
Cash and cash equivalents	$ —	$ 1
Restricted cash	—	3
Receivables	—	202
Materials and supplies	25	227
Prepaid taxes and other	—	199
Total current assets	25	632
Property, plant and equipment	—	1,132
Investments	—	1,875
Other noncurrent assets	—	356
Total noncurrent assets	—	3,363
Total assets included in discontinued operations	$ 25	$ 3,995
Carrying amount of the major classes of liabilities included in discontinued operations:		
Currently payable long-term debt	$ —	$ 524
Accounts payable	—	200
Accrued taxes	—	38
Accrued compensation and benefits	—	79
Other current liabilities	—	137
Total current liabilities	—	978
Long-term debt and other long-term obligations	—	2,428
Accumulated deferred income taxes [(1)]	—	(1,812)
Asset retirement obligations	—	1,945
Deferred gain on sale and leaseback transaction	—	723
Other noncurrent liabilities	—	244
Total noncurrent liabilities	—	3,528
Total liabilities included in discontinued operations	$ —	$ 4,506

[(1)] Represents an increase in FirstEnergy's ADIT liability as an ADIT asset was removed upon deconsolidation of FES and FENOC.

FirstEnergy's Consolidated Statement of Cash Flows combines cash flows from discontinued operations with cash flows from continuing operations within each cash flow category. The following table summarizes the major classes of cash flow items as discontinued operations for the years ended December 31, 2018, 2017 and 2016:

	For the Years Ended December 31,		
(In millions)	**2018**	**2017**	**2016**
CASH FLOWS FROM OPERATING ACTIVITIES:			
Income from discontinued operations	$ 326	$ (1,435)	$ (6,728)
Gain on disposal, net of tax	(435)	—	—
Depreciation and amortization, including nuclear fuel, regulatory assets, net, intangible assets and deferred debt-related costs	110	333	669
Deferred income taxes and investment tax credits, net	61	(842)	(3,582)
Unrealized (gain) loss on derivative transactions	(10)	81	9
CASH FLOWS FROM INVESTING ACTIVITIES:			
Property additions	(27)	(317)	(615)
Nuclear fuel	—	(254)	(232)
Sales of investment securities held in trusts	109	940	717
Purchases of investment securities held in trusts	(122)	(999)	(783)

4. ACCUMULATED OTHER COMPREHENSIVE INCOME

The changes in AOCI for the years ended December 31, 2018, 2017 and 2016, for FirstEnergy are shown in the following table:

	Gains & Losses on Cash Flow Hedges	Unrealized Gains on AFS Securities	Defined Benefit Pension & OPEB Plans	Total
		(In millions)		
AOCI Balance, January 1, 2016	$ (33)	$ 18	$ 186	$ 171
Other comprehensive income before reclassifications	—	106	13	119
Amounts reclassified from AOCI	8	(51)	(72)	(115)
Other comprehensive income (loss)	8	55	(59)	4
Income tax (benefits) on other comprehensive income (loss)	3	21	(23)	1
Other comprehensive income (loss), net of tax	5	34	(36)	3
AOCI Balance, December 31, 2016	$ (28)	$ 52	$ 150	$ 174
Other comprehensive income before reclassifications	—	85	(11)	74
Amounts reclassified from AOCI	10	(63)	(74)	(127)
Other comprehensive income (loss)	10	22	(85)	(53)
Income tax (benefits) on other comprehensive income (loss)	4	7	(32)	(21)
Other comprehensive income (loss), net of tax	6	15	(53)	(32)
AOCI Balance, December 31, 2017	$ (22)	$ 67	$ 97	$ 142
Other comprehensive income before reclassifications	—	(97)	(9)	(106)
Amounts reclassified from AOCI	8	(1)	(74)	(67)
Deconsolidation of FES and FENOC	13	(8)	—	5
Other comprehensive income (loss)	21	(106)	(83)	(168)
Income tax (benefits) on other comprehensive income (loss)	10	(39)	(38)	(67)
Other comprehensive income (loss), net of tax	11	(67)	(45)	(101)
AOCI Balance, December 31, 2018	$ (11)	$ —	$ 52	$ 41

The following amounts were reclassified from AOCI for FirstEnergy in the years ended December 31, 2018, 2017 and 2016:

Reclassifications from AOCI [1]	Year Ended December 31, 2018 [3]	2017	2016	Affected Line Item in Consolidated Statements of Income (Loss)
	(In millions)			
Gains & losses on cash flow hedges				
Commodity contracts	$ 1	$ 2	$ —	Other operating expenses
Long-term debt	7	8	8	Interest expense
	8	10	8	Total before taxes
	(2)	(4)	(3)	Income taxes
	$ 6	$ 6	$ 5	Net of tax
Unrealized gains on AFS securities				
Realized gains on sales of securities	$ (1)	$ (40)	$ (32)	Discontinued Operations
Defined benefit pension and OPEB plans				
Prior-service costs	$ (74)	$ (74)	$ (72)	[2]
	19	28	27	Income taxes
	$ (55)	$ (46)	$ (45)	Net of tax

[1] Amounts in parenthesis represent credits to the Consolidated Statements of Income (Loss) from AOCI.

[2] Components are included in the computation of net periodic pension cost. See Note 5, "Pension and Other Postemployment Benefits," for additional details.

[3] Includes stranded tax amounts reclassified from AOCI in connection with the adoption of ASU 2018-02, "*Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*".

5. PENSION AND OTHER POSTEMPLOYMENT BENEFITS

FirstEnergy provides noncontributory qualified defined benefit pension plans that cover substantially all of its employees and non-qualified pension plans that cover certain employees. The plans provide defined benefits based on years of service and compensation levels. Under the cash-balance portion of the Pension Plan (for employees hired on or after January 1, 2014), FirstEnergy makes contributions to eligible employee retirement accounts based on a pay credit and an interest credit. In addition, FirstEnergy provides a minimum amount of noncontributory life insurance to retired employees in addition to optional contributory insurance. Health care benefits, which include certain employee contributions, deductibles and co-payments, are also available upon retirement to certain employees, their dependents and, under certain circumstances, their survivors. FirstEnergy recognizes the expected cost of providing pension and OPEB to employees and their beneficiaries and covered dependents from the time employees are hired until they become eligible to receive those benefits. FirstEnergy also has obligations to former or inactive employees after employment, but before retirement, for disability-related benefits.

FirstEnergy recognizes a pension and OPEB mark-to-market adjustment for the change in the fair value of plan assets and net actuarial gains and losses annually in the fourth quarter of each fiscal year and whenever a plan is determined to qualify for a remeasurement. The remaining components of pension and OPEB expense, primarily service costs, interest on obligations, assumed return on assets and prior service costs, are recorded on a monthly basis. The pension and OPEB mark-to-market adjustment for the years ended December 31, 2018, 2017, and 2016 were $145 million, $141 million, and $147 million, respectively. Of these amounts, approximately $1 million, $39 million, and $45 million, are included in discontinued operations for the years ended December 31, 2018, 2017, and 2016, respectively. In 2018, the pension and OPEB mark-to-market adjustment primarily reflects a 69 bps increase in the discount rate used to measure benefit obligations and lower than expected asset returns.

FirstEnergy's pension and OPEB funding policy is based on actuarial computations using the projected unit credit method. In January 2018, FirstEnergy satisfied its minimum required funding obligations to its qualified pension plan of $500 million and addressed anticipated required funding obligations through 2020 to its pension plan with an additional contribution of $750 million. On February 1, 2019, FirstEnergy made a $500 million voluntary cash contribution to the qualified pension plan. As a result of this contribution, FirstEnergy expects no required contributions through 2021. In 2016, FirstEnergy satisfied its minimum required funding obligations of $382 million and addressed 2017 funding obligations to its qualified pension plan with total contributions of $882 million (of which $138 million was cash contributions from FES), including $500 million of FE common stock contributed to the qualified pension plan on December 13, 2016.

Pension and OPEB costs are affected by employee demographics (including age, compensation levels and employment periods), the level of contributions made to the plans and earnings on plan assets. Pension and OPEB costs may also be affected by changes

in key assumptions, including anticipated rates of return on plan assets, the discount rates and health care trend rates used in determining the projected benefit obligations for pension and OPEB costs. FirstEnergy uses a December 31 measurement date for its pension and OPEB plans. The fair value of the plan assets represents the actual market value as of the measurement date.

FirstEnergy's assumed rate of return on pension plan assets considers historical market returns and economic forecasts for the types of investments held by the pension trusts. In 2018, FirstEnergy's pension and OPEB plan assets experienced losses of $371 million, or (4.0)%, compared to gains of $999 million, or 15.1%, in 2017 and losses of $472 million, or 8.2%, in 2016, and assumed a 7.50% rate of return for 2018, 2017 and 2016 which generated $605 million, $478 million and $429 million of expected returns on plan assets, respectively. The expected return on pension and OPEB assets is based on the trusts' asset allocation targets and the historical performance of risk-based and fixed income securities. The gains or losses generated as a result of the difference between expected and actual returns on plan assets will increase or decrease future net periodic pension and OPEB cost as the difference is recognized annually in the fourth quarter of each fiscal year or whenever a plan is determined to qualify for remeasurement.

During 2018, the Society of Actuaries released its updated mortality improvement scale for pension plans, MP-2018, incorporating SSA mortality data from 2014-2016. The updated improvement scale indicates a slight decline in life expectancy. Due to the additional data on population mortality, the RP2014 mortality table with the projection scale MP-2018 was utilized to determine the 2018 benefit cost and obligation as of December 31, 2018, for the FirstEnergy pension and OPEB plans. The impact of using the projection scale MP-2018 resulted in a decrease in the projected pension benefit obligation of approximately $16 million and was included in the 2018 pension and OPEB mark-to-market adjustment.

Effective in 2019, FirstEnergy changed the approach utilized to estimate the service cost and interest cost components of net periodic benefit cost for pension and OPEB plans. Historically, FirstEnergy estimated these components utilizing a single, weighted average discount rate derived from the yield curve used to measure the benefit obligation. FirstEnergy has elected to use a spot rate approach in the estimation of the components of benefit cost by applying specific spot rates along the full yield curve to the relevant projected cash flows, as this provides a better estimate of service and interest costs by improving the correlation between projected benefit cash flows to the corresponding spot yield curve rates. This change did not affect the measurement of total benefit obligations or annual net period benefit cost and the change in service and interest cost is offset in the actuarial mark-to-market adjustment reported. This election is considered a change in estimate and, accordingly, accounted prospectively.

Following adoption of ASU 2017-07, "*Compensation-Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*" in 2018, service costs, net of capitalization, continue to be reported within Other operating expenses on the FirstEnergy Consolidated Statements of Income (Loss). Non-service costs are reported within Miscellaneous income, net, within Other Income (Expense). Prior period amounts have been reclassified to conform with current year presentation. See Note 1, "Organization and Basis of Presentation," for additional information.

Also in 2018, the FE Tomorrow cost cutting initiative was implemented to define the corporate services FirstEnergy would need to support its regulated business once the company exited commodity-exposed generation. Through the initiative, FirstEnergy sought to ensure the company has the right talent, organizational and cost structure to efficiently service customers and achieve its earnings growth targets. In support of the FE Tomorrow initiative, more than 80% of eligible employees, totaling nearly 500 people in the shared services, utility services and sustainability organizations, accepted a voluntary enhanced retirement package that included severance compensation and a temporary pension enhancement, with most employees having already retired. Management expects the cost savings resulting from the FE Tomorrow initiative to support the company's growth targets.

Obligations and Funded Status - Qualified and Non-Qualified Plans	Pension		OPEB	
	2018	2017	2018	2017
	(In millions)			
Change in benefit obligation:				
Benefit obligation as of January 1	$ 10,167	$ 9,426	$ 731	$ 711
Service cost	224	208	5	5
Interest cost	372	390	25	27
Plan participants' contributions	—	—	3	4
Plan amendments	5	11	5	—
Special termination benefits	31	—	8	—
Medicare retiree drug subsidy	—	—	1	1
Annuity purchase	(129)	—	—	—
Actuarial (gain) loss	(710)	610	(121)	32
Benefits paid	(498)	(478)	(49)	(49)
Benefit obligation as of December 31	$ 9,462	$ 10,167	$ 608	$ 731
Change in fair value of plan assets:				
Fair value of plan assets as of January 1	$ 6,704	$ 6,213	$ 439	$ 420
Actual return on plan assets	(363)	950	(8)	49
Annuity purchase	(129)	—	—	—
Company contributions	1,270	18	22	16
Plan participants' contributions	—	—	3	4
Benefits paid	(498)	(477)	(48)	(50)
Fair value of plan assets as of December 31	$ 6,984	$ 6,704	$ 408	$ 439
Funded Status:				
Qualified plan	$ (2,093)	$ (3,043)	$ —	$ —
Non-qualified plans	(385)	(420)	—	—
Funded Status	$ (2,478)	$ (3,463)	$ (200)	$ (292)
Accumulated benefit obligation	$ 8,951	$ 9,583	$ —	$ —
Amounts Recognized on the Balance Sheet:				
Noncurrent assets	$ 14	$ —	$ —	$ —
Current liabilities	(20)	(19)	—	—
Noncurrent liabilities	(2,472)	(3,444)	(200)	(292)
Net liability as of December 31	$ (2,478)	$ (3,463)	$ (200)	$ (292)
Amounts Recognized in AOCI:				
Prior service cost (credit)	$ 30	$ 32	$ (121)	$ (206)
Assumptions Used to Determine Benefit Obligations (as of December 31)				
Discount rate	4.44%	3.75%	4.30%	3.50%
Rate of compensation increase	4.10%	4.20%	N/A	N/A
Cash balance weighted average interest crediting rate	3.34%	2.88%	N/A	N/A
Assumed Health Care Cost Trend Rates (as of December 31)				
Health care cost trend rate assumed (pre/post-Medicare)	6.0-5.5%	6.0-5.5%	6.0-5.5%	6.0-5.5%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	4.5%	4.5%	4.5%	4.5%
Year that the rate reaches the ultimate trend rate	2028	2027	2028	2027
Allocation of Plan Assets (as of December 31)				
Equity securities	36%	42%	48%	50%
Bonds	34%	32%	35%	33%
Absolute return strategies	11%	10%	—%	—%
Real estate funds	10%	9%	—%	—%
Derivatives	2%	—%	—%	—%
Private equity funds	2%	1%	—%	—%
Cash and short-term securities	5%	6%	17%	17%

Total	100%	100%	100%	100%

Components of Net Periodic Benefit Costs for Years Ended December 31,	Pension			OPEB		
	2018	2017	2016	2018	2017	2016
			(In millions)			
Service cost	$ 224	$ 208	$ 191	$ 5	$ 5	$ 5
Interest cost	372	390	398	25	27	30
Expected return on plan assets	(574)	(448)	(399)	(31)	(30)	(30)
Amortization of prior service cost (credit)	7	7	8	(81)	(81)	(80)
Special termination costs	31	—	—	8	—	—
Pension & OPEB mark-to-market adjustment	227	108	179	(82)	13	15
Net periodic benefit cost (credit)	$ 287	$ 265	$ 377	$ (156)	$ (66)	$ (60)

Assumptions Used to Determine Net Periodic Benefit Cost for the Years Ended December 31,*	Pension			OPEB		
	2018	2017	2016	2018	2017	2016
Weighted-average discount rate	3.75%	4.25%	4.50%	3.50%	4.00%	4.25%
Expected long-term return on plan assets	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
Rate of compensation increase	4.20%	4.20%	4.20%	N/A	N/A	N/A

*Excludes impact of pension and OPEB mark-to-market adjustment.

Amounts in the tables above include FES' and FENOC's share of the net periodic pension and OPEB costs (credits) of $64 million and $(25) million, respectively, for the year ended December 31, 2018. FES' and FENOC's share of the net periodic pension and OPEB costs (credits) were $60 million and $(17) million, respectively, for the year ended December 31, 2017. Such amounts are a component of Discontinued Operations in FirstEnergy's Consolidated Statements of Income (Loss). Following FES and FENOC's voluntary bankruptcy filing, FE has billed FES and FENOC for their share of pension and OPEB service costs of $42 million for the last nine months of 2018.

In selecting an assumed discount rate, FirstEnergy considers currently available rates of return on high-quality fixed income investments expected to be available during the period to maturity of the pension and OPEB obligations. The assumed rates of return on plan assets consider historical market returns and economic forecasts for the types of investments held by FirstEnergy's pension trusts. The long-term rate of return is developed considering the portfolio's asset allocation strategy.

The following tables set forth pension financial assets that are accounted for at fair value by level within the fair value hierarchy. See Note 11, "Fair Value Measurements," for a description of each level of the fair value hierarchy. There were no significant transfers between levels during 2018 and 2017.

	December 31, 2018				
	Level 1	Level 2	Level 3	Total	Asset Allocation
	(In millions)				
Cash and short-term securities	$ —	$ 342	$ —	$ 342	5%
Equity investments:					
Domestic	723	122	—	845	12%
International	392	1,232	—	1,624	22%
Fixed income:					
Government bonds	—	59	—	59	1%
Corporate bonds	—	1,674	—	1,674	23%
High yield debt	—	667	—	667	10%
Alternatives:					
Hedge funds (absolute return)	—	681	—	681	11%
Derivatives	108	—	—	108	2%
Real estate funds	—	—	665	665	10%
Total [1]	$ 1,223	$ 4,777	$ 665	$ 6,665	96%
Private equity funds [2]				143	2%
Insurance-linked securities [2]				108	2%
Total Investments				$ 6,916	100%

[1] Excludes $68 million as of December 31, 2018, of receivables, payables, taxes and accrued income associated with financial instruments reflected within the fair value table.
[2] Net asset value used as a practical expedient to approximate fair value.

	December 31, 2017				
	Level 1	Level 2	Level 3	Total	Asset Allocation
	(In millions)				
Cash and short-term securities	$ —	$ 379	$ —	$ 379	6 %
Equity investments:					
Domestic	695	27	—	722	11 %
International	514	1,569	—	2,083	31 %
Fixed income:					
Government bonds	—	251	—	251	4 %
Corporate bonds	—	1,237	—	1,237	18 %
High yield debt	—	689	—	689	10 %
Mortgage-backed securities (non-government)	—	31	—	31	— %
Alternatives:					
Hedge funds (absolute return)	—	635	—	635	10 %
Derivatives	—	(1)	—	(1)	— %
Real estate funds	—	—	631	631	9 %
Total [1]	$ 1,209	$ 4,817	$ 631	$ 6,657	99 %
Private equity funds [2]				57	1 %
Total Investments				$ 6,714	100 %

[1] Excludes $(10) million as of December 31, 2017, of receivables, payables, taxes and accrued income associated with financial instruments reflected within the fair value table.
[2] Net asset value used as a practical expedient to approximate fair value.

The following table provides a reconciliation of changes in the fair value of pension investments classified as Level 3 in the fair value hierarchy during 2018 and 2017:

	Real Estate Funds
Balance as of January 1, 2017	$ 615
Actual return on plan assets:	
Unrealized gains	3
Realized gains	10
Transfers in	3
Balance as of December 31, 2017	$ 631
Actual return on plan assets:	
Unrealized gains	102
Realized losses	(65)
Transfers out	(3)
Balance as of December 31, 2018	$ 665

As of December 31, 2018 and 2017, the OPEB trust investments measured at fair value were as follows:

	December 31, 2018				Asset Allocation
	Level 1	Level 2	Level 3	Total	
	(In millions)				
Cash and short-term securities	$ —	$ 71	$ —	$ 71	17%
Equity investment:					
Domestic	196	—	—	196	48%
Fixed income:					
Government bonds	—	107	—	107	26%
Corporate bonds	—	32	—	32	8%
Mortgage-backed securities (non-government)		4	—	4	1%
Total [1]	$ 196	$ 214	$ —	$ 410	100%

[1] Excludes $(2) million as of December 31, 2018, of receivables, payables, taxes and accrued income associated with financial instruments reflected within the fair value table.

	December 31, 2017				Asset Allocation
	Level 1	Level 2	Level 3	Total	
	(In millions)				
Cash and short-term securities	$ —	$ 75	$ —	$ 75	17%
Equity investment:					
Domestic	220	—	—	220	50%
Fixed income:					
Government bonds	—	109	—	109	24%
Corporate bonds	—	34	—	34	8%
Mortgage-backed securities (non-government)		3	—	3	1%
Total [1]	$ 220	$ 221	$ —	$ 441	100%

[1] Excludes $(2) million as of December 31, 2017, of receivables, payables, taxes and accrued income associated with financial instruments reflected within the fair value table.

FirstEnergy follows a total return investment approach using a mix of equities, fixed income and other available investments while taking into account the pension plan liabilities to optimize the long-term return on plan assets for a prudent level of risk. Risk tolerance is established through careful consideration of plan liabilities, plan funded status and corporate financial condition. The investment portfolio contains a diversified blend of equity and fixed-income investments. Equity investments are diversified across U.S. and non-U.S. stocks, as well as growth, value, and small and large capitalization funds. Other assets such as real estate and private

equity are used to enhance long-term returns while improving portfolio diversification. Derivatives may be used to gain market exposure in an efficient and timely manner; however, derivatives are not used to leverage the portfolio beyond the market value of the underlying investments. Investment risk is measured and monitored on a continuing basis through periodic investment portfolio reviews, annual liability measurements and periodic asset/liability studies.

FirstEnergy's target asset allocations for its pension and OPEB trust portfolios for 2018 and 2017 are shown in the following table:

	Target Asset Allocations
Equities	38%
Fixed income	30%
Absolute return strategies	8%
Real estate	10%
Alternative investments	8%
Cash	6%
	100%

Taking into account estimated employee future service, FirstEnergy expects to make the following benefit payments from plan assets and other payments, net of participant contributions:

		OPEB	
	Pension	Benefit Payments	Subsidy Receipts
		(In millions)	
2019	$ 509	$ 57	$ (1)
2020	533	48	(1)
2021	554	48	(1)
2022	566	47	(1)
2023	580	46	(1)
Years 2024-2028	3,047	213	(3)

6. STOCK-BASED COMPENSATION PLANS

FirstEnergy grants stock-based awards through the ICP 2015, primarily in the form of restricted stock and performance-based restricted stock units. Under FirstEnergy's previous incentive compensation plan, the ICP 2007, FirstEnergy also granted stock options and performance shares. The ICP 2007 and ICP 2015 include shareholder authorization to issue 29 million shares and 10 million shares, respectively, of common stock or their equivalent. As of December 31, 2018, approximately 4.7 million shares were available for future grants under the ICP 2015 assuming maximum performance metrics are achieved for the outstanding cycles of restricted stock units. No shares are available for future grants under the ICP 2007. Shares not issued due to forfeitures or cancellations may be added back to the ICP 2015. Shares granted under the ICP 2007 and ICP 2015 are issued from authorized but unissued common stock. Vesting periods for stock-based awards range from one to ten years, with the majority of awards having a vesting period of three years. FirstEnergy also issues stock through its 401(k) Savings Plan, EDCP, and DCPD. Currently, FirstEnergy records the compensation costs for stock-based compensation awards that will be paid in stock over the vesting period based on the fair value on the grant date. Beginning in 2017, based upon the adoption of ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting," FE has elected to account for forfeitures as they occur.

As discussed in Note 1, "Organization and Basis of Presentation," on March 31, 2018, FES and FENOC announced the FES Bankruptcy. FirstEnergy will retain certain obligations for the FES Debtors employees' outstanding awards issued under the 2015 ICP for the 2016-2018 performance cycle.

FirstEnergy adjusts the compensation costs for stock-based compensation awards that will be paid in cash based on changes in the fair value of the award as of each reporting date. FirstEnergy records the actual tax benefit realized from tax deductions when awards are exercised or settled. Actual income tax benefits realized during the years ended December 31, 2018, 2017 and 2016, were $15 million, $15 million and $13 million, respectively. The income tax effects of awards are recognized in the income statement when the awards vest, are settled or are forfeited.

Stock-based compensation costs and the amount of stock-based compensation costs capitalized related to FirstEnergy plans are included in the following tables:

Stock-based Compensation Plan	Years Ended December 31, 2018	2017	2016
		(In millions)	
Restricted Stock Units	$ 102	$ 49	$ 62
Restricted Stock	1	1	2
Performance Shares	—	—	(3)
401(k) Savings Plan	33	42	39
EDCP & DCPD	7	6	5
Total	$ 143	$ 98	$ 105
Stock-based compensation costs capitalized	$ 60	$ 37	$ 37

Outstanding stock options were fully amortized as of December 31, 2016. Stock option expense was not material for FirstEnergy for the year December 31, 2016, and there was no stock option expense for the years ended December 31, 2018 and 2017. Income tax benefits associated with stock-based compensation plan expense were $18 million, $10 million and $14 million for the years ended 2018, 2017 and 2016, respectively.

Restricted Stock Units

Beginning with the performance-based restricted stock units granted in 2015, two-thirds of each award will be paid in stock and one-third will be paid in cash. Outstanding restricted stock unit awards for FES and FENOC participants, however, were previously modified to only pay in cash. Restricted stock units payable in stock provide the participant the right to receive, at the end of the period of restriction, a number of shares of common stock equal to the number of stock units set forth in the agreement, subject to adjustment based on FirstEnergy's performance relative to financial and operational performance targets applicable to each award. The grant date fair value of the stock portion of the restricted stock unit award is measured based on the average of the high and low prices of FE common stock on the date of grant. Beginning with awards granted in 2018, restricted stock units include a performance metric consisting of a relative total shareholder return modifier utilizing the S&P 500 Utility Index as a comparator group. The estimated grant date fair value for these awards is calculated using the Monte Carlo simulation method.

Restricted stock units payable in cash provide the participant the right to receive cash based on the number of stock units set forth in the agreement and value of the equivalent number of shares of FE common stock as of the vesting date. The cash portion of the restricted stock unit award is considered a liability award, which is remeasured each period based on FE's stock price and projected performance adjustments. The liability recorded for the portion of performance-based restricted stock units payable in cash in the future as of December 31, 2018, was $56 million. During 2018, approximately $30 million was paid in relation to the cash portion of restricted stock unit obligations that vested in 2018.

The vesting period for the performance-based restricted stock unit awards granted in 2016, 2017 and 2018, was each three years. Dividend equivalents are received on the restricted stock units and are reinvested in additional restricted stock units and subject to the same performance conditions as the underlying award.

Restricted stock unit activity for the year ended December 31, 2018, was as follows:

Restricted Stock Unit Activity	Shares *(in millions)*	Weighted-Average Grant Date Fair Value (per share)
Nonvested as of January 1, 2018	3.3	$ 33.24
Granted in 2018	2.0	36.78
Forfeited in 2018	(0.1)	33.77
Vested in 2018[(1)]	(1.9)	32.49
Nonvested as of December 31, 2018	3.3	$ 33.78

[(1)] Excludes dividend equivalents of approximately 143 thousand shares earned during vesting period.

The weighted-average fair value of awards granted in 2018, 2017 and 2016 was $36.78, $31.71 and $34.77, respectively. For the years ended December 31, 2018, 2017, and 2016, the fair value of restricted stock units vested was $62 million, $42 million, and $36 million, respectively. As of December 31, 2018, there was $30 million of total unrecognized compensation cost related to

nonvested share-based compensation arrangements granted for restricted stock units; which is expected to be recognized over a period of approximately three years.

Restricted Stock

Certain employees receive awards of FE restricted stock (as opposed to "units" with the right to receive shares at the end of the restriction period) subject to restrictions that lapse over a defined period of time or upon achieving performance results. The fair value of restricted stock is measured based on the average of the high and low prices of FE common stock on the date of grant. Dividends are received on the restricted stock and are reinvested in additional shares of restricted stock, subject to the vesting conditions of the underlying award. Restricted stock activity for the year ended December 31, 2018, was not material.

Stock Options

Stock options have been granted to certain employees allowing them to purchase a specified number of common shares at a fixed exercise price over a defined period of time. Stock options generally expire ten years from the date of grant. There were no stock options granted in 2018. Stock option activity during 2018 was as follows:

Stock Option Activity	**Number of Shares *(in millions)***	**Weighted Average Exercise Price (per share)**
Balance, January 1, 2017 (all options exercisable)	1.4	$ 44.41
Options exercised	(0.3)	35.45
Options forfeited	(0.3)	79.99
Balance, December 31, 2018 (all options exercisable)	0.8	$ 37.37

Approximately $12 million of cash was received in 2018 from the exercise of stock options. There was no cash received from the exercise of stock options in 2017 and the amount in 2016 was not material. The weighted-average remaining contractual term of options outstanding as of December 31, 2018, was 1.35 years.

Performance Shares

Prior to the 2015 grant of performance-based restricted stock units discussed above, performance shares were granted. Performance shares are share equivalents and do not have voting rights. The performance shares outstanding track the performance of FE's common stock over a three-year vesting period. Dividend equivalents accrued on performance shares and were reinvested into additional performance shares with the same performance conditions. The final award value could have been adjusted based on the performance of FE stock performance as compared to a composite of peer companies. In 2016, $2 million cash was paid to settle performance shares that vested over the 2013-2015 performance cycle. In 2018 and 2017, no cash was paid to settle the last outstanding cycle of performance shares that could have vested over the 2014-2016 performance cycle. Following 2017, FirstEnergy no longer has outstanding performance share awards.

401(k) Savings Plan

In each 2018 and 2017, approximately 1.3 million shares of FE common stock were issued and contributed to participants' accounts.

EDCP

Under the EDCP, certain employees can defer a portion of their compensation, including base salary, annual incentive awards and/or long-term incentive awards, into unfunded accounts. Annual incentive and long-term incentive awards may be deferred in FE stock accounts. Base salary and annual incentive awards may be deferred into a retirement cash account which earns interest. Dividends are calculated quarterly on stock units outstanding and are credited in the form of additional stock units. The form of payout as stock or cash vary depending upon the form of the award, the duration of the deferral and other factors. Certain types of deferrals such as dividend equivalent units, Annual incentive awards, and performance share awards are required to be paid in cash. Until 2015, payouts of the stock accounts typically occurred three years from the date of deferral, although participants could have elected to defer their shares into a retirement stock account that would pay out in cash upon retirement. In 2015, FirstEnergy amended the EDCP to eliminate the right to receive deferred shares after three years, effective for deferrals made on or after November 1, 2015. Awards deferred into a retirement stock account will pay out in cash upon separation from service, death or disability. Interest accrues on the cash allocated to the retirement cash account and the balance will pay out in cash over a time period as elected by the participant.

DCPD

Under the DCPD, members of FE's Board of Directors can elect to defer all or a portion of their equity retainers to a deferred stock account and their cash retainers to deferred stock or deferred cash accounts. The net liability recognized for DCPD of approximately $9 million and $8 million as of December 31, 2018 and December 31, 2017, respectively, is included in the caption “Retirement benefits,” on the Consolidated Balance Sheets.

7. TAXES

FirstEnergy records income taxes in accordance with the liability method of accounting. Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts recognized for tax purposes. Investment tax credits, which were deferred when utilized, are being amortized over the recovery period of the related property. Deferred income tax liabilities related to temporary tax and accounting basis differences and tax credit carryforward items are recognized at the statutory income tax rates in effect when the liabilities are expected to be paid. Deferred tax assets are recognized based on income tax rates expected to be in effect when they are settled.

FE and its subsidiaries, as well as FES and FENOC, are party to an intercompany income tax allocation agreement that provides for the allocation of consolidated tax liabilities. Net tax benefits attributable to FE, excluding any tax benefits derived from interest expense associated with acquisition indebtedness from the merger with GPU, are reallocated to the subsidiaries of FE that have taxable income. That allocation is accounted for as a capital contribution to the company receiving the tax benefit. FES and FENOC are expected to remain parties to the intercompany tax allocation agreement until their emergence from bankruptcy, which is when they will no longer be part of FirstEnergy's consolidated tax group.

On December 22, 2017, the President signed into law the Tax Act, which included significant changes to the Internal Revenue Code of 1986 (as amended, the Code). The more significant changes that impacted FirstEnergy were as follows:

- Reduction of the corporate federal income tax rate from 35% to 21%, effective in 2018;
- Full expensing of qualified property, excluding rate regulated utilities, through 2022 with a phase down beginning in 2023;
- Limitations on interest deductions with an exception for rate regulated utilities, effective in 2018;
- Limitation of the utilization of federal NOLs arising after December 31, 2017 to 80% of taxable income with an indefinite carryforward;
- Repeal of the corporate AMT and allowing taxpayers to claim a refund on any AMT credit carryovers.

At December 31, 2017, FirstEnergy completed its assessment of the accounting for certain effects of the provisions in the Tax Act, and as allowed under SEC Staff Accounting Bulletin 118 (SAB 118), recorded provisional income tax amounts related to depreciation for which the impacts of the Tax Act could not be finalized, but for which a reasonable estimate could be determined. Under the Tax Act, qualified property acquired and placed into service after September 27, 2017, would be eligible for full expensing for all taxpayers other than regulated utilities. On August 3, 2018, the IRS released proposed regulations clarifying the immediate expensing of qualified property, specifically addressing that regulated utility property acquired after September 27, 2017, and placed into service by December 31, 2017, qualifies for full expensing. While not final as of December 31, 2018, corporate taxpayers may rely on the proposed regulations for tax years ending after September 27, 2017. As of December 31, 2018, FirstEnergy has now completed its accounting for all of the enactment-date income tax effects of the Tax Act, resulting in an immaterial adjustment to the provisional income tax amounts recorded at December 31, 2017.

The Tax Act also amended Section 163(j) of the Code, limiting interest expense deductions for corporations, with exemption for certain regulated utilities. On November 26, 2018, the IRS issued proposed regulations implementing Section 163(j), including its application of the rules to consolidated groups with both regulated utility and non-regulated members. Based on its interpretation of these proposed regulations, FirstEnergy has estimated the amount of deductible interest for its consolidated group in 2018 and has recorded a deferred tax asset on the nondeductible portion as it is carried forward with an indefinite life. The deferred tax asset related to the indefinite lived carryforward of nondeductible interest has a full valuation allowance ($60 million) recorded against it as future profitability from sources other than regulated utility businesses is required for utilization. Of this tax effected nondeductible interest, $27 million has been reflected as an uncertain tax position. All tax expense related to nondeductible interest in 2018 has been recorded in discontinued operations as it is entirely attributed to the anticipated inclusion of entities reported in discontinued operations in FirstEnergy's consolidated federal tax return.

INCOME TAXES [1]	For the Years Ended December 31, 2018	2017	2016
		(In millions)	
Currently payable (receivable)-			
Federal	$ (16)	$ 14	$ (1)
State	17	20	9
	1	34	8
Deferred, net-			
Federal	252	1,647	317
State	243	40	208
	495	1,687	525
Investment tax credit amortization	(6)	(6)	(6)
Total income taxes	$ 490	$ 1,715	$ 527

[1] Income Taxes on Income from Continuing Operations. Currently payable (receivable) in 2018 excludes $1 million of state taxes associated with discontinued operations. Deferred, net in 2018 excludes $1.3 billion of federal tax benefits and $12 million of state taxes associated with discontinued operations.

FirstEnergy tax rates are affected by permanent items, such as AFUDC equity and other flow-through items, as well as discrete items that may occur in any given period, but are not consistent from period to period. The following tables provide a reconciliation of federal income tax expense (benefit) at the federal statutory rate to the total income taxes (benefits) for the years ended December 31, 2018, 2017 and 2016:

	For the Years Ended December 31, 2018	2017	2016
		(In millions)	
Income from Continuing Operations, before income taxes	$ 1,512	$ 1,426	$ 1,078
Federal income tax expense at statutory rate (21%, 35%, and 35% for 2018, 2017, and 2016, respectively)	$ 318	$ 499	$ 377
Increases (reductions) in taxes resulting from-			
State income taxes, net of federal tax benefit	90	40	16
AFUDC equity and other flow-through	(31)	(15)	(13)
Amortization of investment tax credits	(5)	(6)	(6)
ESOP dividend	(3)	(5)	(4)
Remeasurement of deferred taxes	24	1,193	—
WV unitary group remeasurement	126	—	—
Excess deferred tax amortization due to the Tax Act	(60)	—	—
Uncertain tax positions	2	(3)	(8)
Valuation allowances	21	11	160
Other, net	8	1	5
Total income taxes	$ 490	$ 1,715	$ 527
Effective income tax rate	32.4%	120.3%	49.0%

Excluding the impact of the remeasurement of FES's and FENOC's deferred taxes in 2017 resulting from the Tax Act, FirstEnergy's effective tax rate on continuing operations was 43.3%. Although FES' and FENOC's operations are presented in discontinued operations, the 2017 remeasurement of deferred taxes remain in continuing operations in accordance with accounting standards for the impact of tax rate changes. Compared to FirstEnergy's effective tax rate on continuing operations in 2018 of 32.4%, the decrease from 2017 is primarily due to the decrease in the corporate federal income tax rate from 35% to 21%. Additionally, in 2018, FirstEnergy's regulated distribution and transmission subsidiaries began amortizing the net regulatory liability associated with excess deferred taxes, resulting in an income tax benefit that reduced the effective tax rate. The income tax benefit is offset by a corresponding reduction in revenues, resulting from rate orders implemented by various regulatory commissions (see Note 16 "Regulatory Matters," for additional detail). These decreases were partially offset by the impact of the legal and financial separation of FES and FENOC from FirstEnergy in the first quarter of 2018 that officially eroded the ties between FES, FENOC and other FE subsidiaries doing business in West Virginia. As such, FES and FENOC were removed from the West Virginia unitary group when calculating West Virginia state income taxes, resulting in a $126 million charge to income tax expense in continuing operation

s associated with the remeasurement in state deferred taxes. See Note 3, "Discontinued Operations" for other tax matters relating to the FES Bankruptcy that were recognized in discontinued operations.

Accumulated deferred income taxes as of December 31, 2018 and 2017, are as follows:

	As of December 31,	
	2018	2017
	(In millions)	
Property basis differences	$ 4,737	$ 4,354
Pension and OPEB	(629)	(708)
TMI-2 nuclear decommissioning	82	37
AROs	(215)	(157)
Regulatory asset/liability	414	416
Deferred compensation	(170)	(149)
Estimated worthless stock deduction	(1,004)	—
Loss carryforwards and AMT credits	(899)	(863)
Valuation reserve	394	312
All other	(208)	(71)
Net deferred income tax liability	$ 2,502	$ 3,171

FirstEnergy has recorded as deferred income tax assets the effect of Federal NOLs and tax credits that will more likely than not be realized through future operations and through the reversal of existing temporary differences. As of December 31, 2018, FirstEnergy's loss carryforwards and AMT credits consisted of $2.4 billion ($493 million, net of tax) of Federal NOL carryforwards that will begin to expire in 2031 and Federal AMT credits of $18 million that have an indefinite carryforward period.

The table below summarizes pre-tax NOL carryforwards for state and local income tax purposes of approximately $7.6 billion ($365 million, net of tax) for FirstEnergy, of which approximately $2.1 billion ($100 million, net of tax) is expected to be utilized based on current estimates and assumptions. The ultimate utilization of these NOLs may be impacted by statutory limitations on the use of NOLs imposed by state and local tax jurisdictions, changes in statutory tax rates, and changes in business which, among other things, impact both future profitability and the manner in which future taxable income is apportioned to various state and local tax jurisdictions. In addition to the valuation allowances on state and local NOLs, FirstEnergy has recorded a reserve against certain state and local property related DTAs (approximately $59 million, net of tax) and a reserve against the estimated nondeductible portion of interest expense, discussed above.

Expiration Period	State	Local
	(In millions)	
2019-2023	$ 1,583	$ 1,581
2024-2028	1,526	—
2029-2033	1,862	—
2034-2038	1,067	—
	$ 6,038	$ 1,581

FirstEnergy accounts for uncertainty in income taxes recognized in its financial statements. A recognition threshold and measurement attribute is utilized for financial statement recognition and measurement of tax positions taken or expected to be taken on the tax return. As of December 31, 2018 and 2017, FirstEnergy's total unrecognized income tax benefits were approximately $158 million and $80 million, respectively. The change in unrecognized income tax benefits from the prior year is primarily attributable to a reserve of approximately $27 million for the estimated nondeductible interest under Section 163(j) and $88 million for reserves on the estimated worthless stock deduction. See Note 3, Discontinued Operations, for further discussion. If ultimately recognized in future years, approximately $142 million of unrecognized income tax benefits would impact the effective tax rate.

On October 18, 2017, the Supreme Court of Pennsylvania affirmed the Commonwealth Court’s holding that the state’s net loss carryover provision violated the Pennsylvania Uniformity Clause and was unconstitutional. However, the court also opined that the portion of the net loss carryover provision that created the violation may be severed from the statute, enabling the statute to operate as the legislature intended, and on October 30, 2017, the Pennsylvania Governor signed House Bill 542 into law which, among other things, amended Pennsylvania’s limitation on net loss deductions to remove the flat-dollar limitation. On January 4, 2018, the Pennsylvania Supreme Court denied to further hear any arguments related to the matter and, as a result, FirstEnergy withdrew its protective refund claims from the state of Pennsylvania on January 30, 2018. Upon doing so, FirstEnergy reversed a previously recorded unrecognized tax benefit of approximately $45 million in the first quarter of 2018, none of which impacted FirstEnergy’s effective tax rate.

As of December 31, 2018, it is reasonably possible that approximately $6 million of unrecognized tax benefits may be resolved during 2019 as a result of settlements with taxing authorities or the statute of limitations expiring, of which $2 million would affect FirstEnergy's effective tax rate.

The following table summarizes the changes in unrecognized tax positions for the years ended 2018, 2017 and 2016:

	(In millions)
Balance, January 1, 2016	$ 26
Current year increases	2
Prior years increases	69
Prior years decreases	(13)
Balance, December 31, 2016	$ 84
Current year increases	2
Decrease for lapse in statute	(6)
Balance, December 31, 2017	$ 80
Current year increases	125
Prior years decreases	(45)
Decrease for lapse in statute	(2)
Balance, December 31, 2018	$ 158

FirstEnergy recognizes interest expense or income and penalties related to uncertain tax positions in income taxes by applying the applicable statutory interest rate to the difference between the tax position recognized and the amount previously taken, or expected to be taken, on the tax return. FirstEnergy's recognition of net interest associated with unrecognized tax benefits in 2018, 2017 and 2016, was not material. For the years ended December 31, 2018 and 2017, the cumulative net interest payable recorded by FirstEnergy was not material.

FirstEnergy has tax returns that are under review at the audit or appeals level by the IRS and state taxing authorities. FirstEnergy's tax returns for all state jurisdictions are open from 2009-2017. In January 2018, the IRS completed its examination of FirstEnergy's 2016 federal income tax return and issued a Full Acceptance Letter with no changes or adjustments to FirstEnergy's taxable income. Tax year 2017 is currently under review by the IRS.

General Taxes

General tax expense for the years ended December 31, 2018, 2017 and 2016, recognized in continuing operations is summarized as follows:

	For the Years Ended December 31,		
	2018	**2017**	**2016**
		(In millions)	
KWH excise	$ 198	$ 188	$ 196
State gross receipts	192	184	184
Real and personal property	478	452	421
Social security and unemployment	103	96	91
Other	22	20	21
Total general taxes	$ 993	$ 940	$ 913

8. LEASES

FirstEnergy leases certain office space and other property and equipment under cancelable and noncancelable leases.

Operating lease expense for the years ended December 31, 2018, 2017 and 2016, was $48 million, $53 million and $62 million, respectively.

The future minimum capital lease payments as of December 31, 2018, are as follows:

Capital Leases	
	(In millions)
2019	$ 24
2020	19
2021	16
2022	13
2023	8
Years thereafter	16
Total minimum lease payments	96
Interest portion	(23)
Present value of net minimum lease payments	73
Less current portion	18
Noncurrent portion	$ 55

The future minimum operating lease payments as of December 31, 2018, are as follows:

Operating Leases	
	(In millions)
2019	$ 34
2020	36
2021	34
2022	30
2023	28
Years thereafter	127
Total minimum lease payments	$ 289

9. INTANGIBLE ASSETS

As of December 31, 2018, intangible assets classified in Other Deferred Charges on FirstEnergy's Consolidated Balance Sheets include the following:

	Intangible Assets			Amortization Expense						
				Actual	Estimated					
(In millions)	Gross	Accumulated Amortization	Net	2018	2019	2020	2021	2022	2023	Thereafter
NUG contracts[1]	$ 124	$ 41	$ 83	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 58
OVEC	8	3	5	—	1	—	—	—	1	3
Coal contracts[2]	102	97	5	3	3	2	—	—	—	—
	$ 234	$ 141	$ 93	$ 8	$ 9	$ 7	$ 5	$ 5	$ 6	$ 61

(1) NUG contracts are subject to regulatory accounting and their amortization does not impact earnings.
(2) The coal contracts were recorded with a regulatory offset and their amortization does not impact earnings.

10. VARIABLE INTEREST ENTITIES

FirstEnergy performs qualitative analyses based on control and economics to determine whether a variable interest classifies FirstEnergy as the primary beneficiary (a controlling financial interest) of a VIE. An enterprise has a controlling financial interest if it has both power and economic control, such that an entity has: (i) the power to direct the activities of a VIE that most significantly impact the entity's economic performance; and (ii) the obligation to absorb losses of the entity that could potentially be significant

to the VIE or the right to receive benefits from the entity that could potentially be significant to the VIE. FirstEnergy consolidates a VIE when it is determined that it is the primary beneficiary.

In order to evaluate contracts for consolidation treatment and entities for which FirstEnergy has an interest, FirstEnergy aggregates variable interests into categories based on similar risk characteristics and significance.

Consolidated VIEs

VIEs in which FirstEnergy is the primary beneficiary consist of the following (included in FirstEnergy's consolidated financial statements):

- ***Ohio Securitization*** - In September 2012, the Ohio Companies created separate, wholly owned limited liability company SPEs which issued phase-in recovery bonds to securitize the recovery of certain all-electric customer heating discounts, fuel and purchased power regulatory assets. The phase-in recovery bonds are payable only from, and secured by, phase-in recovery property owned by the SPEs. The bondholder has no recourse to the general credit of FirstEnergy or any of the Ohio Companies. Each of the Ohio Companies, as servicer of its respective SPE, manages and administers the phase-in recovery property including the billing, collection and remittance of usage-based charges payable by retail electric customers. In the aggregate, the Ohio Companies are entitled to annual servicing fees of $445 thousand that are recoverable through the usage-based charges. The SPEs are considered VIEs and each one is consolidated into its applicable utility. As of December 31, 2018 and December 31, 2017, $292 million and $315 million of the phase-in recovery bonds were outstanding, respectively.

- ***JCP&L Securitization*** - In August 2006, JCP&L Transition Funding II sold transition bonds to securitize the recovery of deferred costs associated with JCP&L's supply of BGS. JCP&L did not purchase and does not own any of the transition bonds, which are included as long-term debt on FirstEnergy's Consolidated Balance Sheets. The transition bonds are the sole obligations of JCP&L Transition Funding II and are collateralized by its equity and assets, which consist primarily of bondable transition property. As of December 31, 2018 and December 31, 2017, $41 million and $56 million of the transition bonds were outstanding, respectively.

- ***MP and PE Environmental Funding Companies*** - The entities issued bonds, the proceeds of which were used to construct environmental control facilities. The limited liability company SPEs own the irrevocable right to collect non-bypassable environmental control charges from all customers who receive electric delivery service in MP's and PE's West Virginia service territories. Principal and interest owed on the environmental control bonds is secured by, and payable solely from, the proceeds of the environmental control charges. Creditors of FirstEnergy, other than the limited liability company SPEs, have no recourse to any assets or revenues of the special purpose limited liability companies. As of December 31, 2018 and December 31, 2017, $358 million and $383 million of the environmental control bonds were outstanding, respectively.

Unconsolidated VIEs

FirstEnergy is not the primary beneficiary of the following VIEs:

- ***Global Holding*** - FEV holds a 33-1/3% equity ownership in Global Holding, the holding company for a joint venture in the Signal Peak mining and coal transportation operations with coal sales in U.S. and international markets. FEV is not the primary beneficiary of the joint venture, as it does not have control over the significant activities affecting the joint ventures economic performance. FEV's ownership interest is subject to the equity method of accounting. As of December 31, 2018, the carrying value of the equity method investment was $7 million.

  As discussed in Note 17, "Commitments, Guarantees and Contingencies," FE is the guarantor under Global Holding's $300 million term loan facility, which matures in March 2020 and has an outstanding principal balance of $190 million as of December 31, 2018. Failure by Global Holding to meet the terms and conditions under its term loan facility could require FE to be obligated under the provisions of its guarantee, resulting in consolidation of Global Holding by FE.

- ***PATH WV*** - PATH, a proposed transmission line from West Virginia through Virginia into Maryland which PJM cancelled in 2012, is a series limited liability company that is comprised of multiple series, each of which has separate rights, powers and duties regarding specified property and the series profits and losses associated with such property. A subsidiary of FE owns 100% of the Allegheny Series (PATH-Allegheny) and 50% of the West Virginia Series (PATH-WV), which is a joint venture with a subsidiary of AEP. FirstEnergy is not the primary beneficiary of PATH-WV, as it does not have control over the significant activities affecting the economics of PATH-WV. FirstEnergy's ownership interest in PATH-WV is subject to the equity method of accounting. As of December 31, 2018, the carrying value of the equity method investment was $17 million.

- ***Purchase Power Agreements*** - FirstEnergy evaluated its PPAs and determined that certain NUG entities at its Regulated Distribution segment may be VIEs to the extent that they own a plant that sells substantially all of its output to the applicable utilities and the contract price for power is correlated with the plant's variable costs of production.

  FirstEnergy maintains 11 long-term PPAs with NUG entities that were entered into pursuant to PURPA. FirstEnergy was not involved in the creation of, and has no equity or debt invested in, any of these entities. FirstEnergy has determined that for all but one of these NUG entities, it does not have a variable interest or the entities do not meet the criteria to be considered a VIE. FirstEnergy may hold a variable interest in the remaining one entity; however, it applied the scope exception that exempts enterprises unable to obtain the necessary information to evaluate entities.

Because FirstEnergy has no equity or debt interests in the NUG entities, its maximum exposure to loss relates primarily to the above-market costs incurred for power. FirstEnergy expects any above-market costs incurred at its Regulated Distribution segment to be recovered from customers. Purchased power costs related to the contract that may contain a variable interest were $108 million and $112 million, respectively, during the years ended December 31, 2018 and 2017.

- ***FES and FENOC -*** As a result of the Chapter 11 bankruptcy filing discussed in Note 3, "Discontinued Operations," FE evaluated its investments in FES and FENOC and determined they are VIEs. FE is not the primary beneficiary because it lacks a controlling interest in FES and FENOC, which are subject to the jurisdiction of the Bankruptcy Court as of March 31, 2018. The carrying values of the equity investments in FES and FENOC were zero at December 31, 2018.

11. FAIR VALUE MEASUREMENTS

RECURRING FAIR VALUE MEASUREMENTS

Authoritative accounting guidance establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy gives the highest priority to Level 1 measurements and the lowest priority to Level 3 measurements. The three levels of the fair value hierarchy and a description of the valuation techniques are as follows:

Level 1
- Quoted prices for identical instruments in active market

Level 2
- Quoted prices for similar instruments in active market
- Quoted prices for identical or similar instruments in markets that are not active
- Model-derived valuations for which all significant inputs are observable market data

Models are primarily industry-standard models that consider various assumptions, including quoted forward prices for commodities, time value, volatility factors and current market and contractual prices for the underlying instruments, as well as other relevant economic measures.

Level 3
- Valuation inputs are unobservable and significant to the fair value measurement

FirstEnergy produces a long-term power and capacity price forecast annually with periodic updates as market conditions change. When underlying prices are not observable, prices from the long-term price forecast are used to measure fair value.

FTRs are financial instruments that entitle the holder to a stream of revenues (or charges) based on the hourly day-ahead congestion price differences across transmission paths. FTRs are acquired by FirstEnergy in the annual, monthly and long-term PJM auctions and are initially recorded using the auction clearing price less cost. After initial recognition, FTRs' carrying values are periodically adjusted to fair value using a mark-to-model methodology, which approximates market. The primary inputs into the model, which are generally less observable than objective sources, are the most recent PJM auction clearing prices and the FTRs' remaining hours. The model calculates the fair value by multiplying the most recent auction clearing price by the remaining FTR hours less the prorated FTR cost. Significant increases or decreases in inputs in isolation may have resulted in a higher or lower fair value measurement. See Note 12, "Derivative Instruments," for additional information regarding FirstEnergy's FTRs.

NUG contracts represent PPAs with third-party non-utility generators that are transacted to satisfy certain obligations under PURPA. NUG contract carrying values are recorded at fair value and adjusted periodically using a mark-to-model methodology, which approximates market. The primary unobservable inputs into the model are regional power prices and generation MWH. Pricing for the NUG contracts is a combination of market prices for the current year and next two years based on observable data and internal models using historical trends and market data for the remaining years under contract. The internal models use forecasted energy purchase prices as an input when prices are not defined by the contract. Forecasted market prices are based on ICE quotes and management assumptions. Generation MWH reflects data provided by contractual arrangements and historical trends. The model calculates the fair value by multiplying the prices by the generation MWH. Significant increases or decreases in inputs in isolation may have resulted in a higher or lower fair value measurement.

FirstEnergy primarily applies the market approach for recurring fair value measurements using the best information available. Accordingly, FirstEnergy maximizes the use of observable inputs and minimizes the use of unobservable inputs. There were no changes in valuation methodologies used as of December 31, 2018, from those used as of December 31, 2017. The determination of the fair value measures takes into consideration various factors, including but not limited to, nonperformance risk, counterparty credit risk and the impact of credit enhancements (such as cash deposits, LOCs and priority interests). The impact of these forms of risk was not significant to the fair value measurements.

The following tables set forth the recurring assets and liabilities that are accounted for at fair value by level within the fair value hierarchy:

	December 31, 2018				December 31, 2017			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets				*(In millions)*				
Corporate debt securities	$ —	$ 405	$ —	$ 405	$ —	$ 476	$ —	$ 476
Derivative assets FTRs[1]	—	—	10	10	—	—	3	3
Equity securities[2]	339	—	—	339	297	—	—	297
Foreign government debt securities	—	13	—	13	—	23	—	23
U.S. government debt securities	—	20	—	20	—	21	—	21
U.S. state debt securities	—	250	—	250	—	247	—	247
Other[3]	367	34	—	401	588	38	—	626
Total assets	$ 706	$ 722	$ 10	$ 1,438	$ 885	$ 805	$ 3	$ 1,693
Liabilities								
Derivative liabilities FTRs[1]	$ —	$ —	$ (1)	$ (1)	$ —	$ —	$ —	$ —
Derivative liabilities NUG contracts[1]	—	—	(44)	(44)	—	—	(79)	(79)
Total liabilities	$ —	$ —	$ (45)	$ (45)	$ —	$ —	$ (79)	$ (79)
Net assets (liabilities)[4]	$ 706	$ 722	$ (35)	$ 1,393	$ 885	$ 805	$ (76)	$ 1,614

(1) Contracts are subject to regulatory accounting treatment and changes in market values do not impact earnings.

(2) NDT funds hold equity portfolios whose performance is benchmarked against the S&P 500 Low Volatility High Dividend Index, S&P 500 Index, MSCI World Index and MSCI AC World IMI Index.

(3) Primarily consists of short-term cash investments.

(4) Excludes $4 million and $(11) million as of December 31, 2018 and December 31, 2017, respectively, of receivables, payables, taxes and accrued income associated with financial instruments reflected within the fair value table.

Rollforward of Level 3 Measurements

The following table provides a reconciliation of changes in the fair value of NUG contracts and FTRs that are classified as Level 3 in the fair value hierarchy for the periods ended December 31, 2018 and December 31, 2017:

	NUG Contracts[1]			FTRs[1]		
	Derivative Assets	Derivative Liabilities	Net	Derivative Assets	Derivative Liabilities	Net
			(In millions)			
January 1, 2017 Balance	$ 1	$ (108)	$ (107)	$ 3	$ (1)	$ 2
Unrealized gain (loss)	—	(10)	(10)	1	(1)	—
Purchases	—	—	—	3	—	3
Settlements	(1)	39	38	(4)	2	(2)
December 31, 2017 Balance	$ —	$ (79)	$ (79)	$ 3	$ —	$ 3
Unrealized gain (loss)	—	2	2	8	1	9
Purchases	—	—	—	5	(5)	—
Settlements	—	33	33	(6)	3	(3)
December 31, 2018 Balance	$ —	$ (44)	$ (44)	$ 10	$ (1)	$ 9

(1) Contracts are subject to regulatory accounting treatment and changes in market values do not impact earnings.

Level 3 Quantitative Information

The following table provides quantitative information for FTRs and NUG contracts that are classified as Level 3 in the fair value hierarchy for the period ended December 31, 2018:

	Fair Value, Net (In millions)	Valuation Technique	Significant Input	Range	Weighted Average	Units
FTRs	$ 9	Model	RTO auction clearing prices	$0.20 to $6.10	$1.80	Dollars/MWH
NUG Contracts	$ (44)	Model	Generation	400 to 1,214,000	249,000 $32.60	MWH
			Regional electricity prices	$31.40 to $33.60		Dollars/MWH

INVESTMENTS

All temporary cash investments purchased with an initial maturity of three months or less are reported as cash equivalents on the Consolidated Balance Sheets at cost, which approximates their fair market value. Investments other than cash and cash equivalents include equity securities, AFS debt securities and other investments. FirstEnergy has no debt securities held for trading purposes.

Generally, unrealized gains and losses on equity securities are recognized in income whereas unrealized gains and losses on AFS debt securities are recognized in AOCI. However, the NDTs of JCP&L, ME and PN are subject to regulatory accounting with all gains and losses on equity and AFS debt securities offset against regulatory assets.

The investment policy for the NDT funds restricts or limits the trusts' ability to hold certain types of assets including private or direct placements, warrants, securities of FirstEnergy, investments in companies owning nuclear power plants, financial derivatives, securities convertible into common stock and securities of the trust funds' custodian or managers and their parents or subsidiaries.

Nuclear Decommissioning and Nuclear Fuel Disposal Trusts

JCP&L, ME and PN hold debt and equity securities within their respective NDT and nuclear fuel disposal trusts. The debt securities are classified as AFS securities, recognized at fair market value.

The following table summarizes the amortized cost basis, unrealized gains, unrealized losses and fair values of investments held in NDT and nuclear fuel disposal trusts as of December 31, 2018 and December 31, 2017:

	December 31, 2018[1]				December 31, 2017[1]			
	Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value	Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
	(In millions)							
Debt securities	$ 714	$ 2	$ (28)	$ 688	$ 774	$ 11	$ (17)	$ 768
Equity securities	$ 339	$ 15	$ (16)	$ 338	$ 254	$ 40	$ —	$ 294

[1] Excludes short-term cash investments of $20 million and $11 million in 2018 and 2017, respectively.

Proceeds from the sale of investments in equity and AFS debt securities, realized gains and losses on those sales and interest and dividend income for the three years ended December 31, 2018, 2017 and 2016, were as follows:

	2018	2017	2016
	(In millions)		
Sale Proceeds	$ 800	$ 1,230	$ 961
Realized Gains	41	74	53
Realized Losses	(48)	(58)	(52)
OTTI	—	—	(2)
Interest and Dividend Income	41	39	44

Other Investments

Other investments include employee benefit trusts, which are primarily invested in corporate-owned life insurance policies, and equity method investments. Other investments were $253 million and $255 million as of December 31, 2018 and December 31, 2017, respectively, and are excluded from the amounts reported above.

LONG-TERM DEBT AND OTHER LONG-TERM OBLIGATIONS

All borrowings with initial maturities of less than one year are defined as short-term financial instruments under GAAP and are reported as Short-term borrowings on the Consolidated Balance Sheets at cost. Since these borrowings are short-term in nature, FirstEnergy believes that their costs approximate their fair market value. The following table provides the approximate fair value and related carrying amounts of long-term debt, which excludes capital lease obligations and net unamortized debt issuance costs, premiums and discounts as of December 31, 2018 and 2017:

	As of December 31,	
	2018	2017
	(In millions)	
Carrying Value	$ 18,315	$ 19,296
Fair Value	19,266	21,412

The fair values of long-term debt and other long-term obligations reflect the present value of the cash outflows relating to those securities based on the current call price, the yield to maturity or the yield to call, as deemed appropriate at the end of each respective period. The yields assumed were based on securities with similar characteristics offered by corporations with credit ratings similar to those of FirstEnergy. FirstEnergy classified short-term borrowings, long-term debt and other long-term obligations as Level 2 in the fair value hierarchy as of December 31, 2018 and December 31, 2017.

12. DERIVATIVE INSTRUMENTS

FirstEnergy is exposed to financial risks resulting from fluctuating interest rates and commodity prices, including prices for electricity, coal and energy transmission. To manage the volatility related to these exposures, FirstEnergy's Risk Policy Committee, comprised of senior management, provides general management oversight for risk management activities throughout FirstEnergy. The Risk Policy Committee is responsible for promoting the effective design and implementation of sound risk management programs and oversees compliance with corporate risk management policies and established risk management practice. FirstEnergy also uses a variety of derivative instruments for risk management purposes including forward contracts, options, futures contracts and swaps.

FirstEnergy accounts for derivative instruments on its Consolidated Balance Sheets at fair value (unless they meet the normal purchases and normal sales criteria) as follows:

- Changes in the fair value of derivative instruments that are designated and qualify as cash flow hedges are recorded to AOCI with subsequent reclassification to earnings in the period during which the hedged forecasted transaction affects earnings.
- Changes in the fair value of derivative instruments that are designated and qualify as fair value hedges are recorded as an adjustment to the item being hedged. When fair value hedges are discontinued, the adjustment recorded to the item being hedged is amortized into earnings.
- Changes in the fair value of derivative instruments that are not designated in a hedging relationship are recorded in earnings on a mark-to-market basis, unless otherwise noted.

Derivative instruments meeting the normal purchases and normal sales criteria are accounted for under the accrual method of accounting with their effects included in earnings at the time of contract performance.

FirstEnergy has contractual derivative agreements through 2020.

Cash Flow Hedges

FirstEnergy has used forward starting interest rate swap agreements to hedge a portion of the consolidated interest rate risk associated with anticipated issuances of fixed-rate, long-term debt securities of its subsidiaries. These derivatives were designated as cash flow hedges, protecting against the risk of changes in future interest payments resulting from changes in benchmark U.S. Treasury rates between the date of hedge inception and the date of the debt issuance. Total pre-tax unamortized losses included in AOCI associated with prior interest rate cash flow hedges totaled $15 million and $22 million as of December 31, 2018 and December 31, 2017, respectively. Based on current estimates, approximately $2 million of these unamortized losses are expected to be amortized to interest expense during the next twelve months.

Refer to Note 4, "Accumulated Other Comprehensive Income," for reclassifications from AOCI during the years ended December 31, 2018 and 2017.

As of December 31, 2018 and December 31, 2017, no commodity or interest rate derivatives were designated as cash flow hedges.

Fair Value Hedges

FirstEnergy has used fixed-for-floating interest rate swap agreements to hedge a portion of the consolidated interest rate risk associated with the debt portfolio of its subsidiaries. As of December 31, 2018 and December 31, 2017, no fixed-for-floating interest rate swap agreements were outstanding.

Unamortized gains included in long-term debt associated with prior fixed-for-floating interest rate swap agreements totaled $2 million and $3 million as of December 31, 2018 and December 31, 2017, respectively.

NUGs

As of December 31, 2018 and December 31, 2017, FirstEnergy's net liability position under NUG contracts was $44 million and $79 million, respectively, representing contracts held at JCP&L and PN. NUG contracts are classified as an adverse power contract liability on the Consolidated Balance Sheets. During the year ended December 31, 2018, there were settlements of $33 million and unrealized gains of $2 million. Changes in the fair value of NUG contracts are subject to regulatory accounting treatment and do not impact earnings.

FTRs

As of December 31, 2018 and December 31, 2017, FirstEnergy's net asset position associated with FTRs was $9 million and $3 million, respectively. FirstEnergy holds FTRs that generally represent an economic hedge of future congestion charges that will be incurred in connection with FirstEnergy's load obligations. FirstEnergy acquires the majority of its FTRs in an annual auction through a self-scheduling process involving the use of ARRs allocated to members of PJM that have load serving obligations. For the year ended December 31, 2018, there were settlements of $3 million and there were unrealized gains of $9 million. Changes in the fair value of FTR contracts are subject to regulatory accounting treatment and do not impact earnings.

13. CAPITALIZATION

COMMON STOCK

Retained Earnings and Dividends

As of December 31, 2018, FirstEnergy had an accumulated deficit of $4.9 billion. Dividends declared in 2018 and 2017 were $1.82 and $1.44 per share, respectively. In each 2018 and 2017, dividends of $0.36 per share were paid in the first, second, third and fourth quarters. On November 9, 2018, the Board of Directors declared a quarterly dividend of $0.38 per share to be paid from other paid-in-capital in the first quarter of 2019. The amount and timing of all dividend declarations are subject to the discretion of the Board of Directors and its consideration of business conditions, results of operations, financial condition and other factors.

In addition to paying dividends from retained earnings, OE, CEI, TE, Penn, JCP&L, ME and PN have authorization from FERC to pay cash dividends to FirstEnergy from paid-in capital accounts, as long as their FERC-defined equity-to-total-capitalization ratio remains above 35%. In addition, TrAIL and AGC have authorization from FERC to pay cash dividends to their respective parents from paid-in capital accounts, as long as their FERC-defined equity-to-total-capitalization ratio remains above 45%. The articles of incorporation, indentures, regulatory limitations and various other agreements relating to the long-term debt of certain FirstEnergy subsidiaries contain provisions that could further restrict the payment of dividends on their common stock. None of these provisions materially restricted FirstEnergy's subsidiaries' abilities to pay cash dividends to FE as of December 31, 2018.

Common Stock Issuance

On January 22, 2018, FE entered into a Common Stock Purchase Agreement for the private placement of 30,120,482 shares of FE's common stock, par value $0.10 per share, representing an investment of $850 million ($3 million of common shares and $847 million of OPIC). In addition, during 2018, 911,411 of preferred shares were converted into 33,238,910 common shares at the option of the preferred holders. An additional 494,767 preferred shares were converted into 18,044,018 common shares at the option of the holders in January 2019, resulting in 209,822 preferred shares outstanding and yet to be converted.

Additionally, FE issued approximately 3.2 million shares of common stock in 2018, 3.0 million shares of common stock in 2017 and 2.7 million shares of common stock in 2016 to registered shareholders and its directors and the employees of its subsidiaries under its Stock Investment Plan and certain share-based benefit plans.

On December 13, 2016, FE contributed 16,097,875 newly issued shares of its common stock to its qualified pension plan in a private placement transaction. These shares were valued at approximately $500 million in the aggregate, and were issued to satisfy a portion of FirstEnergy's future pension funding obligations.

PREFERRED AND PREFERENCE STOCK

FirstEnergy and the Utilities were authorized to issue preferred stock and preference stock as of December 31, 2018, as follows:

	Preferred Stock		Preference Stock	
	Shares Authorized	Par Value	Shares Authorized	Par Value
FE	5,000,000	$ 100		
OE	6,000,000	$ 100	8,000,000	no par
OE	8,000,000	$ 25		
Penn	1,200,000	$ 100		
CEI	4,000,000	no par	3,000,000	no par
TE	3,000,000	$ 100	5,000,000	$ 25
TE	12,000,000	$ 25		
JCP&L	15,600,000	no par		
ME	10,000,000	no par		
PN	11,435,000	no par		
MP	940,000	$ 100		
PE	10,000,000	$ 0.01		
WP	32,000,000	no par		

Preferred Stock Issuance

FE entered into a Preferred Stock Purchase Agreement (the Preferred SPA) for the private placement of 1,616,000 shares of mandatorily convertible preferred stock, designated as the Series A Convertible Preferred Stock, par value $100 per share, representing an investment of nearly $1.62 billion ($162 million of mandatorily convertible preferred stock and $1.46 billion of OPIC).

The preferred stock participates in dividends on the common stock on an as-converted basis based on the number of shares of common stock a holder of preferred stock would receive if its shares of preferred stock were converted on the dividend record date at the conversion price in effect at that time. Such dividends are paid at the same time that the dividends on common stock are paid.

Each share of preferred stock is convertible at the option of the holders into a number of shares of common stock equal to the $1,000 liquidation preference, divided by the Conversion Price then in effect. As of December 31, 2018, the Conversion Price in effect was $27.42 per share. The Conversion Price is subject to anti-dilution adjustments and adjustments for subdivisions and combinations of the common stock, as well as dividends on the common stock paid in common stock and for certain equity issuances below the Conversion Price then in effect. As of December 31, 2018, 911,411 preferred shares have been converted into 33,238,910 common shares at the option of the holders, resulting in 704,589 shares of preferred shares outstanding. An additional 494,767 preferred shares were converted into 18,044,018 common shares at the option of the holders in January 2019, resulting in 209,822 preferred shares outstanding and yet to be converted as of January 31, 2019.

In general, any shares of preferred stock outstanding on July 22, 2019, will be automatically converted. Further, the preferred stock will automatically convert to common stock upon certain events of bankruptcy or liquidation of FE. FE may elect to convert the preferred stock if, at any time, fewer than 323,200 shares of preferred stock are outstanding. However, no shares of preferred stock will be converted prior to January 22, 2020, if such conversion will cause a converting holder to be deemed to beneficially own, together with its affiliates whose holdings would be aggregated with such holder for purposes of Section 13(d) under the Exchange Act, more than 4.9% of the then-outstanding common stock. Furthermore, in no event shall FE issue more than 58,964,222 shares of common stock (the Share Cap) in the aggregate upon conversion of the convertible preferred stock. From and after the time at which the aggregate number of shares of common stock issued upon conversion of the preferred stock equals the Share Cap, each holder electing to convert convertible preferred stock will be entitled to receive a cash payment equal to the market value of the common stock such holder does not receive upon conversion.

The holders of preferred stock have limited class voting rights related to the creation of additional securities that are senior or equal with the preferred stock, as well as certain reclassifications and amendments that would affect the rights of the holders of preferred stock. The holders of preferred stock also have the right to approve issuances of securities convertible or exchangeable for common stock, subject to certain exceptions for compensation arrangements and bona fide dividend reinvestment or share purchase plans.

Pursuant to the Preferred SPA, FirstEnergy formed an RWG composed of three employees of FirstEnergy and two outside members to advise FirstEnergy management regarding FES' restructuring. On September 20, 2018, pursuant to the Preferred SPA, the RWG was terminated in light of the substantial completion of the RWG’s role.

As of December 31, 2017, there were no preferred stock outstanding. As of December 31, 2018 and 2017, there were no preference stock outstanding.

LONG-TERM DEBT AND OTHER LONG-TERM OBLIGATIONS

The following tables present outstanding long-term debt and capital lease obligations for FirstEnergy as of December 31, 2018 and 2017:

	As of December 31, 2018		As of December 31,	
(Dollar amounts in millions)	**Maturity Date**	**Interest Rate**	**2018**	**2017**
FMBs and secured notes - fixed rate	2019 - 2056	1.726% - 9.740%	$ 4,355	$ 4,692
Unsecured notes - fixed rate	2019 - 2047	2.850% - 7.700%	13,450	13,155
Unsecured notes - variable rate	2020	3.270%	500	1,450
Capital lease obligations			73	89
Unamortized debt discounts			(39)	(41)
Unamortized debt issuance costs			(95)	(99)
Unamortized fair value adjustments			10	(1)
Currently payable long-term debt			(503)	(558)
Total long-term debt and other long-term obligations			$ 17,751	$ 18,687

On January 22, 2018, FE repaid $1.2 billion of a variable rate syndicated term loan and two separate $125 million term loans using the proceeds from the $2.5 billion equity investment as discussed above.

On May 3, 2018, AGC redeemed $100 million of 5.06% senior notes due 2021 and paid $5.7 million in related make-whole premiums in connection with the redemption.

On May 10, 2018, MAIT issued $450 million of 4.10% senior notes due 2028. Proceeds from the issuance of the notes were used to establish a capital structure, to finance capital improvements and for general corporate purposes, including funding working capital needs and day-to-day operations.

On June 4, 2018, AE Supply repaid approximately $155 million of 5.75% senior notes due 2019 and approximately $150 million of 6.75% senior notes due 2039, and paid $83.3 million in related make-whole premiums in connection with repayments.

On June 4, 2018, AE Supply and MP caused to be redeemed $73.5 million of 5.50% PCRBs due 2037. On July 10, 2018, such PCRBs were refinanced as MP issued $73.5 million of 3.0% PCRBs with an October 2021 mandatory put.

On June 11, 2018, AE Supply caused to be redeemed $142 million of 5.25% PCRBs due 2037.

On June 15, 2018, JCP&L retired $150 million of 4.8% senior notes at maturity.

On September 27, 2018, ATSI issued $100 million of 4.32% senior notes due 2030. Proceeds were used to refinance existing indebtedness, including amounts under the FE regulated utility money pool, and remaining proceeds will be used to fund working capital needs, and for other general corporate purposes.

On October 3, 2018, Penn issued $50 million of 4.37% first mortgage bonds due 2048. Proceeds were used to refinance existing indebtedness, including amounts under the FE regulated utility money pool, to fund capital expenditures; and for other general corporate purposes.

On October 15, 2018, OE repaid $25 million of 8.25% first mortgage bonds at maturity.

On October 19, 2018, FE entered into a $1.25 billion 364-day term loan due 2019 (classified as short-term borrowings). Proceeds were used for general corporate purposes. Additionally, on October 19, 2018, FE entered into a $500 million two-year variable rate term loan due 2020. Proceeds were used to reduce revolver borrowings.

On November 2, 2018, CEI issued $300 million of 4.55% senior unsecured notes due 2030. Proceeds were used to retire $300 million of 8.875% first mortgage bonds at maturity on November 15, 2018.

On January 10, 2019, ME issued $500 million of 4.30% senior note due 2029. Proceeds from the issuance of senior notes were used to refinance existing indebtedness, including ME's 7.70% senior notes due January 15, 2019, and borrowings outstanding under the FE regulated utility money pool, to fund capital expenditures, and for other general corporate purposes.

On February 8, 2019, JCP&L issued $400 million of 4.30% senior notes due 2026. Proceeds from the issuance of the senior notes were used to refinance existing indebtedness, including amounts under the FE regulated utility money pool incurred in connection with the repayment at maturity of JCP&L's 7.35% senior notes due 2019.

See Note 8, "Leases," for additional information related to capital leases.

Securitized Bonds

Environmental Control Bonds

The consolidated financial statements of FirstEnergy include environmental control bonds issued by two bankruptcy remote, special purpose limited liability companies that are indirect subsidiaries of MP and PE. Proceeds from the bonds were used to construct environmental control facilities. Principal and interest owed on the environmental control bonds is secured by, and payable solely from, the proceeds of the environmental control charges. As of December 31, 2018 and 2017, $358 million and $383 million of environmental control bonds were outstanding, respectively.

Transition Bonds

The consolidated financial statements of FirstEnergy and JCP&L include transition bonds issued by JCP&L Transition Funding and JCP&L Transition Funding II, wholly owned limited liability companies of JCP&L. The proceeds were used to securitize the recovery of JCP&L's bondable stranded costs associated with the previously divested Oyster Creek Nuclear Generating Station and to securitize the recovery of deferred costs associated with JCP&L's supply of BGS. As of December 31, 2018 and 2017, $41 million and $56 million of the transition bonds were outstanding, respectively.

Phase-In Recovery Bonds

In June 2013, the SPEs formed by the Ohio Companies issued approximately $445 million of pass-through trust certificates supported by phase-in recovery bonds to securitize the recovery of certain all electric customer heating discounts, fuel and purchased power regulatory assets. As of December 31, 2018 and 2017, $292 million and $315 million of the phase-in recovery bonds were outstanding, respectively.

See Note 10, "Variable Interest Entities," for additional information on securitized bonds.

Other Long-term Debt

The Ohio Companies and Penn each have a first mortgage indenture under which they can issue FMBs secured by a direct first mortgage lien on substantially all of their property and franchises, other than specifically excepted property.

Based on the amount of FMBs authenticated by the respective mortgage bond trustees as of December 31, 2018, the sinking fund requirement for all FMBs issued under the various mortgage indentures was zero.

The following table presents scheduled debt repayments for outstanding long-term debt, excluding capital leases, fair value purchase accounting adjustments and unamortized debt discounts and premiums, for the next five years as of December 31, 2018. PCRBs that are scheduled to be tendered for mandatory purchase prior to maturity are reflected in the applicable year in which such PCRBs are scheduled to be tendered.

Year	***(In millions)***
2019	$ 489
2020	$ 864
2021	$ 132
2022	$ 1,143
2023	$ 1,194

Certain PCRBs allow bondholders to tender their PCRBs for mandatory purchase prior to maturity. The following table classifies these PCRBs by year, excluding unamortized debt discounts and premiums, for the next five years based on the next date on which the debt holders may exercise their right to tender their PCRBs as of December 31, 2018:

Year		
		(In millions)
2019	$	—
2020	$	—
2021	$	74
2022	$	—
2023	$	—

Debt Covenant Default Provisions

FirstEnergy has various debt covenants under certain financing arrangements, including its revolving credit facilities and term loans. The most restrictive of the debt covenants relate to the nonpayment of interest and/or principal on such debt and the maintenance of certain financial ratios. The failure by FirstEnergy to comply with the covenants contained in its financing arrangements could result in an event of default, which may have an adverse effect on its financial condition. As of December 31, 2018, FirstEnergy remains in compliance with all debt covenant provisions.

Additionally, there are cross-default provisions in a number of the financing arrangements. These provisions generally trigger a default in the applicable financing arrangement of an entity if it or any of its significant subsidiaries, excluding AE Supply, default under another financing arrangement in excess of a certain principal amount, typically $100 million. Although such defaults by any of the Utilities, ATSI, TrAIL or MAIT would generally cross-default FE financing arrangements containing these provisions, defaults by AE Supply would generally not cross-default to applicable financing arrangements of FE. Also, defaults by FE would generally not cross-default applicable financing arrangements of any of FE's subsidiaries. Cross-default provisions are not typically found in any of the senior notes or FMBs of FE or the Utilities.

14. SHORT-TERM BORROWINGS AND BANK LINES OF CREDIT

FirstEnergy had $1,250 million and $300 million of short-term borrowings as of December 31, 2018 and 2017, respectively.

FE and the Utilities, and FET and certain of its subsidiaries, each participate in two separate five-year syndicated revolving credit facilities, which were amended on October 19, 2018, providing for aggregate commitments of $3.5 billion (Facilities), which are available through December 6, 2022. Under the amended FE facility, an aggregate amount of $2.5 billion is available to be borrowed, repaid and reborrowed, subject to separate borrowing sub-limits for each borrower including FE and its regulated distribution subsidiaries. Under the amended FET Facility, an aggregate amount of $1.0 billion is available to be borrowed, repaid and reborrowed under a syndicated credit facility, subject to separate borrowing sub-limits for each borrower including FET and the Transmission Companies. Prior to the amendments to the Facilities, the aggregate commitments under the Facilities was $5.0 billion, which were available until December 6, 2021. FirstEnergy amended the Facilities to reduce costs and to better align FirstEnergy's ongoing liquidity needs with its strategy to be a fully regulated utility company.

Borrowings under the Facilities may be used for working capital and other general corporate purposes, including intercompany loans and advances by a borrower to any of its subsidiaries. Generally, borrowings under the Facilities are available to each borrower separately and mature on the earlier of 364 days from the date of borrowing or the commitment termination date, as the same may be extended. Each of the Facilities contains financial covenants requiring each borrower to maintain a consolidated debt-to-total-capitalization ratio (as defined under each of the Facilities) of no more than 65%, and 75% for FET, measured at the end of each fiscal quarter.

FirstEnergy's available liquidity from external sources as of February 18, 2019, was as follows:

Borrower(s)	Type	Maturity	Commitment	Available Liquidity
			(In millions)	
FirstEnergy[1]	Revolving	December 2022	$ 2,500	$ 2,490
FET[2]	Revolving	December 2022	1,000	1,000
		Subtotal	$ 3,500	$ 3,490
		Cash and cash equivalents	—	156
		Total	$ 3,500	$ 3,646

(1) FE and the Utilities. Available liquidity includes impact of $10 million of LOCs issued under various terms.
(2) Includes FET and the Transmission Companies.

The following table summarizes the borrowing sub-limits for each borrower under the facilities, the limitations on short-term indebtedness applicable to each borrower under current regulatory approvals and applicable statutory and/or charter limitations as of January 31, 2019:

Borrower	FirstEnergy Revolving Credit Facility Sub-Limits	FET Revolving Credit Facility Sub-Limits	Regulatory and Other Short-Term Debt Limitations
		(In millions)	
FE	$ 2,500	$ —	$ — [1]
FET	—	1,000	— [1]
OE	500	—	500 [2]
CEI	500	—	500 [2]
TE	300	—	300 [2]
JCP&L	500	—	500 [2]
ME	500	—	500 [2]
PN	300	—	300 [2]
WP	200	—	200 [2]
MP	500	—	500 [2]
PE	150	—	150 [2]
ATSI	—	500	500 [2]
Penn	100	—	100 [2]
TrAIL	—	400	400 [2]
MAIT	—	400	400 [2]

(1) No limitations.
(2) Includes amounts which may be borrowed under the regulated companies' money pool.

The FE Facility and the FET Facility have $250 million and $100 million, respectively, subject to each borrower's sub-limit, available for the issuance of LOCs (subject to borrowings drawn under the Facilities) expiring up to one year from the date of issuance. The stated amount of outstanding LOCs will count against total commitments available under each of the Facilities and against the applicable borrower's borrowing sub-limit.

The Facilities do not contain provisions that restrict the ability to borrow or accelerate payment of outstanding advances in the event of any change in credit ratings of the borrowers. Pricing is defined in "pricing grids," whereby the cost of funds borrowed under the facilities is related to the credit ratings of the company borrowing the funds, other than the FET Facility, which is based on its subsidiaries' credit ratings. Additionally, borrowings under each of the Facilities are subject to the usual and customary provisions for acceleration upon the occurrence of events of default, including a cross-default for other indebtedness in excess of $100 million.

As of December 31, 2018, the borrowers were in compliance with the applicable debt-to-total-capitalization covenants in each case as defined under the respective Facilities. The minimum interest charge coverage ratio no longer applies following FE's upgrade to an investment grade credit rating.

Term Loans

On October 19, 2018, FE entered into two separate syndicated term loan credit agreements, the first being a $1.25 billion 364-day facility with The Bank of Nova Scotia, as administrative agent, and the lenders identified therein, and the second being a $500 million two-year facility with JPMorgan Chase Bank, N.A., as administrative agent, and the lenders identified therein, respectively, the proceeds of each were used to reduce short-term debt. The term loans contain covenants and other terms and conditions substantially similar to those of the FE Facility described above, including a consolidated debt-to-total-capitalization ratio.

The initial borrowing of $1.75 billion under the new term loans, which took the form of a Eurodollar rate advance, may be converted from time to time, in whole or in part, to alternate base rate advances or other Eurodollar rate advances. Outstanding alternate base rate advances will bear interest at a fluctuating interest rate per annum equal to the sum of an applicable margin for alternate base rate advances determined by reference to FE's reference ratings plus the highest of (i) the administrative agent's publicly-announced "prime rate", (ii) the sum of 1/2 of 1% per annum plus the Federal Funds Rate in effect from time to time and (iii) the rate of interest per annum appearing on a nationally-recognized service such as the Dow Jones Market Service (Telerate) equal to one-month LIBOR on each day plus 1%. Outstanding Eurodollar rate advances will bear interest at LIBOR for interest periods of one week or one, two, three or six months plus an applicable margin determined by reference to FE's reference ratings. Changes in FE's reference ratings would lower or raise its applicable margin depending on whether ratings improved or were lowered, respectively.

FirstEnergy Money Pools

FirstEnergy's utility operating subsidiary companies also have the ability to borrow from each other and FE to meet their short-term working capital requirements. Similar but separate arrangements exist among FirstEnergy's unregulated companies with AE Supply, FE, FET, FEV and certain other unregulated subsidiaries. FESC administers these money pools and tracks surplus funds of FE and the respective regulated and unregulated subsidiaries, as the case may be, as well as proceeds available from bank borrowings. Companies receiving a loan under the money pool agreements must repay the principal amount of the loan, together with accrued interest, within 364 days of borrowing the funds. The rate of interest is the same for each company receiving a loan from their respective pool and is based on the average cost of funds available through the pool. The average interest rate for borrowings in 2018 was 2.26% per annum for the regulated companies' money pool and 2.96% per annum for the unregulated companies' money pools.

Weighted Average Interest Rates

The weighted average interest rates on short-term borrowings outstanding, including borrowings under the FirstEnergy Money Pools, as of December 31, 2018 and 2017, were 3.07% and 3.24%, respectively.

15. ASSET RETIREMENT OBLIGATIONS

FirstEnergy has recognized applicable legal obligations for AROs and their associated cost, primarily for the decommissioning of the TMI-2 nuclear generating facility and environmental remediation, including reclamation of sludge disposal ponds, closure of coal ash disposal sites, underground and above-ground storage tanks and wastewater treatment lagoons. In addition, FirstEnergy has recognized conditional retirement obligations, primarily for asbestos remediation.

JCP&L, ME and PN maintain NDTs that are legally restricted for purposes of settling the TMI-2 nuclear decommissioning ARO. The fair values of the decommissioning trust assets as of December 31, 2018 and 2017, were $790 million and $822 million, respectively.

The following table summarizes the changes to the ARO balances during 2018 and 2017:

ARO Reconciliation	***(In millions)***
Balance, January 1, 2017	$ 581
Transfer of BV-2 liability to NG	(49)
Liabilities settled	(1)
Accretion	39
Balance, December 31, 2017	$ 570
Changes in timing and amount of estimated cash flows	203
Liabilities settled	(1)
Accretion	40
Balance, December 31, 2018	$ 812

During the second quarter of 2017, in connection with NG purchasing the lessor equity interests of the remaining non-affiliated leasehold interests from an owner participant in the Beaver Valley Unit 2 sale leaseback and the expiration of the leases, OE and TE transferred the ARO (approximately $49 million) and NDT assets associated with their leasehold interests to NG.

In April 2015, the EPA finalized regulations for the disposal of CCRs (non-hazardous), establishing national standards for landfill design, structural integrity design and assessment criteria for surface impoundments, groundwater monitoring and protection procedures and other operational and reporting procedures to assure the safe disposal of CCRs from electric generating plants. On September 13, 2017, the EPA announced that it would reconsider certain provisions of the final regulations. On July 17, 2018, the EPA Administrator signed a final rule extending the deadline for certain CCR facilities to cease disposal and commence closure activities, as well as, establishing less stringent groundwater monitoring and protection requirements. On August 21, 2018, the D.C. Circuit remanded sections of the CCR Rule to the EPA to provide additional safeguards for unlined CCR impoundments that are more protective of human health and the environment. AE Supply assessed the changes in timing and closure plan requirements associated with the McElroy's Run impoundment site and increased the ARO by approximately $43 million in the third quarter of 2018.

During the fourth quarter of 2018, based on studies completed by a third-party to reassess the estimated costs and timing to decommission TMI-2, JCP&L, ME and PN increased their ARO by a total of approximately $172 million, which was offset against a regulatory asset. The increase in the ARO resulted primarily from accelerated timing of the estimated cash flows associated with decommissioning.

16. REGULATORY MATTERS

STATE REGULATION

Each of the Utilities' retail rates, conditions of service, issuance of securities and other matters are subject to regulation in the states in which it operates - in Maryland by the MDPSC, in Ohio by the PUCO, in New Jersey by the NJBPU, in Pennsylvania by the PPUC, in West Virginia by the WVPSC and in New York by the NYPSC. The transmission operations of PE in Virginia are subject to certain regulations of the VSCC. In addition, under Ohio law, municipalities may regulate rates of a public utility, subject to appeal to the PUCO if not acceptable to the utility. Further, if any of the FirstEnergy affiliates were to engage in the construction of significant new transmission facilities, depending on the state, they may be required to obtain state regulatory authorization to site, construct and operate the new transmission facility.

The following table summarizes the key terms of distribution rate orders in effect for the Utilities.

Company	Rates Effective	Allowed Debt/Equity	Allowed ROE
CEI	May 2009	51% / 49%	10.5%
ME[1]	January 2017	48.8% / 51.2%	Settled[2]
MP	February 2015	54% / 46%	Settled[2]
JCP&L	January 2017	55% / 45%	9.6%
OE	January 2009	51% / 49%	10.5%
PE-West Virginia	February 2015	54% / 46%	Settled[2]
PE-Maryland	November 1994	48% / 52%	11.9%
PN[1]	January 2017	47.4% / 52.6%	Settled[2]
Penn[1]	January 2017	49.9% / 50.1%	Settled[2]
TE	January 2009	51% / 49%	10.5%
WP[1]	January 2017	49.7% / 50.3%	Settled[2]

[1] Reflects filed debt/equity as final settlement/orders do not specifically include capital structure.

[2] Commission-approved settlement agreements did not disclose ROE rates.

MARYLAND

PE operates under MDPSC approved base rates that were effective as of November 11, 1994. PE also provides SOS pursuant to a combination of settlement agreements, MDPSC orders and regulations, and statutory provisions. SOS supply is competitively procured in the form of rolling contracts of varying lengths through periodic auctions that are overseen by the MDPSC and a third-party monitor. Although settlements with respect to SOS supply for PE customers have expired, service continues in the same manner until changed by order of the MDPSC. PE recovers its costs plus a return for providing SOS.

The EmPOWER Maryland program requires each electric utility to file a plan to reduce electric consumption and demand 0.2% per year, up to the ultimate goal of 2% annual savings, for the duration of the 2018-2020 and 2021-2023 EmPOWER Maryland program cycles, to the extent the MDPSC determines that cost-effective programs and services are available. PE's 2016 starting goal under this requirement was 0.97%. PE's approved 2018-2020 EmPOWER Maryland plan continues and expands upon prior years' programs, and adds new programs, for a projected total cost of $116 million over the three-year period. PE recovers program costs subject to a five-year amortization. Maryland law only allows for the utility to recover lost distribution revenue attributable to energy efficiency or demand reduction programs through a base rate case proceeding, and to date, such recovery has not been sought or obtained by PE.

In 2013, the MDPSC required Maryland electric utilities to submit analyses relating to the costs and benefits of making further system and staffing enhancements in order to attempt to reduce storm outage durations. PE's submitted analysis projected that it would require up to approximately $2.7 billion in infrastructure investments over 15 years to attempt to achieve the quickest level of response for the largest storm projected in MDPSC's scenarios. The MDPSC conducted a hearing September 2014, but has not taken further action on this matter.

On January 19, 2018, PE filed a joint petition along with other utility companies, work group stakeholders and the MDPSC electric vehicle work group leader to implement a statewide electric vehicle portfolio in connection with a 2016 MDPSC proceeding to consider an array of issues relating to electric distribution system design, including matters relating to electric vehicles, distributed energy resources, advanced metering infrastructure, energy storage, system planning, rate design, and impacts on low-income customers. PE proposed an electric vehicle charging infrastructure program at a projected total cost of $12 million, to be recovered over a five-year amortization. On January 14, 2019, the MDPSC approved the petition subject to certain reductions in the scope of the program.

On January 12, 2018, the MDPSC instituted a proceeding to examine the impacts of the Tax Act on the rates and charges of Maryland utilities. PE must track and apply regulatory accounting treatment for the impacts beginning January 1, 2018, and submitted a report to the MDPSC on February 15, 2018, estimating that the Tax Act impacts would be approximately $7 million to $8 million annually for PE's customers. On August 17, 2018, the Staff of the MDPSC filed a reply that recommended the MDPSC instead direct PE to reduce base rates by $6.5 million to reflect reduced federal tax costs pending resolution of PE's upcoming rate case and further direct that PE pay customers a one-time credit for what the Staff estimated were the tax savings to PE through the end of July 2018. On October 5, 2018, the MDPSC issued an order requiring PE to pay a one-time credit for tax savings through September 30, 2018, which totaled approximately $5 million, and reserved all other Tax Act impacts to be resolved in the pending rate case.

On August 24, 2018, PE filed a base rate case with the MDPSC, which it supplemented on October 22, 2018, to update the partially forecasted test year with a full twelve months of actual data. The rate case requested an annual increase in base distribution rates of $19.7 million, plus creation of an EDIS to fund four enhanced service reliability programs. In responding to discovery, PE revised its request for an annual increase in base rates to $17.6 million. The proposed rate increase reflects $7.3 million in annual savings for customers resulting from the recent federal tax law changes. On November 20, 2018, the Staff of the MDPSC filed testimony recommending an increase in base rates of $12.9 million and conditional approval of the EDIS, while the Maryland Office of People's Counsel filed testimony recommending a reduction in rates of $11.1 million and rejection of the EDIS. The evidentiary hearing concluded on January 28, 2019, and a final order is expected by March 23, 2019.

NEW JERSEY

JCP&L operates under NJBPU approved rates that were effective as of January 1, 2017. In addition, on January 25, 2017, the NJBPU approved the acceleration of the amortization of JCP&L's 2012 major storm expenses that are recovered through the SRC in order for JCP&L to achieve full recovery by December 31, 2019. JCP&L provides BGS for retail customers who do not choose a third-party EGS and for customers of third-party EGSs that fail to provide the contracted service. All New Jersey EDCs participate in this competitive BGS procurement process and recover BGS costs directly from customers as a charge separate from base rates.

In December 2017, the NJBPU issued proposed rules to modify its current CTA policy in base rate cases to: (i) calculate savings using a five-year look back from the beginning of the test year; (ii) allocate savings with 75% retained by the company and 25% allocated to rate payers; and (iii) exclude transmission assets of electric distribution companies in the savings calculation, which were published in the NJ Register in the first quarter of 2018. JCP&L filed comments supporting the proposed rulemaking. On January 17, 2019, the NJBPU approved the proposed CTA rules with no changes.

Also in December 2017, the NJBPU approved its IIP rulemaking. The IIP creates a financial incentive for utilities to accelerate the level of investment needed to promote the timely rehabilitation and replacement of certain non-revenue producing components that enhance reliability, resiliency, and/or safety. On July 13, 2018, JCP&L filed an infrastructure plan, JCP&L Reliability Plus, which proposed to accelerate $386.8 million of electric distribution infrastructure investment over four years to enhance the reliability and resiliency of its distribution system and reduce the frequency and duration of power outages. On August 29, 2018, the NJBPU retained the petition for hearing and, on November 22, 2018, issued a procedural schedule. On December 17, 2018, the Division of Rate Counsel recommended a $97 million program, a return on equity of 8.75%, and 5.38% cost of debt. On January 23, 2019, the NJBPU granted JCP&L's request to temporarily suspend procedural schedule in the matter pending settlement discussions. There can be no assurance that a definitive settlement agreement will be reached and, if so, will be approved by the NJBPU.

On January 31, 2018, the NJBPU instituted a proceeding to examine the impacts of the Tax Act on the rates and charges of New Jersey utilities. The NJBPU ordered New Jersey utilities to: (1) defer on their books the impacts of the Tax Act effective January 1, 2018; (2) to file tariffs effective April 1, 2018, reflecting the rate impacts of changes in current taxes; and (3) to file tariffs effective July 1, 2018, reflecting the rate impacts of changes in deferred taxes. On March 2, 2018, JCP&L filed a petition with the NJBPU, which included proposed tariffs for a base rate reduction of $28.6 million effective April 1, 2018, and a rider to reflect $1.3 million in rate impacts of changes in deferred taxes. On March 26, 2018, the NJBPU approved JCP&L's rate reduction effective

April 1, 2018, on an interim basis subject to refund, pending the outcome of this proceeding. The NJBPU, however, did not address refunds and other proposed rider tariffs at such time.

OHIO

The Ohio Companies currently operate under ESP IV through May 31, 2024. ESP IV includes Rider DMR, which provides for the Ohio Companies to collect $132.5 million annually for three years, with the possibility of a two-year extension and is grossed up for federal income taxes, resulting in an approved amount of approximately $168 million annually in 2018 and 2019. Revenues from Rider DMR will be excluded from the significantly excessive earnings test for the initial three-year term but the exclusion will be reconsidered upon application for a potential two-year extension. The PUCO set three conditions for continued recovery under Rider DMR: (1) retention of the corporate headquarters and nexus of operations in Akron, Ohio; (2) no change in control of the Ohio Companies; and (3) a demonstration of sufficient progress in the implementation of grid modernization programs approved by the PUCO. ESP IV also continues a base distribution rate freeze through May 31, 2024. In addition, ESP IV continues the supply of power to non-shopping customers at a market-based price set through an auction process. On February 1, 2019, the Ohio Companies filed with the PUCO an application requesting a two-year extension of Rider DMR at the same amount and conditions.

ESP IV also continues Rider DCR, which supports continued investment related to the distribution system for the benefit of customers, with increased revenue caps of $30 million per year through May 31, 2019; $20 million per year from June 1, 2019 through May 31, 2022; and $15 million per year from June 1, 2022 through May 31, 2024. ESP IV also includes: (1) the collection of lost distribution revenues associated with energy efficiency and peak demand reduction programs; (2) an agreement to file a Grid Modernization Business Plan for PUCO consideration and approval, which was filed in February 2016, and remains pending as part of the grid modernization settlement described below; (3) a goal across FirstEnergy to reduce CO_2 emissions by 90% below 2005 levels by 2045; (4) contributions, totaling $51 million to: (a) fund energy conservation programs, economic development and job retention in the Ohio Companies' service territories; (b) establish a fuel-fund in each of the Ohio Companies' service territories to assist low-income customers; and (c) establish a Customer Advisory Council to ensure preservation and growth of the competitive market in Ohio; and (5) an agreement to file an application to transition to a straight fixed variable cost recovery mechanism for residential customers' base distribution rates, which filing the PUCO denied on June 13, 2018.

Several parties, including the Ohio Companies, filed applications for rehearing regarding the Ohio Companies' ESP IV with the PUCO. On August 16, 2017, the PUCO denied all remaining intervenor applications for rehearing, denied the Ohio Companies' challenges to the modifications to Rider DMR and added a third-party monitor to ensure that Rider DMR funds are spent appropriately. The Ohio Companies then filed an application for rehearing of the PUCO's August 16, 2017 ruling on the issues of the third-party monitor and the ROE calculation for advanced metering infrastructure, which the PUCO denied. In October 2017, the Sierra Club and the OMAEG filed notices of appeal with the Supreme Court of Ohio appealing various PUCO entries on their applications for rehearing. The Ohio Companies intervened in the appeal, and additional parties subsequently filed notices of appeal with the Supreme Court of Ohio challenging various PUCO entries on their applications for rehearing. On September 26, 2018, the Supreme Court of Ohio denied a July 30, 2018 joint motion filed by the OCC, the NOAC, and the OMAEG to stay the portions of the PUCO's orders and entries under appeal that authorized Rider DMR. Oral argument on the appeals was held on January 9, 2019.

Under Ohio law, the Ohio Companies are required to implement energy efficiency programs that achieve certain annual energy savings and total peak demand reductions. The Ohio Companies' 2017-2019 plan, as proposed in April 2016, includes a portfolio of energy efficiency programs targeted to a variety of customer segments, including residential customers, low income customers, small commercial customers, large commercial and industrial customers and governmental entities. In December 2016, the Ohio Companies filed a Stipulation and Recommendation with several parties that contained changes to the plan and a decrease in the plan costs. The Ohio Companies anticipate the cost of the plans will be approximately $268 million over the life of the portfolio plans and such costs are expected to be recovered through the Ohio Companies' existing rate mechanisms. On November 21, 2017, the PUCO issued an order that approved the proposed plans with several modifications, including a cap on the Ohio Companies' collection of program costs and shared savings set at 4% of the Ohio Companies' total sales to customers. On December 21, 2017, the Ohio Companies filed an application for rehearing challenging the PUCO's modifications, which the PUCO denied on January 10, 2018. On March 12, 2018, the Ohio Companies appealed to the Supreme Court of Ohio challenging the PUCO's imposition of a 4% cost cap. Various other parties also appealed challenging various PUCO entries on their applications for rehearing. Oral argument on the appeals is scheduled for February 20, 2019.

Ohio law requires electric utilities and electric service companies in Ohio to serve part of their load from renewable energy resources measured by an annually increasing percentage, which in 2017 was 3.5%, and increases 1% each year through 2026 (to 12.5%) and shall remain at 12.5% in 2027 and each year thereafter. The Ohio Companies conducted RFPs in 2009, 2010 and 2011 to secure RECs to help meet these renewable energy requirements. In September 2011, the PUCO opened a docket to review the Ohio Companies' alternative energy recovery rider through which the Ohio Companies recover the costs of acquiring these RECs. In August 2013, the PUCO approved the Ohio Companies' REC acquisitions except for certain purchases arising from one auction and directed the Ohio Companies to credit non-shopping customers in the amount of $43.4 million, plus interest, on the basis that the Ohio Companies did not prove such purchases were prudent. Following appeals, on January 24, 2018, the Supreme Court of Ohio reversed the PUCO order finding that the order violated the rule against retroactive ratemaking. After the OCC and ELPC filed a motion for reconsideration, to which the Ohio Companies responded in opposition, on April 25, 2018, the Supreme Court of Ohio denied the motion for reconsideration. As a result, in the second quarter of 2018, the Ohio Companies recognized a pre-tax benefit

to earnings (within the Amortization (deferral) of regulatory assets, net line on the Consolidated Statement of Income (Loss)) of approximately $72 million to reverse the liability associated with the PUCO opinion and order.

On December 1, 2017, the Ohio Companies filed an application with the PUCO for approval of a DPM Plan. The DPM Plan is a portfolio of approximately $450 million in distribution platform investment projects, which are designed to modernize the Ohio Companies' distribution grid, prepare it for further grid modernization projects, and provide customers with immediate reliability benefits. On November 9, 2018, the Ohio Companies filed a settlement agreement that provides for the implementation of the first phase of grid modernization plans, including the investment of $516 million over three years to modernize the Ohio Companies' electric distribution system, and for all tax savings associated with the Tax Act, discussed below, to flow back to customers. On January 25, 2019, the Ohio Companies filed a supplemental settlement agreement that keeps intact the provisions of the settlement described above and adds further customer benefits and protections, which broadened support for the settlement. The settlement has broad support, including PUCO Staff, the OCC, representatives of industrial and commercial customers, a low-income advocate, environmental advocates, hospitals, competitive generation suppliers and other parties. The PUCO conducted a hearing and the settlement agreement remains subject to PUCO approval.

On January 10, 2018, the PUCO opened a case to consider the impacts of the Tax Act and determine the appropriate course of action to pass benefits on to customers. The Ohio Companies, effective January 1, 2018, were required to establish a regulatory liability for the estimated reduction in federal income tax resulting from the Tax Act, and filed comments on February 15, 2018, explaining that customers will save nearly $40 million annually as a result of updating tariff riders for the tax rate changes and that the Ohio Companies' base distribution rates are not impacted by the Tax Act changes because they are frozen through May 2024. On October 24, 2018, the PUCO entered an Order in its investigation into the impacts of the Tax Act on Ohio's utilities directing that by January 1, 2019, all Ohio rate-regulated utility companies, unless ordered otherwise, file applications not for an increase in rates to reflect the impact of the Tax Act on each specific utility's current rates. On October 30, 2018, the Ohio Companies filed an application to open a new proceeding for the implementation of matters relating to the impact of the Tax Act. As discussed further above, on November 9, 2018, the Ohio Companies filed a settlement agreement that provides for all tax savings associated with the Tax Act to flow back to customers and for the implementation of the first phase of grid modernization plans. As part of the agreement, the Ohio Companies also filed an application for approval of a rider to return the remaining tax savings to customers following PUCO approval of the settlement. On December 19, 2018, the PUCO upheld its January 10, 2018 ruling that utilities should be required to establish a deferred tax liability, effective January 1, 2018, in response to the Tax Act. On January 25, 2019, the Ohio Companies filed a supplemental settlement agreement that keeps intact the provisions of the settlement described above and adds further customer benefits and protections, which broadened support for the settlement. The PUCO conducted a hearing and the settlement agreement remains subject to PUCO approval.

PENNSYLVANIA

The Pennsylvania Companies operate under rates approved by the PPUC, effective as of January 27, 2017. The Pennsylvania Companies operate under DSPs for the June 1, 2017 through May 31, 2019 delivery period, which provide for the competitive procurement of generation supply for customers who do not choose an alternative EGS or for customers of alternative EGSs that fail to provide the contracted service. Under the DSPs, the supply will be provided by wholesale suppliers through a mix of 12 and 24-month energy contracts, as well as one RFP for 2-year SREC contracts for ME, PN and Penn. The DSPs include modifications to the Pennsylvania Companies' POR programs in order to reduce the level of uncollectible expense the Pennsylvania Companies experience associated with alternative EGS charges.

The Pennsylvania Companies' DSPs for the June 1, 2019 through May 31, 2023 delivery period were approved by the PPUC in September 2018. Under the 2019-2023 DSPs, the supply will be provided by wholesale suppliers through a mix of 3, 12 and 24-month energy contracts, as well as two RFPs for 2-year SREC contracts for ME, PN and Penn. The 2019-2023 DSPs also include modifications to the Pennsylvania Companies' POR programs in order to continue their clawback pilot program as a long-term, permanent program term, and modifications to the Pennsylvania Companies' customer class definitions to allow for the introduction of hourly priced default service to customers at or above 100kW. The PPUC directed a working group to further discuss the implementation of customer assistance program shopping limitations and appropriate scripting for the Pennsylvania Companies' customer referral programs, and in November 2018, issued a subsequent order to approve additional customer assistance program shopping parameters and further limit the scope of the working group discussion. On December 21, 2018, the PPUC issued a tentative order proposing a model to incorporate the directed shopping restrictions. Comments on the proposal were filed January 22, 2019.

Pursuant to Pennsylvania's EE&C legislation in Act 129 of 2008 and PPUC orders, Pennsylvania EDCs implement energy efficiency and peak demand reduction programs. The Pennsylvania Companies' Phase III EE&C plans for the June 2016 through May 2021 period, which were approved in March 2016, with expected costs up to $390 million, are designed to achieve the targets established in the PPUC's Phase III Final Implementation Order with full recovery through the reconcilable EE&C riders.

Pennsylvania EDCs may establish a DSIC to recover costs of infrastructure improvements and costs related to highway relocation projects with PPUC approval. LTIIPs outlining infrastructure improvement plans for PPUC review and approval must be filed prior to approval of a DSIC. On June 14, 2017, the PPUC approved modified LTIIPs for ME, PN and Penn for the remaining years of 2017 through 2020 to provide additional support for reliability and infrastructure investments. On September 20, 2018, following a periodic review of the LTIIPs as required by regulation once every five years, the PPUC entered an Order concluding that the

Pennsylvania Companies have substantially adhered to the schedules and expenditures outlined in their LTIIPs, but that changes to the LTIIPs as designed are necessary to maintain and improve reliability and directed the Pennsylvania Companies to file modified or new LTIIPs. On January 18, 2019, the Pennsylvania Companies filed modifications to their current LTIIPs that would terminate those LTIIPs at the end of 2019, and proposed revised LTIIP spending in 2019 of $44.52 million by ME, $24.72 million by PN, $26.06 million by Penn and $50.85 million by WP. The Pennsylvania Companies also committed to making filings later in 2019, which would propose new LTIIPs for the 2020 through 2024 period.

The Pennsylvania Companies' approved DSIC riders for quarterly cost recovery went into effect July 1, 2016, subject to hearings and refund or reallocation among customer classes. In the January 19, 2017 order approving the Pennsylvania Companies' general rate cases, the PPUC added an additional issue to the DSIC proceeding to include whether ADIT should be included in DSIC calculations. On February 2, 2017, the parties to the DSIC proceeding submitted a Joint Settlement to the ALJ that resolved the issues that were pending from the order issued on June 9, 2016. On April 19, 2018, the PPUC approved the Joint Settlement without modification and reversed the ALJ's previous decision that would have required the Pennsylvania Companies to reflect all federal and state income tax deductions related to DSIC-eligible property in currently effective DSIC rates. On May 21, 2018, the Pennsylvania OCA filed an appeal with the Pennsylvania Commonwealth Court of the PPUC's decision of April 19, 2018. On June 11, 2018, the Pennsylvania Companies filed a Notice of Intervention in the Pennsylvania OCA's appeal to the Commonwealth Court. Briefing is complete and oral argument is scheduled for June 3, 2019.

On February 12, 2018, the PPUC initiated a proceeding to determine the effects of the Tax Act on the tax liability of utilities and the feasibility of reflecting such impacts in rates charged to customers. On March 9, 2018, the Pennsylvania Companies submitted their calculation of the net annual effect of the Tax Act on income tax expense and rate base to be $37 million for ME, $40 million for PN, $9 million for Penn, and $30 million for WP. The Pennsylvania Companies also filed comments proposing that rates be adjusted to reflect the tax rate changes prospectively from the date of a final PPUC order via a reconcilable rider, with the amount that would otherwise accrue between January 1, 2018 and the date of a final order being used to invest in the Pennsylvania Companies' infrastructure. On March 15, 2018, the PPUC issued a Temporary Rates Order making the Pennsylvania Companies' rates temporary and subject to refund for six months. On May 17, 2018, the PPUC issued orders directing that the Pennsylvania Companies implement a reconcilable negative surcharge mechanism in order to refund to customers the net effect of the Tax Act for the period July 1, 2018 through December 31, 2018, to be prospectively updated for new rates effective January 1, 2019. The Pennsylvania Companies were also directed to establish a regulatory liability for the net impact of the Tax Act for the period of January 1, 2018 through June 30, 2018. On June 14, 2018, the PPUC issued an order revising this directive such that the Pennsylvania Companies must instead establish accounts to track tax savings for the period January 1, 2018 through March 14, 2018, and record regulatory liabilities associated with tax savings for only the period March 15, 2018 through June 30, 2018. The cumulative value of the tracked amounts and the regulatory liability is expected to amount to $12 million for ME, $13 million for PN, $3 million for Penn, and $10 million for WP. These amounts are expected to be addressed in the Pennsylvania Companies' next available rate proceedings, or independent filings to be made within three years, whichever comes sooner. The Pennsylvania Companies filed voluntary surcharges on June 1, 2018, to adjust rates for the reduced tax rate, which were effective for bills rendered starting July 1, 2018. For the first six-month period, the surcharge returned to customers was approximately $22 million for ME, $23 million for PN, $6 million for Penn, and $18 million for WP.

WEST VIRGINIA

MP and PE provide electric service to all customers through traditional cost-based, regulated utility ratemaking and operates under rates approved by the WVPSC effective February 2015. MP and PE recover net power supply costs, including fuel costs, purchased power costs and related expenses, net of related market sales revenue through the ENEC. MP's and PE's ENEC rate is updated annually.

In September 2016, the WVPSC approved the Phase II energy efficiency program for MP and PE as reflected in a unanimous settlement, which included three energy efficiency programs to meet the Phase II requirement of energy efficiency reductions of 0.5% of 2013 distribution sales for the January 1, 2017 through May 31, 2018 period. On December 15, 2017, the WVPSC approved MP's and PE's proposed annual decrease in their EE&C rates, effective January 1, 2018, which is not material to FirstEnergy. This Phase II energy efficiency program ended May 31, 2018.

Previously, AE Supply was the winning bidder of a December 2016 RFP to address MP's generation shortfall and on March 6, 2017, MP and AE Supply signed an asset purchase agreement for MP to acquire AE Supply's Pleasants Power Station (1,300 MWs), subject to customary and other closing conditions, including regulatory approvals. In January 2018, FERC issued an order denying authorization for the transaction and the WVPSC issued an order approving the transfer of Pleasants Power Station conditioned on MP assuming significant commodity risk. Based on the adverse FERC ruling and the conditions included in the WVPSC order, MP and AE Supply terminated the asset purchase agreement.

On August 31, 2018, MP and PE filed a $100.9 million decrease in their ENEC rates proposed to be effective January 1, 2019, which included a $25.6 million annual decrease impact associated with the settlement regarding the impact of the Tax Act on West Virginia rates, as noted below. Additionally, the August 31, 2018 filing included an elimination of the Energy Efficiency Cost Rate Surcharge effective January 1, 2019, equating to an additional $2.1 million decrease. The rate decreases represent an approximate 7.2% annual decrease in rates versus those in effect on August 31, 2018. A unanimous settlement was filed with the WVPSC on

November 20, 2018, and a hearing was held on November 27, 2018. An order adopting the settlement in full without modification was issued on January 2, 2019.

On January 3, 2018, the WVPSC initiated a proceeding to investigate the effects of the Tax Act on the revenue requirements of utilities. MP and PE must track the tax savings resulting from the Tax Act on a monthly basis, effective January 1, 2018. On January 26, 2018, the WVPSC issued an order clarifying that regulatory accounting should be implemented as of January 1, 2018, including the recording of any regulatory liabilities resulting from the Tax Act. MP and PE filed written testimony on May 30, 2018, explaining the impact of the Tax Act on federal income tax and revenue requirements and showing an annual rate impact of $26.2 million. MP and PE, the Staff of the WVPSC, the WV Consumer Advocate and a coalition of industrial customers entered into a settlement agreement on August 23, 2018, to have $25.6 million in rate reductions flow through to customers beginning September 1, 2018, and to defer to the next base rate case (or a separate proceeding if a base rate case is not filed by August 31, 2020) the amount and classification of the excess ADITs resulting from the Tax Act and the issue of whether MP and PE should be required to credit to customers any of the reduced income tax expense occurring between January 1, 2018 and August 31, 2018. The WVPSC approved the settlement on August 24, 2018.

RELIABILITY MATTERS

Federally-enforceable mandatory reliability standards apply to the bulk electric system and impose certain operating, record-keeping and reporting requirements on the Utilities, AGC, AE Supply, and the Transmission Companies. NERC is the ERO designated by FERC to establish and enforce these reliability standards, although NERC has delegated day-to-day implementation and enforcement of these reliability standards to eight regional entities, including RFC. All of FirstEnergy's facilities are located within the RFC region. FirstEnergy actively participates in the NERC and RFC stakeholder processes, and otherwise monitors and manages its companies in response to the ongoing development, implementation and enforcement of the reliability standards implemented and enforced by RFC.

FirstEnergy believes that it is in compliance with all currently-effective and enforceable reliability standards. Nevertheless, in the course of operating its extensive electric utility systems and facilities, FirstEnergy occasionally learns of isolated facts or circumstances that could be interpreted as excursions from the reliability standards. If and when such occurrences are found, FirstEnergy develops information about the occurrence and develops a remedial response to the specific circumstances, including in appropriate cases “self-reporting” an occurrence to RFC. Moreover, it is clear that NERC, RFC and FERC will continue to refine existing reliability standards as well as to develop and adopt new reliability standards. Any inability on FirstEnergy's part to comply with the reliability standards for its bulk electric system could result in the imposition of financial penalties, and obligations to upgrade or build transmission facilities, that could have a material adverse effect on its financial condition, results of operations and cash flows.

FERC REGULATORY MATTERS

Under the FPA, FERC regulates rates for interstate wholesale sales, transmission of electric power, accounting and other matters, including construction and operation of hydroelectric projects. With respect to their wholesale services and rates, the Utilities, AE Supply, AGC, and the Transmission Companies are subject to regulation by FERC. FERC regulations require JCP&L, MP, PE, WP and the Transmission Companies to provide open access transmission service at FERC-approved rates, terms and conditions. Transmission facilities of JCP&L, MP, PE, WP and the Transmission Companies are subject to functional control by PJM and transmission service using their transmission facilities is provided by PJM under the PJM Tariff.

The following table summarizes the key terms of rate orders in effect for transmission customer billings for FirstEnergy's transmission owner entities:

Company	Rates Effective	Capital Structure	Allowed ROE
ATSI	January 1, 2015	Actual (13 month average)	10.38%
JCP&L	June 1, 2017	Settled[1]	Settled[1]
MP	March 21, 2018[2]	Settled[1]	Settled[1]
PE	March 21, 2018[2]	Settled[1]	Settled[1]
WP	March 21, 2018[2]	Settled[1]	Settled[1]
MAIT	July 1, 2017	50% / 50% (hypothetical)[3]	10.3%
TrAIL	July 1, 2008	Actual (year-end)	12.7% (TrAIL the Line & Black Oak SVC) 11.7% (All other projects)

[1] FERC-approved settlement agreements did not specify.
[2] See FERC Actions on Tax Act below.
[3] Effective January 2019, converts to lower of actual (13 month average) or 60%.

FERC regulates the sale of power for resale in interstate commerce in part by granting authority to public utilities to sell wholesale power at market-based rates upon showing that the seller cannot exert market power in generation or transmission or erect barriers to entry into markets. The Utilities and AE Supply each have been authorized by FERC to sell wholesale power in interstate commerce

at market-based rates and have a market-based rate tariff on file with FERC, although major wholesale purchases remain subject to regulation by the relevant state commissions.

Federally-enforceable mandatory reliability standards apply to the bulk electric system and impose certain operating, record-keeping and reporting requirements on the Utilities, AE Supply, and the Transmission Companies. NERC is the ERO designated by FERC to establish and enforce these reliability standards, although NERC has delegated day-to-day implementation and enforcement of these reliability standards to eight regional entities, including RFC. All of the facilities that FirstEnergy operates are located within the RFC region. FirstEnergy actively participates in the NERC and RFC stakeholder processes, and otherwise monitors and manages its companies in response to the ongoing development, implementation and enforcement of the reliability standards implemented and enforced by RFC.

FirstEnergy believes that it is in compliance with all currently-effective and enforceable reliability standards. Nevertheless, in the course of operating its extensive electric utility systems and facilities, FirstEnergy occasionally learns of isolated facts or circumstances that could be interpreted as excursions from the reliability standards. If and when such occurrences are found, FirstEnergy develops information about the occurrence and develops a remedial response to the specific circumstances, including in appropriate cases “self-reporting” an occurrence to RFC. Moreover, it is clear that NERC, RFC and FERC will continue to refine existing reliability standards as well as to develop and adopt new reliability standards. Any inability on FirstEnergy's part to comply with the reliability standards for its bulk electric system could result in the imposition of financial penalties, or obligations to upgrade or build transmission facilities, that could have a material adverse effect on its financial condition, results of operations and cash flows.

PJM Transmission Rates

PJM and its stakeholders have been debating the proper method to allocate costs for a certain class of new transmission facilities since 2005. While FirstEnergy and other parties advocated for a traditional "beneficiary pays" (or usage based) approach, others advocated for “socializing” the costs on a load-ratio share basis, where each customer in the zone would pay based on its total usage of energy within PJM. On May 31, 2018, FERC issued an order approving a settlement agreement among various parties, including ATSI and the Utilities, agreeing to apply a combined usage based/socialization approach to cost allocation for charges to transmission customers in the PJM Region for transmission projects operating at or above 500 kV. For historical transmission costs prior to January 1, 2016, the settlement agreement provides a “black-box” schedule of credits to and payments from customers across PJM’s transmission zones. From January 1, 2016 forward, PJM will collect a charge for the revenue requirement associated with each transmission enhancement through a “50/50” calculation, with 50% based on a load-ratio share and the other 50% solution-based distribution factor (DFAX) hybrid method. As a result of the settlement, FirstEnergy recorded a pre-tax benefit of approximately $115 million in 2018 (within the Other operating expenses line on the Consolidated Statement of Income), relating to the amount of refund the Ohio Companies will receive and retain from PJM, of which $73 million is associated with the "black box" calculation of historical transmission costs prior to January 1, 2016, and $42 million is associated with the "50/50" calculation of historical transmission costs from January 1, 2016 to June 30, 2018. PJM implemented the settlement for transmission service in August 2018. Requests for rehearing or clarification of FERC's May 31, 2018, orders and related responses remain pending before FERC. FirstEnergy does not expect a material impact from implementation of the settlement agreement going forward.

RTO Realignment

On June 1, 2011, ATSI and the ATSI zone transferred from MISO to PJM. While many of the matters involved with the move have been resolved, FERC denied recovery under ATSI's transmission rate for certain charges that collectively can be described as "exit fees" and certain other transmission cost allocation charges totaling approximately $78.8 million until such time as ATSI submits a cost/benefit analysis demonstrating net benefits to customers from the transfer to PJM. Subsequently, FERC rejected a proposed settlement agreement to resolve the exit fee and transmission cost allocation issues, stating that its action is without prejudice to ATSI submitting a cost/benefit analysis demonstrating that the benefits of the RTO realignment decisions outweigh the exit fee and transmission cost allocation charges. In a subsequent order, FERC affirmed its prior ruling that ATSI must submit the cost/benefit analysis. ATSI is evaluating the cost/benefit approach.

Separately, FirstEnergy joined certain other PJM TOs in a protest of MISO's proposal to allocate MVP costs to energy transactions that cross MISO's borders into the PJM Region. On September 20, 2018, FERC denied rehearing with respect to its 2016 order regarding allocation of MVP costs and affirmed and clarified its prior decision that MISO may allocate MVP costs to PJM customers for power withdrawals from MISO to PJM as such exports occur.

MAIT Transmission Formula Rate

MAIT previously submitted an application to FERC requesting authorization to implement a forward-looking formula transmission rate to recover and earn a return on transmission assets effective February 1, 2017. Following various protests to the proposed MAIT formula transmission rate, on March 10, 2017, FERC issued an order accepting the MAIT formula transmission rate for filing, suspending the formula transmission rate for five months to become effective July 1, 2017, and establishing hearing and settlement judge procedures. On May 21, 2018, FERC issued an order accepting a settlement agreement as filed by MAIT and certain parties, without conditions. The settlement agreement provides for certain changes to MAIT's formula rate, including changing MAIT's ROE from 11% to 10.3%, setting the recovery amount for certain regulatory assets, and establishing that MAIT's capital structure will not

exceed 60% equity over the period ending December 31, 2021. The settlement agreement further provides that the ROE and the 60% cap on the equity component of MAIT's capital structure will remain in effect unless changed pursuant to section 205 or 206 of the FPA provided the effective date for any change shall be no earlier than January 1, 2022. Refunds for the difference between the filed rate and the settlement rate will be handled through MAIT's true-up process.

JCP&L Transmission Formula Rate

In October 2016, after withdrawing its request to the NJBPU to transfer its transmission assets to MAIT, JCP&L submitted an application to FERC requesting authorization to implement a forward-looking formula transmission rate to recover and earn a return on transmission assets effective January 1, 2017. Following various protests to the proposed formula transmission rate, on March 10, 2017, FERC issued an order accepting the JCP&L formula transmission rate for filing, suspending the transmission rate for five months to become effective June 1, 2017, and establishing hearing and settlement judge procedures. On February 20, 2018, FERC issued an order accepting a settlement agreement filed by JCP&L and certain parties, with an effective date of June 1, 2017. The settlement agreement provides for a $135 million stated annual revenue requirement for Network Integration Transmission Service and an average of $20 million stated annual revenue requirement for certain projects listed on the PJM Tariff where the costs are allocated in part beyond the JCP&L transmission zone within the PJM Region. The revenue requirements are subject to a moratorium on additional revenue requirements proceedings through December 31, 2019, other than limited filings to seek recovery for certain additional costs. Refunds for the difference between the filed rate and the settlement rate were paid out ratably in 2018.

FERC Actions on Tax Act

On March 15, 2018, FERC took action to address the impact of the Tax Act on FERC-jurisdictional rates, including transmission and electric wholesale rates. FERC directed MP, PE and WP to either submit a joint filing to adjust their stated transmission rates to address the impact of the Tax Act changes in effective tax rate, or to “show cause” as to why such action is not required. FERC established a refund effective date of March 21, 2018, for any refunds as a result of the change in tax rate. On May 14, 2018, MP, PE and WP submitted revisions to their joint stated transmission rate to reflect the reduction in the federal corporate income tax rate. The revisions reduced the stated rate by 6.70%. FERC issued an order on November 15, 2018, accepting the revisions without modifications or conditions.

Also, on March 15, 2018, FERC issued a Notice of Inquiry seeking information regarding whether and how FERC should address possible changes to ADIT and bonus depreciation as a result of the Tax Act. Such possible changes could impact FERC-jurisdictional rates, including transmission rates. On November 15, 2018, FERC issued a NOPR suggesting mechanisms to revise transmission rates to address the Tax Act’s effect on ADIT. Specifically, FERC proposed utilities with transmission formula rates would include mechanisms to (i) deduct any excess ADIT from or add any deficient ADIT to their rate bases; (ii) raise or lower their income tax allowances by any amortized excess or deficient ADIT; and (iii) incorporate a new permanent worksheet into their rates that will annually track information related to excess or deficient ADIT. Utilities with transmission stated rates would determine the amount of excess and deferred income tax caused by the reduced federal corporate income tax rate and return or recover this amount to or from customers. To assist with implementation of the proposed rule, FERC also issued on November 15, 2018, a policy statement providing accounting and ratemaking guidance for treatment of ADIT for all FERC-jurisdictional public utilities. The policy statement also addresses the accounting and ratemaking treatment of ADIT following the sale or retirement of an asset after December 31, 2017. FESC, on behalf of its affiliated transmission owners, supported comments submitted by Edison Electric Institute requesting additional clarification on the ratemaking and accounting treatment for ADIT in formula and stated transmission rates. FERC's final rule remains pending.

Transmission ROE Methodology

In June 2014, FERC issued Opinion No. 531 revising its approach for calculating the discounted cash flow element of FERC’s ROE methodology and announcing the potential for a qualitative adjustment to the ROE methodology results. Parties appealed to the D.C. Circuit, and on April 14, 2017, that court issued a decision vacating FERC’s order and remanding the matter to FERC for further review. On October 16, 2018, FERC issued its order on remand, in which it proposed a revised ROE methodology. Specifically, in complaint proceedings alleging that an existing ROE is not just and reasonable, FERC proposes to rely on three financial models-discounted cash flow, capital-asset pricing, and expected earnings-to establish a composite zone of reasonableness to identity a range of just and reasonable ROEs. FERC then will utilize the transmission utility’s risk relative to other utilities within that zone of reasonableness to assign the transmission utility to one of three quartiles within the zone. FERC would take no further action (i.e., dismiss the complaint) if the existing ROE falls within the identified quartile. However, if the ROE falls outside the quartile, FERC would deem the existing ROE presumptively unjust and unreasonable and would determine the replacement ROE. FERC would add a fourth financial model risk premium to the analysis to calculate a ROE based on the average point of central tendency for each of the four financial models. FERC established a paper hearing on how the new methodology should apply to the remanded proceedings. FirstEnergy is monitoring the proceedings.

17. COMMITMENTS, GUARANTEES AND CONTINGENCIES

NUCLEAR INSURANCE

JCP&L, ME and PN maintain property damage insurance provided by NEIL for their interest in the retired TMI- 2 nuclear facility, a permanently shut down and defueled facility. Under these arrangements, up to $150 million of coverage for decontamination costs, decommissioning costs, debris removal and repair and/or replacement of property is provided. JCP&L, ME and PN pay annual premiums and are subject to retrospective premium assessments of up to approximately $1.2 million during a policy year.

JCP&L, ME and PN intend to maintain insurance against nuclear risks as long as it is available. To the extent that property damage, decontamination, decommissioning, repair and replacement costs and other such costs arising from a nuclear incident at any of JCP&L, ME or PN's plants exceed the policy limits of the insurance in effect with respect to that plant, to the extent a nuclear incident is determined not to be covered by JCP&L, ME or PN's insurance policies, or to the extent such insurance becomes unavailable in the future, JCP&L, ME or PN would remain at risk for such costs.

The Price-Anderson Act limits public liability relative to a single incident at a nuclear power plant. In connection with TMI-2, JCP&L, ME and PN carry the required ANI third party liability coverage and also have coverage under a Price Anderson indemnity agreement issued by the NRC. The total available coverage in the event of a nuclear incident is $560 million, which is also the limit of public liability for any nuclear incident involving TMI-2.

GUARANTEES AND OTHER ASSURANCES

FirstEnergy has various financial and performance guarantees and indemnifications which are issued in the normal course of business. These contracts include performance guarantees, stand-by letters of credit, debt guarantees, surety bonds and indemnifications. FirstEnergy enters into these arrangements to facilitate commercial transactions with third parties by enhancing the value of the transaction to the third party.

As of December 31, 2018, outstanding guarantees and other assurances aggregated approximately $1.7 billion, consisting of guarantees on behalf of FES and FENOC ($345 million), parental guarantees on behalf of its consolidated subsidiaries' guarantees ($1.0 billion), other guarantees ($190 million) and other assurances ($140 million). FirstEnergy has also committed to provide certain additional guarantees to the FES Debtors for retained environmental liabilities of AE Supply related to the Pleasants Power Station and McElroy's Run CCR disposal facility as part of the settlement agreement in connection with the FES Bankruptcy.

COLLATERAL AND CONTINGENT-RELATED FEATURES

In the normal course of business, FE and its subsidiaries routinely enter into physical or financially settled contracts for the sale and purchase of electric capacity, energy, fuel and emission allowances. Certain bilateral agreements and derivative instruments contain provisions that require FE or its subsidiaries to post collateral. This collateral may be posted in the form of cash or credit support with thresholds contingent upon FE's or its subsidiaries' credit rating from each of the major credit rating agencies. The collateral and credit support requirements vary by contract and by counterparty. The incremental collateral requirement allows for the offsetting of assets and liabilities with the same counterparty, where the contractual right of offset exists under applicable master netting agreements.

Bilateral agreements and derivative instruments entered into by FE and its subsidiaries have margining provisions that require posting of collateral. Based on AE Supply's power portfolio exposure as of December 31, 2018, AE Supply has posted no collateral. The Utilities and Transmission Companies have posted collateral totaling $2 million.

These credit-risk-related contingent features, or the margining provisions within bilateral agreements, stipulate that if the subsidiary were to be downgraded or lose its investment grade credit rating (based on its senior unsecured debt rating), it would be required to provide additional collateral. Depending on the volume of forward contracts and future price movements, higher amounts for margining, which is the ability to secure additional collateral when needed, could be required. The following table discloses the potential additional credit rating contingent contractual collateral obligations as of December 31, 2018:

Potential Collateral Obligations	AE Supply	Utilities and FET	FE	Total
		(In millions)		
Contractual Obligations for Additional Collateral				
At Current Credit Rating	$ 1	$ —	$ —	$ 1
Upon Further Downgrade	—	62	—	62
Surety Bonds (Collateralized Amount)[1]	1	59	246	306
Total Exposure from Contractual Obligations	$ 2	$ 121	$ 246	$ 369

Surety Bonds are not tied to a credit rating. Surety Bonds' impact assumes maximum contractual obligations (typical obligations require 30 days to cure). FE provides credit support for FG surety bonds for $169 million and $31 million for the benefit of the PA DEP with respect to LBR CCR impoundment closure and post-closure activities and the Hatfield's Ferry CCR disposal site, respectively.

OTHER COMMITMENTS AND CONTINGENCIES

FE is a guarantor under a $300 million syndicated senior secured term loan facility due March 3, 2020, under which Global Holding's outstanding principal balance is $190 million as of December 31, 2018. In addition to FE, Signal Peak, Global Rail, Global Mining Group, LLC and Global Coal Sales Group, LLC, each being a direct or indirect subsidiary of Global Holding, continue to provide their joint and several guaranties of the obligations of Global Holding under the facility.

In connection with the facility, 69.99% of Global Holding's direct and indirect membership interests in Signal Peak, Global Rail and their affiliates along with FEV's and WMB Marketing Ventures, LLC's respective 33-1/3% membership interests in Global Holding, are pledged to the lenders under the current facility as collateral.

ENVIRONMENTAL MATTERS

Various federal, state and local authorities regulate FirstEnergy with regard to air and water quality and other environmental matters. Pursuant to a March 28, 2017 executive order, the EPA and other federal agencies are to review existing regulations that potentially burden the development or use of domestically produced energy resources and appropriately suspend, revise or rescind those that unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with the law. FirstEnergy cannot predict the timing or ultimate outcome of any of these reviews or how any future actions taken as a result thereof, in particular with respect to existing environmental regulations, may materially impact its business, results of operations, cash flows and financial condition.

Compliance with environmental regulations could have a material adverse effect on FirstEnergy's earnings, cash flow and competitive position to the extent that FirstEnergy competes with companies that are not subject to such regulations and, therefore, do not bear the risk of costs associated with compliance, or failure to comply, with such regulations.

Clean Air Act

FirstEnergy complies with SO_2 and NOx emission reduction requirements under the CAA and SIP(s) by burning lower-sulfur fuel, utilizing combustion controls and post-combustion controls and/or using emission allowances.

CSAPR requires reductions of NOx and SO_2 emissions in two phases (2015 and 2017), ultimately capping SO_2 emissions in affected states to 2.4 million tons annually and NOx emissions to 1.2 million tons annually. CSAPR allows trading of NOx and SO_2 emission allowances between power plants located in the same state and interstate trading of NOx and SO_2 emission allowances with some restrictions. The D.C. Circuit ordered the EPA on July 28, 2015, to reconsider the CSAPR caps on NOx and SO_2 emissions from power plants in 13 states, including Ohio, Pennsylvania and West Virginia. This follows the 2014 U.S. Supreme Court ruling generally upholding the EPA's regulatory approach under CSAPR, but questioning whether the EPA required upwind states to reduce emissions by more than their contribution to air pollution in downwind states. The EPA issued a CSAPR update rule on September 7, 2016, reducing summertime NOx emissions from power plants in 22 states in the eastern U.S., including Ohio, Pennsylvania and West Virginia, beginning in 2017. Various states and other stakeholders appealed the CSAPR update rule to the D.C. Circuit in November and December 2016. On September 6, 2017, the D.C. Circuit rejected the industry's bid for a lengthy pause in the litigation and set a briefing schedule. Depending on the outcome of the appeals, the EPA's reconsideration of the CSAPR update rule and how the EPA and the states ultimately implement CSAPR, the future cost of compliance may be material and changes to FirstEnergy's operations may result.

The EPA tightened the primary and secondary NAAQS for ozone from the 2008 standard levels of 75 PPB to 70 PPB on October 1, 2015. The EPA stated the vast majority of U.S. counties will meet the new 70 PPB standard by 2025 due to other federal and state rules and programs but on April 30, 2018, the EPA designated fifty-one areas in twenty-two states as non-attainment; however, FirstEnergy has no power plants operating in those areas. States have roughly three years to develop implementation plans to attain the new 2015 ozone NAAQS. Depending on how the EPA and the states implement the new 2015 ozone NAAQS, the future cost of compliance may be material and changes to FirstEnergy's operations may result. In August 2016, the State of Delaware filed a CAA Section 126 petition with the EPA alleging that the Harrison generating facility's NOx emissions significantly contribute to Delaware's inability to attain the ozone NAAQS. The petition sought a short-term NOx emission rate limit of 0.125 lb/mmBTU over an averaging period of no more than 24 hours. In November 2016, the State of Maryland filed a CAA Section 126 petition with the EPA alleging that NOx emissions from 36 EGUs, including Harrison Units 1, 2 and 3 and Pleasants Units 1 and 2, significantly contribute to Maryland's inability to attain the ozone NAAQS. The petition sought NOx emission rate limits for the 36 EGUs by May 1, 2017. On September 14, 2018, the EPA denied both the States of Delaware and Maryland petitions under CAA Section 126. In October 2018, Delaware and Maryland appealed the denials of their petitions to the D.C. Circuit. In March 2018, the State of New York filed a CAA Section 126 petition with the EPA alleging that NOx emissions from nine states (including Ohio, Pennsylvania and West Virginia) significantly contribute to New York's inability to attain the ozone NAAQS. The petition seeks suitable emission rate limits for large stationary sources that are affecting New York's air quality within the three years allowed by CAA Section 126.

On May 3, 2018, the EPA extended the time frame for acting on the CAA Section 126 petition by six months to November 9, 2018, but has not taken any further action. FirstEnergy is unable to predict the outcome of these matters or estimate the loss or range of loss.

On May 1, 2017, FE and FG, and CSX and BNSF entered into a definitive settlement agreement, which resolved all claims related to a coal transportation contract dispute as a result of MATS. Pursuant to the settlement agreement, FG agreed to pay CSX and BNSF an aggregate amount equal to $109 million, payable in three annual installments, the first of which was made on May 1, 2017. FE agreed to unconditionally and continually guarantee the settlement payments due by FG pursuant to the terms of the settlement agreement. The settlement agreement further provided that in the event of the initiation of bankruptcy proceedings or failure to make timely settlement payments, the unpaid settlement amount will immediately accelerate and become due and payable in full. On April 6, 2018, FE paid the remaining $72 million under the settlement agreement as a result of the FES Bankruptcy.

As to a specific coal supply agreement, AE Supply, the party thereto, asserted termination rights effective in 2015 as a result of MATS. In response to notification of the termination, on January 15, 2015, Tunnel Ridge, LLC, the coal supplier, commenced litigation in the Court of Common Pleas of Allegheny County, Pennsylvania, alleging AE Supply did not have sufficient justification to terminate the agreement and seeking damages for the difference between the market and contract price of the coal, or lost profits plus incidental damages. On February 18, 2018, the parties reached an agreement in principle settling all claims in dispute. The agreement in principle includes, among other matters, a $93 million payment by AE Supply, as well as certain coal supply commitments for Pleasants Power Station during its remaining operation by AE Supply. Certain aspects of the final settlement agreement are guaranteed by FE, including the $93 million payment, which was paid in the first quarter of 2018. The parties executed the final settlement agreement on March 9, 2018, and the plaintiff dismissed the matter with prejudice on March 15, 2018.

Climate Change

FirstEnergy has established a goal to reduce CO_2 emissions by 90% below 2005 levels by 2045. There are a number of initiatives to reduce GHG emissions at the state, federal and international level. Certain northeastern states are participating in the RGGI and western states led by California, have implemented programs, primarily cap and trade mechanisms, to control emissions of certain GHGs. Additional policies reducing GHG emissions, such as demand reduction programs, renewable portfolio standards and renewable subsidies have been implemented across the nation.

The EPA released its final “Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act,” in December 2009, concluding that concentrations of several key GHGs constitutes an "endangerment" and may be regulated as "air pollutants" under the CAA and mandated measurement and reporting of GHG emissions from certain sources, including electric generating plants. The EPA released its final CPP regulations in August 2015 to reduce CO_2 emissions from existing fossil fuel-fired EGUs and also finalized separate regulations imposing CO_2 emission limits for new, modified, and reconstructed fossil fuel fired EGUs. Numerous states and private parties filed appeals and motions to stay the CPP with the D.C. Circuit in October 2015. On January 21, 2016, a panel of the D.C. Circuit denied the motions for stay and set an expedited schedule for briefing and argument. On February 9, 2016, the U.S. Supreme Court stayed the rule during the pendency of the challenges to the D.C. Circuit and U.S. Supreme Court. On March 28, 2017, an executive order, entitled “Promoting Energy Independence and Economic Growth,” instructed the EPA to review the CPP and related rules addressing GHG emissions and suspend, revise or rescind the rules if appropriate. On October 16, 2017, the EPA issued a proposed rule to repeal the CPP. To replace the CPP, the EPA proposed the ACE rule on August 21, 2018, which would establish emission guidelines for states to develop plans to address GHG emissions from existing coal-fired power plants. Depending on the outcomes of the review pursuant to the executive order, of further appeals and how any final rules are ultimately implemented, the future cost of compliance may be material.

At the international level, the United Nations Framework Convention on Climate Change resulted in the Kyoto Protocol requiring participating countries, which does not include the U.S., to reduce GHGs commencing in 2008 and has been extended through 2020. The Obama Administration submitted in March 2015, a formal pledge for the U.S. to reduce its economy-wide GHG emissions by 26 to 28 percent below 2005 levels by 2025, and in September 2016, joined in adopting the agreement reached on December 12, 2015, at the United Nations Framework Convention on Climate Change meetings in Paris. The Paris Agreement was ratified by the requisite number of countries (i.e., at least 55 countries representing at least 55% of global GHG emissions) in October 2016 and its non-binding obligations to limit global warming to well below two degrees Celsius became effective on November 4, 2016. On June 1, 2017, the Trump Administration announced that the U.S. would cease all participation in the Paris Agreement. FirstEnergy cannot currently estimate the financial impact of climate change policies, although potential legislative or regulatory programs restricting CO_2 emissions, or litigation alleging damages from GHG emissions, could require material capital and other expenditures or result in changes to its operations.

Clean Water Act

Various water quality regulations, the majority of which are the result of the federal CWA and its amendments, apply to FirstEnergy's plants. In addition, the states in which FirstEnergy operates have water quality standards applicable to FirstEnergy's operations.

The EPA finalized CWA Section 316(b) regulations in May 2014, requiring cooling water intake structures with an intake velocity greater than 0.5 feet per second to reduce fish impingement when aquatic organisms are pinned against screens or other parts of a cooling water intake system to a 12% annual average and requiring cooling water intake structures exceeding 125 million gallons

per day to conduct studies to determine site-specific controls, if any, to reduce entrainment, which occurs when aquatic life is drawn into a facility's cooling water system. Depending on any final action taken by the states with respect to impingement and entrainment, the future capital costs of compliance with these standards may be material.

On September 30, 2015, the EPA finalized new, more stringent effluent limits for the Steam Electric Power Generating category (40 CFR Part 423) for arsenic, mercury, selenium and nitrogen for wastewater from wet scrubber systems and zero discharge of pollutants in ash transport water. The treatment obligations phase-in as permits are renewed on a five-year cycle from 2018 to 2023. On April 13, 2017, the EPA granted a Petition for Reconsideration and administratively stayed all deadlines in the effluent limits rule pending a new rulemaking. On September 18, 2017, the EPA replaced the administrative stay with a rulemaking which postponed only certain compliance deadlines for two years. Depending on the outcome of appeals and how any final rules are ultimately implemented, the future costs of compliance with these standards may be substantial and changes to FirstEnergy's operations may result.

In October 2009, the WVDEP issued an NPDES water discharge permit for the Fort Martin plant, which imposes TDS, sulfate concentrations and other effluent limitations for heavy metals, as well as temperature limitations. Concurrent with the issuance of the Fort Martin NPDES permit, WVDEP also issued an administrative order setting deadlines for MP to meet certain of the effluent limits that were effective immediately under the terms of the NPDES permit. MP appealed, and a stay of certain conditions of the NPDES permit and order have been granted pending a final decision on the appeal and subject to WVDEP moving to dissolve the stay. The Fort Martin NPDES permit could require an initial capital investment ranging from $150 million to $300 million in order to install technology to meet the TDS and sulfate limits, which technology may also meet certain of the other effluent limits. March 2018, the WVDEP issued a draft NPDES Permit Renewal that, if finalized as proposed, would moot the appeal and reduce the estimated capital investment requirements. MP intends to vigorously pursue these issues but cannot predict the outcome of the appeal or estimate the possible loss or range of loss.

FirstEnergy intends to vigorously defend against the CWA matters described above but, except as indicated above, cannot predict their outcomes or estimate the loss or range of loss.

Regulation of Waste Disposal

Federal and state hazardous waste regulations have been promulgated as a result of the RCRA, as amended, and the Toxic Substances Control Act. Certain CCRs, such as coal ash, were exempted from hazardous waste disposal requirements pending the EPA's evaluation of the need for future regulation.

In April 2015, the EPA finalized regulations for the disposal of CCRs (non-hazardous), establishing national standards for landfill design, structural integrity design and assessment criteria for surface impoundments, groundwater monitoring and protection procedures and other operational and reporting procedures to assure the safe disposal of CCRs from electric generating plants. On September 13, 2017, the EPA announced that it would reconsider certain provisions of the final regulations. On July 17, 2018, the EPA Administrator signed a final rule extending the deadline for certain CCR facilities to cease disposal and commence closure activities, as well as, establishing less stringent groundwater monitoring and protection requirements. On August 21, 2018, the D.C. Circuit remanded sections of the CCR Rule to the EPA to provide additional safeguards for unlined CCR impoundments that are more protective of human health and the environment. AE Supply assessed the changes in timing and closure plan requirements associated with the McElroy's Run impoundment site and increased the ARO by approximately $43 million in the third quarter of 2018.

Pursuant to a 2013 consent decree, PA DEP issued a 2014 permit for the Little Blue Run CCR impoundment requiring the Bruce Mansfield plant to cease disposal of CCRs by December 31, 2016, and FG to provide bonding for 45 years of closure and post-closure activities and to complete closure within a 12-year period, but authorizing FG to seek a permit modification based on "unexpected site conditions that have or will slow closure progress." The permit does not require active dewatering of the CCRs, but does require a groundwater assessment for arsenic and abatement if certain conditions in the permit are met. The CCRs from the Bruce Mansfield plant are being beneficially reused with the majority used for reclamation of a site owned by the Marshall County Coal Company in Moundsville, West Virginia, and the remainder recycled into drywall by National Gypsum. These beneficial reuse options are expected to be sufficient for ongoing plant operations, however, the Bruce Mansfield plant is pursuing other options. On May 22, 2015 and September 21, 2015, the PA DEP reissued a permit for the Hatfield's Ferry CCR disposal facility and then modified that permit to allow disposal of Bruce Mansfield plant CCR. The Sierra Club's Notices of Appeal before the Pennsylvania Environmental Hearing Board challenging the renewal, reissuance and modification of the permit for the Hatfield’s Ferry CCR disposal facility were resolved through a Consent Adjudication between FG, PA DEP and the Sierra Club requiring operational changes that became effective November 3, 2017. As noted above, FE provides credit support for FG surety bonds of $169 million and $31 million for the benefit of the PA DEP with respect to LBR and the Hatfield's Ferry disposal site, respectively.

FirstEnergy or its subsidiaries have been named as potentially responsible parties at waste disposal sites, which may require cleanup under the CERCLA. Allegations of disposal of hazardous substances at historical sites and the liability involved are often unsubstantiated and subject to dispute; however, federal law provides that all potentially responsible parties for a particular site may be liable on a joint and several basis. Environmental liabilities that are considered probable have been recognized on the Consolidated Balance Sheets as of December 31, 2018, based on estimates of the total costs of cleanup, FirstEnergy's proportionate responsibility for such costs and the financial ability of other unaffiliated entities to pay. Total liabilities of approximately $121 million

have been accrued through December 31, 2018, including approximately $85 million for environmental remediation of former manufactured gas plants and gas holder facilities in New Jersey, which are being recovered by JCP&L through a non-bypassable SBC. FE or its subsidiaries could be found potentially responsible for additional amounts or additional sites, but the loss or range of losses cannot be determined or reasonably estimated at this time.

OTHER LEGAL PROCEEDINGS

Nuclear Plant Matters

Under NRC regulations, JCP&L, ME and PN must ensure that adequate funds will be available to decommission their retired nuclear facility, TMI-2. As of December 31, 2018, JCP&L, ME and PN had in total approximately $790 million invested in external trusts to be used for the decommissioning and environmental remediation of their retired TMI-2 nuclear generating facility. The values of these NDTs also fluctuate based on market conditions. If the values of the trusts decline by a material amount, the obligation to JCP&L, ME and PN to fund the trusts may increase. Disruptions in the capital markets and their effects on particular businesses and the economy could also affect the values of the NDTs.

FES Bankruptcy

On March 31, 2018, FES, including its consolidated subsidiaries, FG, NG, FE Aircraft Leasing Corp., Norton Energy Storage L.L.C. and FGMUC, and FENOC filed voluntary petitions for bankruptcy protection under Chapter 11 of the United States Bankruptcy Code in the Bankruptcy Court. See Note 3, "Discontinued Operations," for additional information.

Other Legal Matters

There are various lawsuits, claims (including claims for asbestos exposure) and proceedings related to FirstEnergy's normal business operations pending against FE or its subsidiaries. The loss or range of loss in these matters is not expected to be material to FE or its subsidiaries. The other potentially material items not otherwise discussed above are described under Note 16, "Regulatory Matters," of the Notes to Consolidated Financial Statements.

FirstEnergy accrues legal liabilities only when it concludes that it is probable that it has an obligation for such costs and can reasonably estimate the amount of such costs. In cases where FirstEnergy determines that it is not probable, but reasonably possible that it has a material obligation, it discloses such obligations and the possible loss or range of loss if such estimate can be made. If it were ultimately determined that FE or its subsidiaries have legal liability or are otherwise made subject to liability based on any of the matters referenced above, it could have a material adverse effect on FE's or its subsidiaries' financial condition, results of operations and cash flows.

18. TRANSACTIONS WITH AFFILIATED COMPANIES

FE does not bill directly or allocate any of its costs to any subsidiary company. Costs are charged to FE's subsidiaries, as well as FES and FENOC, for services received from FESC. The majority of costs are directly billed or assigned at no more than cost. The remaining costs are for services that are provided on behalf of more than one company, or costs that cannot be precisely identified and are allocated using formulas developed by FESC. The current allocation or assignment formulas used and their bases include multiple factor formulas: each company’s proportionate amount of FirstEnergy’s aggregate direct payroll, number of employees, asset balances, revenues, number of customers, other factors and specific departmental charge ratios. Intercompany transactions are generally settled under commercial terms within thirty days.

The Utilities and Transmission Companies are parties to an intercompany income tax allocation agreement with FE and its other subsidiaries, including FES and FENOC, that provides for the allocation of consolidated tax liabilities. Net tax benefits attributable to FE are generally reallocated to the subsidiaries of FirstEnergy that have taxable income. That allocation is accounted for as a capital contribution to the company receiving the tax benefit (see Note 7, "Taxes").

Additionally, the Utilities purchase power from FES to meet a portion of their POLR and default service requirements and provide power to certain facilities. See Note 3 "Discontinued Operations" for additional details.

19. SEGMENT INFORMATION

Regulated Distribution and Regulated Transmission are FirstEnergy's reportable segments.

Financial information for each of FirstEnergy’s reportable segments is presented in the tables below.

The **Regulated Distribution** segment distributes electricity through FirstEnergy’s ten utility operating companies, serving approximately six million customers within 65,000 square miles of Ohio, Pennsylvania, West Virginia, Maryland, New Jersey and New York. This segment also controls 3,790 MWs of regulated electric generation capacity located primarily in West Virginia, Virginia and New Jersey. Regulation of our retail distribution rates is generally premised on providing an opportunity to earn a reasonable return of and on prudently incurred invested capital to provide service to our customers through the use of both base rate proceedings

and other cost-based rate mechanisms, including recovery riders and trackers. The segment's results reflect the costs of securing and delivering electric generation from transmission facilities to customers, including the deferral and amortization of certain related costs.

The **Regulated Transmission** segment provides transmission infrastructure owned and operated by the Transmission Companies and certain of FirstEnergy's utilities (JCP&L, MP, PE and WP) to transmit electricity from generation sources to distribution facilities. The segment's revenues are primarily derived from forward-looking formula rates at the Transmission Companies as well as stated transmission rates at JCP&L, MP, PE and WP. Both the forward-looking formula and stated rates recover costs that the regulatory agencies determine are permitted to be recovered and provide a return on transmission capital investment. Under forward-looking formula rates, the revenue requirement is updated annually based on a projected rate base and projected costs, which is subject to an annual true-up based on actual costs. The segment's results also reflect the net transmission expenses related to the delivery of electricity on FirstEnergy's transmission facilities.

The **Corporate/Other** segment reflects corporate support not charged to FE's subsidiaries, interest expense on FE's holding company debt and other businesses that do not constitute an operating segment. Additionally, reconciling adjustments for the elimination of inter-segment transactions and discontinued operations are included in Corporate/Other. Reconciling adjustments are shown separately in the following table of Segment Financial Information. As of December 31, 2018, approximately 70 MWs of electric generating capacity, representing AE Supply's OVEC capacity entitlement, was included in continuing operations of the Corporate/Other reportable segment. As of December 31, 2018, Corporate/Other had approximately $7.1 billion of FE holding company debt.

FES, FENOC, BSPC and a portion of AE Supply (including the Pleasants Power Station), representing substantially all of FirstEnergy's operations that previously comprised the CES reportable operating segment, are presented as discontinued operations in FirstEnergy's consolidated financial statements resulting from the FES Bankruptcy and actions taken as part of the strategic review to exit commodity-exposed generation, as discussed below. During the third quarter of 2018, the Pleasants Power Station was reclassified to discontinued operations following its inclusion in the definitive FES Bankruptcy settlement agreement for the benefit of FES' creditors. Prior period results have been reclassified to conform with such presentation as discontinued operations. The financial information for all periods has been revised to present the discontinued operations within Reconciling Adjustments. The remaining business activities that previously comprised the CES reportable operating segment were not material and, as such, have been combined into **Corporate/Other** for reporting purposes.

Segment Financial Information

For the Years Ended December 31,	Regulated Distribution	Regulated Transmission	Corporate/ Other	Reconciling Adjustments	FirstEnergy Consolidated
			(In millions)		
2018					
Total revenues	$ 10,103	$ 1,353	$ 34	$ (229)	$ 11,261
Provision for depreciation	812	252	3	69	1,136
Amortization (Deferral) of regulatory assets, net	(163)	13	—	—	(150)
Miscellaneous income (expense), net	192	14	32	(33)	205
Interest expense	514	167	468	(33)	1,116
Income taxes	422	122	(54)	—	490
Income (loss) from continuing operations	1,242	397	(617)	—	1,022
Total assets	28,690	10,404	969	—	40,063
Total goodwill	5,004	614	—	—	5,618
Property additions	1,411	1,104	133	27	2,675
2017					
Total revenues	$ 9,760	$ 1,324	$ 43	$ (199)	$ 10,928
Provision for depreciation	724	224	10	69	1,027
Amortization of regulatory assets, net	292	16	—	—	308
Impairment of assets	—	41	—	—	41
Miscellaneous income (expense), net	57	1	39	(44)	53
Interest expense	535	156	358	(44)	1,005
Income taxes (benefits)	580	205	930	—	1,715
Income (loss) from continuing operations	916	336	(1,541)	—	(289)
Total assets	27,730	9,525	1,007	3,995	42,257
Total goodwill	5,004	614	—	—	5,618
Property additions	1,191	1,030	49	317	2,587
2016					
Total revenues	$ 9,619	$ 1,143	$ 140	$ (202)	$ 10,700
Provision for depreciation	676	187	3	67	933
Amortization of regulatory assets, net	290	7	—	—	297
Impairment of assets	—	—	43	—	43
Miscellaneous income (expense), net	85	(1)	(17)	(23)	44
Interest expense	586	158	252	(23)	973
Income taxes (benefits)	375	187	(35)	—	527
Income (loss) from continuing operations	651	331	(431)	—	551
Total assets	27,702	8,755	1,061	5,630	43,148
Total goodwill	5,004	614	—	—	5,618
Property additions	1,063	1,101	56	615	2,835

20. SUMMARY OF QUARTERLY FINANCIAL DATA (UNAUDITED)

The following summarizes certain consolidated operating results by quarter for 2018 and 2017.

FirstEnergy

CONSOLIDATED STATEMENTS OF INCOME (LOSS)

(In millions, except per share amounts)	**2018**				**2017** [4]			
	Dec. 31	**Sep. 30**	**Jun. 30**	**Mar. 31**	**Dec. 31**	**Sep. 30**	**Jun. 30**	**Mar. 31**
Revenues	$ 2,710	$ 3,064	$ 2,625	$ 2,862	$ 2,681	$ 2,910	$ 2,561	$ 2,776
Other operating expense	770	739	684	940	803	651	657	650
Provision for depreciation	293	283	283	277	262	261	254	250
Impairment of assets (Note 1)	—	—	—	—	28	13	—	—
Operating Income	512	710	700	580	505	733	574	616
Pension and OPEB mark-to-market adjustment	(144)	—	—	—	(102)	—	—	—
Income before income taxes	169	520	409	414	171	503	352	400
Income taxes	(13)	133	121	249	1,232	202	132	149
Income from continuing operations	182	387	288	165	(1,061)	301	220	251
Discontinued operations [1] (Note 3)	(44)	(845)	11	1,204	(1,438)	95	(46)	(46)
Net Income (Loss)	138	(458)	299	1,369	(2,499)	396	174	205
Income allocated to preferred shareholders [2]	10	54	165	156	—	—	—	—
Net income (loss) attributable to common shareholders	128	(512)	134	1,213	(2,499)	396	174	205
Earnings (loss) per share of common stock-[3]								
Basic - Continuing Operations	0.34	0.66	0.27	0.01	(2.39)	0.68	0.49	0.57
Basic - Discontinued Operations (Note 3)	(0.09)	(1.68)	0.01	2.54	(3.23)	0.21	(0.10)	(0.11)
Basic - Net Income (Loss) Attributable to Common Shareholders	0.25	(1.02)	0.28	2.55	(5.62)	0.89	0.39	0.46
Diluted - Continuing Operations	0.34	0.66	0.27	0.01	(2.39)	0.68	0.49	0.57
Diluted - Discontinued Operations (Note 3)	(0.09)	(1.68)	0.01	2.53	(3.23)	0.21	(0.10)	(0.11)
Diluted - Net Income (Loss) Attributable to Common Shareholders	0.25	(1.02)	0.28	2.54	(5.62)	0.89	0.39	0.46

[1] Net of income taxes

[2] The sum of quarterly income allocated to preferred shareholders may not equal annual income allocated to preferred shareholders as quarter-to-date and year-to-date amounts are calculated independently.

[3] The sum of quarterly earnings per share information may not equal annual earnings per share due to the issuance of shares and conversion of preferred shares throughout the year. See FirstEnergy's Consolidated Statements of Stockholders' Equity and Note 6, "Stock-Based Compensation Plans," for additional information.

[4] Prior year numbers have been re-casted for discontinued operations.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

The management of FirstEnergy, with the participation of the chief executive officer and chief financial officer, has reviewed and evaluated the effectiveness of their registrant's disclosure controls and procedures, as defined in the Securities Exchange Act of 1934, as amended, Rules 13a-15(e) and 15d-15(e), as of the end of the period covered by this report. Based on that evaluation, the chief executive officer and chief financial officer have concluded that FirstEnergy's disclosure controls and procedures were effective as of the end of the period covered by this report.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) of the Securities Exchange Act of 1934. Using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control — Integrated Framework* published in 2013, management conducted an evaluation of the effectiveness of their internal control over financial reporting under the supervision of the chief executive officer and chief financial officer. Based on that evaluation, management concluded that FirstEnergy's internal control over financial reporting was effective as of December 31, 2018. The effectiveness of FirstEnergy's internal control over financial reporting, as of December 31, 2018, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report included herein.

Changes in Internal Control over Financial Reporting

During the quarter ended December 31, 2018, there were no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, FirstEnergy's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 10 is incorporated herein by reference to FirstEnergy's 2019 Proxy Statement to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated herein by reference to FirstEnergy's 2019 Proxy Statement to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The Item 403 of Regulation S-K information required by Item 12 is incorporated herein by reference to FirstEnergy's 2019 Proxy Statement to be filed with the SEC pursuant to Regulation 14A under the Securities and Exchange Act of 1934.

The following table contains information as of December 31, 2018, regarding compensation plans for which shares of FE common stock may be issued.

Plan category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights[1]	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in First Column)
Equity compensation plans approved by security holders	5,996,152 [2]	$ 37.75 [3]	4,749,792 [4]
Equity compensation plans not approved by security holders[5]	—	N/A	—
Total	5,996,152	$ 37.75	4,749,792

[1] This number includes stock-based RSUs originally intended to be issued as shares but that have been converted to be paid in cash.

[2] Represents shares of common stock that could be issued upon exercise of outstanding options granted under the ICP 2007 and ICP 2015. This number also includes 2,432,371 shares subject to outstanding awards of stock based RSUs granted under the ICP 2015 if paid at target for the three outstanding cycles, as well as 2,432,371 additional shares assuming maximum performance metrics are achieved for the 2016-2018, 2017-2019, and 2018-2020 cycles of stock based RSUs, 41,905 outstanding FE Amended and Restated EDCP related shares to be paid in stock and 427,383 shares related to the FE DCPD that will be paid in stock. Cash based RSUs granted under the ICP 2015 are payable only in cash and therefore have not been included in the table, however, as noted above, certain stock-based awards that have been amended to pay in cash. Not reflected in the table are 129,924 stock options related to the AE 2008 Long-Term Incentive Plan and the AE 1998 Long-Term Incentive Plan and 20,558 shares related to the AYE Director's Plan and AYE DCD that will be paid in stock per the election of the recipient.

[3] Only FirstEnergy options were included in the calculation for determining the weighted-average exercise price. The weighted-average exercise price for options outstanding under the AE 2008 Long-Term Incentive Plan and the AE 1998 Long-Term Incentive Plan was $35.45 as of December 31, 2018.

[4] Represents shares available for issuance, assuming maximum performance metrics are achieved (or approximately 7,182,162 available assuming performance at target) for the 2016-2018, 2017-2019, and 2018-2020 cycles of stock-based RSUs, with respect to future awards under the ICP 2015 and future accruals of dividends on awards outstanding under ICP 2015. Additional shares may become available under the ICP 2015 due to cancellations, forfeitures, cash settlements or other similar circumstances with respect to outstanding awards. In addition, nominal amounts of shares may be issued in the future under the AYE Director's Plan and AYE DCD to cover future dividends that may accrue on amounts previously deferred and payable in stock, but new awards are no longer being granted under the Allegheny plans or the ICP 2007.

[5] All equity compensation plans have been approved by security holders.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated herein by reference to FirstEnergy's 2019 Proxy Statement to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

A summary of the audit and audit-related fees for services rendered by PricewaterhouseCoopers LLP for the years ended December 31, 2018 and 2017, are as follows:

	Audit Fees[1]		Audit-Related Fees[2]	
	2018	2017[3]	2018	2017
	(In thousands)			
FirstEnergy	$ 7,345	$ 8,460	$ 163	$ 502

(1) Professional services rendered for the audits of the registrants' annual financial statements and reviews of unaudited financial statements included in the registrants' Quarterly Reports on Form 10-Q and for services in connection with statutory and regulatory filings or engagements, including comfort letters, agreed upon procedures and consents for financings and filings made with the SEC.

(2) Professional services rendered in 2018 and 2017 related to SEC Regulation AB. Also, in 2017, professional services rendered related to restructuring.

(3) Includes approximately $1.6 million in audit fees for FES' audit in 2017.

Tax Fees and All Other Fees

Tax-related fees totaled $120,000 in 2018. There were no tax services performed by PricewaterhouseCoopers LLP in 2017. PricewaterhouseCoopers LLP performed no other services in 2018 or 2017, however, the registrants paid approximately $6,300 and $39,500 in software subscription fees to PricewaterhouseCoopers LLP for 2018 and 2017, respectively.

Additional information required by this item is incorporated herein by reference to FirstEnergy's 2019 Proxy Statement to be filed with the SEC pursuant to Regulation 14A under the Securities Exchange Act of 1934.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULE

(a) The following documents are filed as a part of this report on Form 10-K:

1. Financial Statements:

Management's Reports on Internal Control Over Financial Reporting for FirstEnergy Corp. are listed under Item 8, "Financial Statements and Supplementary Data" herein.

Reports of Independent Registered Public Accounting Firm for FirstEnergy Corp. are listed under Item 8, "Financial Statements and Supplementary Data," herein.

The financial statements filed as a part of this report for FirstEnergy Corp. are listed under Item 8, "Financial Statements and Supplementary Data," herein.

2. Financial Statement Schedule:

Reports of Independent Registered Public Accounting Firm as to Schedule are included herein on pages:

	Page
FirstEnergy	86

Schedule II — Consolidated Valuation and Qualifying Accounts for each of the three years in the period ended December 31, 2018, are included herein on pages:

	Page
FirstEnergy	160

3. Exhibits — FirstEnergy

Exhibit Number	
3-1	Amended Articles of Incorporation of FirstEnergy Corp., as amended January 22, 2018 (incorporated by reference to FE's Form 10-K filed February 20, 2018, Exhibit 3.1, File No. 333-21011).
3-2	FirstEnergy Corp. Amended Code of Regulations, as amended May 17, 2011 (incorporated by reference FE's Form 10-Q filed July 31, 2018, Exhibit 3, File No. 333-21011).
4-1	Indenture, dated November 15, 2001, between FirstEnergy Corp. and The Bank of New York Mellon, as Trustee (incorporated by reference to FE's Form S-3 filed September 21, 2001, Exhibit 4(a), File No. 333-69856).
4-2	Officer's Certificate relating to FirstEnergy Corp.'s $650 million aggregate principal amount of its 2.75% Notes, Series A, due 2018 and $850 million aggregate principal amount of its 4.25% Notes, Series B, due 2023 (the "Series B Notes") (incorporated by reference to FE's Form 8-K filed March 5, 2013, Exhibit 4.1, File No. 333-21011).
4-2	(a) Form of Series B Note (incorporated by reference to FE's Form 8-K filed March 5, 2013, Exhibit 4.3, File No. 333-21011).
4-4	Sixth Supplemental Indenture, dated as of December 19, 2016, to Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009, by and between FirstEnergy Nuclear Generation, LLC and The Bank of New York Mellon Trust Company, N.A., as trustee (incorporated by reference to FE's Form 8-K filed December 21, 2016, Exhibit 4.1, File No. 333-21011).
4-4	(a) Form of First Mortgage Bonds, Collateral Series L of 2016 due 2018 (incorporated by reference to FE's Form 8-K filed December 21, 2016, Exhibit 4.1(a), File No. 333-21011) (included in Exhibit 4-4).
4-5	Ninth Supplemental Indenture, dated as of December 19, 2016, to Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 19, 2008, by and between FirstEnergy Generation, LLC and The Bank of New York Mellon Trust Company, N.A. (formerly known as The Bank of New York Trust Company, N.A.), as trustee (incorporated by reference to FE's Form 8-K filed December 21, 2016, Exhibit 4.2, File No. 333-21011).
4-5	(a) Form of First Mortgage Bonds, Collateral Series E of 2016 due 2018 (incorporated by reference to FE's Form 8-K filed December 21, 2016, Exhibit 4.2(a), File No. 333-21011) (included in Exhibit 4-5).
4-6	Officer's Certificate relating to FirstEnergy Corp.'s 2.85% Notes, Series A, due 2022, 3.90% Notes, Series B, due 2027 and 4.85% Notes, Series C, due 2047 (incorporated by reference to FE's Form 8-K filed June 21, 2017, Exhibit 4.1, File No. 333-21011).
4-7	Form of 2.85% Note, Series A, due 2022 (incorporated by reference to FE's Form 8-K filed June 21, 2017, Exhibit 4.1, File No. 333-21011).
4-8	Form of 3.90% Note, Series B, due 2027 (incorporated by reference to FE's Form 8-K filed June 21, 2017, Exhibit 4.1, File No. 333-21011).
4-9	Form of 4.85% Note, Series C, due 2047 (incorporated by reference to FE's Form 8-K filed June 21, 2017, Exhibit 4.1, File No. 333-21011).
(B) 10-1	FirstEnergy Corp. 2007 Incentive Plan, effective May 15, 2007 (incorporated by reference to FE's Form 10-K filed February 25, 2009, Exhibit 10.1, File No. 333-21011).
(B) 10-2	Amendment to FirstEnergy Corp. 2007 Incentive Plan, effective January 1, 2011 (incorporated by reference to FE's Form 10-Q filed May 3, 2011, Exhibit 10.5, File No. 333-21011).
(B) 10-3	Amendment No. 2 to FirstEnergy Corp. 2007 Incentive Plan, effective January 1, 2014 (incorporated by reference to FE's Form 10-K filed February 27, 2014, Exhibit 10-3, File No. 333-21011).
(B) 10-4	FirstEnergy Corp. Deferred Compensation Plan for Outside Directors, amended and restated January 1, 2005, further amended December 31, 2010 (incorporated by reference to FE's Form 10-K filed February 27, 2014, Exhibit 10-6, File No. 333-21011).
(B) 10-5	Amendment No. 1 to Deferred Compensation Plan for Outside Directors, effective as of January 1, 2012 (incorporated by reference to FE's Form 10-Q filed May 3, 2011, Exhibit 10.7, File No. 333-21011).
(B) 10-6	Amendment No. 2 to FirstEnergy Corp. Deferred Compensation Plan for Outside Directors, effective January 21, 2014, (incorporated by reference to FE's Form 10-K filed February 27, 2014, Exhibit 10-8, File No. 333-21011).
(A) (B) 10-7	Amendment No. 3 to FirstEnergy Corp. Deferred Compensation Plan for Outside Directors, dated January 14, 2019 and effective as of April 1, 2018.
(B) 10-8	FirstEnergy Corp. Supplemental Executive Retirement Plan, amended and restated January 1, 2005, further amended December 31, 2010 (incorporated by reference to FE's Form 10-K filed February 27, 2014, Exhibit 10-9, File No. 333-21011).

Exhibit Number	
(B) 10-9	Amendment to FirstEnergy Corp. Supplemental Executive Retirement Plan, effective January 1, 2012 (incorporated by reference to FE's Form 10-Q filed May 3, 2011, Exhibit 10.8, File No. 333-21011).
(A) (B) 10-10	Amendment No. 2 to FirstEnergy Corp. Supplemental Executive Retirement Plan, dated January 14, 2019 and effective [as of April 1], 2018.
(B) 10-11	FirstEnergy Corp. Cash Balance Restoration Plan, effective January 1, 2014 (incorporated by reference to FE's Form 10-K filed February 27, 2014, Exhibit 10-11, File No. 333-21011).
(B) 10-12	Retirement Plan for Outside Directors of GPU, Inc. as amended and restated as of August 8, 2000 (incorporated by reference to GPU, Inc. Form 10-K filed March 21, 2001, Exhibit 10-N, File No. 001-06047).
10-13	Consent Decree dated March 18, 2005 (incorporated by reference to FE's Form 8-K filed March 18, 2005, Exhibit 10-1, File No. 333-21011).
(B) 10-14	Allegheny Energy, Inc. 2008 Long-Term Incentive Plan (incorporated by reference to FE's Form 8-K filed February 25, 2011, Exhibit 10.3, File No. 21011).
(B) 10-15	Amendment No. 1 to Allegheny Energy, Inc. 2008 Long-Term Incentive Plan (incorporated by reference to FE's Form 8-K filed February 27, 2014, Exhibit 10-27, File No. 333-21011).
(B) 10-16	Allegheny Energy, Inc. Non-Employee Director Stock Plan (incorporated by reference to FE's Form 8-K filed February 25, 2011, Exhibit 10.4, File No. 21011).
(B) 10-17	Allegheny Energy, Inc. Amended and Restated Revised Plan for Deferral of Compensation of Directors (incorporated by reference to FE's Form 10-K filed February 27, 2014, Exhibit 10-29, File No. 333-21011).
(B) 10-18	Amendment No. 1 to Allegheny Energy, Inc. Amended and Restated Revised Plan for Deferral of Compensation of Directors (incorporated by reference to FE's Form 10-K filed February 27, 2014, Exhibit 10-30, File No. 333-21011).
(B) 10-19	Form of Director and Officer Indemnification Agreement (incorporated by referenced to FE's Form 8-K filed May 16, 2018, Exhibit 10.1, File No. 333-21011).
10-20	Guarantee, dated as of September 16, 2013 by FirstEnergy Corp. in favor of participants under the FirstEnergy Corp. Executive Deferred Compensation Plan (incorporated by reference to FE's Form 10-Q filed November 5, 2013, Exhibit 10.2, File No. 333-21011).
(B) 10-21	Form of Restricted Stock Agreement (incorporated by reference to FE's Form 10-K filed February 17, 2015, Exhibit 10-49, File No. 333-21011).
(B) 10-22	FirstEnergy Corp. Amended and Restated Executive Deferred Compensation Plan, dated July 20, 2015, and effective as of November 1, 2015 (incorporated by reference to FE's Form 8-K filed July 24, 2015, Exhibit 10.1, File No. 333-21011).
(A) (B) 10-23	Amendment No. 1 to FirstEnergy Corp. Amended and Restated Executive Deferred Compensation Plan, dated January 14, 2019 and effective [as of April 1], 2018.
(B) 10-24	Performance-Earned Restricted Stock Award Agreement, effective August 10, 2015, by and between FirstEnergy Corp. and James F. Pearson (incorporated by reference to FE's Form 8-K filed August 7, 2015, Exhibit 10.1, File No. 333-21011).
(B) 10-25	FirstEnergy Corp. 2017 Change in Control Severance Plan, dated as of September 15, 2015, and effective as of January 1, 2017 (incorporated by reference to FE's Form 8-K filed September 18, 2015, Exhibit 10.1, File No. 333-21011).
(B) 10-26	Waiver of Participation in the FirstEnergy Corp. Change in Control Severance Plan, entered into by Charles E. Jones dated as of September 15, 2015 (incorporated by reference to FE's Form 8-K filed September 18, 2015, Exhibit 10.2, File No. 333-21011).
(B) 10-27	Non-Competition and Non-Disparagement Agreement, entered into by Charles E. Jones, dated as of September 15, 2015 (incorporated by reference to FE's Form 8-K filed September 18, 2015, Exhibit 10.3, File No. 333-21011).
(B) 10-28	FirstEnergy Corp. 2015 Incentive Compensation Plan (incorporated by reference to FE's Definitive Proxy Statement filed April 1, 2015, Appendix A, File No. 333-21011).
(B) 10-29	Amendment No. 1 to the FirstEnergy Corp. 2015 Incentive Compensation Plan, effective February 21, 2017 (incorporated by reference to FE's Form 10-K filed February 21, 2017, Exhibit 10-51, File No. 333-21011).
(B) 10-30	Form of 2016-2018 Cash-Based Performance-Adjusted Restricted Stock Unit Award Agreement (incorporated by reference to FE's Form 10-K filed February 16, 2016, Exhibit 10-57, File No. 333-21011).

Exhibit Number	
(B) 10-31	Form of 2016-2018 Stock-Based Performance-Adjusted Restricted Stock Unit Award Agreement (incorporated by reference to FE's Form 10-K filed February 16, 2016, Exhibit 10-58, File No. 333-21011).
(B) 10-32	Form of 2016 Restricted Stock Award Agreement (incorporated by reference to FE's Form 10-K filed February 16, 2016, Exhibit 10-59, File No. 333-21011).
(B) 10-33	Form of 2017-2019 Cash-Based Performance-Adjusted Restricted Stock Unit Award Agreement (incorporated by reference to FE's Form 10-K filed February 21, 2017, Exhibit 10-49, File No. 333-21011).
(B) 10-34	Form of 2017-2019 Stock-Based Performance-Adjusted Restricted Stock Unit Award Agreement (incorporated by reference to FE's Form 10-K filed February 21, 2017, Exhibit 10-50, File No. 333-21011).
(B) 10-35	Form of 2017 Restricted Stock Award Agreement (incorporated by reference to FE's Form 10-K filed February 21, 2017, Exhibit 10-52, File No. 333-21011).
(B) 10-36	Executive Severance Benefits Plan, as amended and restated as of December 20, 2016 (incorporated by reference to FE's Form 8-K filed December 21, 2016, Exhibit 10.1, File No. 333-21011).
10-37	Credit Agreement, dated as of December 6, 2016, among FirstEnergy, The Cleveland Electric Illuminating Company, Metropolitan Edison Company, Ohio Edison Company, Pennsylvania Power Company, The Toledo Edison Company, Jersey Central Power & Light Company, Monongahela Power Company, Pennsylvania Electric Company, The Potomac Edison Company and West Penn Power Company, as borrowers, Mizuho Bank, Ltd., as administrative agent, and the lending banks and swing line lenders identified therein (incorporated by reference to FE's Form 8-K filed December 6, 2016, Exhibit 10.1, File No. 333-21011).
(A) 10-38	Amendment No. 1 to Credit Agreement, dated as of October 19, 2018, among FirstEnergy, The Cleveland Electric Illuminating Company, Metropolitan Edison Company, Ohio Edison Company, Pennsylvania Power Company, The Toledo Edison Company, Jersey Central Power & Light Company, Monongahela Power Company, Pennsylvania Electric Company, The Potomac Edison Company and West Penn Power Company, as borrowers, Mizuho Bank, Ltd., as administrative agent, and the lending banks and swing line lenders identified therein.
10-39	Credit Agreement, dated as of December 6, 2016, among FirstEnergy Transmission, LLC, American Transmission Systems, Incorporated, Mid-Atlantic Interstate Transmission, LLC and Trans-Allegheny Interstate Line Company, as borrowers, and PNC Bank, National Association, as administrative agent, the banks and the fronting banks identified therein (incorporated by reference to FE's Form 8-K filed December 6, 2016, Exhibit 10.2, File No. 333-21011).
(A) 10-40	Amendment No. 1 to Credit Agreement, dated as of October 19, 2018, among FirstEnergy Transmission, LLC, American Transmission Systems, Incorporated, Mid-Atlantic Interstate Transmission, LLC and Trans-Allegheny Interstate Line Company, as borrowers, and PNC Bank, National Association, as administrative agent, the banks and the fronting banks identified therein.
10-41	Credit Agreement, dated as of December 6, 2016, among FirstEnergy Solutions Corp., as Borrower, FirstEnergy Generation, LLC and FirstEnergy Nuclear Generation, LLC, as Guarantors and FirstEnergy Corp., as Lender (incorporated by reference to FE's Form 8-K filed December 6, 2016, Exhibit 10.4, File No. 333-21011).
(B) 10-42	FirstEnergy Solutions Corp. Replacement 2017 Long-Term Incentive Program (LTIP), effective March 6, 2017 (incorporated by reference to FE's Form 10-Q filed April 27, 2017, Exhibit 10.1, File No. 333-21011).
(B) 10-43	Guarantee, dated as of February 21, 2017, by FirstEnergy Corp. in favor of participants under the FirstEnergy Corp. Cash Balance Pension Restoration Plan (incorporated by reference to FE's Form 10-Q filed July 27, 2017, Exhibit 10.1, File No. 333-21011).
10-44	Preferred Stock Purchase Agreement, dated January 22, 2018, among FirstEnergy Corp. and the Preferred Investors (incorporated by reference to FE's Form 8-K filed January 22, 2018, Exhibit 10.1, File No. 333-21011).
10-45	Common Stock Purchase Agreement, dated January 22, 2018, among FirstEnergy Corp. and ZP Master Utility Fund, Ltd., P Zimmer, Ltd., ZP Energy Fund, L.P. and ZP Master Energy Fund, L.P. (incorporated by reference to FE's Form 8-K filed January 22, 2018, Exhibit 10.2, File No. 333-21011).
(B) 10-46	Form of 2018-2020 Cash-Based Performance-Adjusted Restricted Stock Unit Award Agreement (incorporated by reference to FE's Form 10-K filed February 20, 2018, Exhibit 10-56, File No. 333-21011).
(B) 10-47	Form of 2018-2020 Stock-Based Performance-Adjusted Restricted Stock Unit Award Agreement (incorporated by reference to FE's Form 10-K filed February 20, 2018, Exhibit 10-57, File No. 333-21011).
(B) 10-48	Form of 2018 Restricted Stock Award Agreement (incorporated by reference to FE's Form 10-K filed February 20, 2018, Exhibit 10-58, File No. 333-21011).
(B) 10-49	FirstEnergy Solutions Corp. 2016 Key Employee Retention Plan, effective December 1, 2016 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.3, File No. 333-21011).

Exhibit Number	
(B) 10-50	Amendment to FirstEnergy Solutions Corp. 2016 Key Employee Retention Plan, effective March 23, 2017 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.4, File No. 333-21011).
(B) 10-51	Second Amendment to FirstEnergy Solutions Corp. 2016 Key Employee Retention Plan, effective December 1, 2017 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.5, File No. 333-21011).
(B) 10-52	Form of FirstEnergy Solutions Corp. Retention Agreement (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.6, File No. 333-21011).
(B) 10-53	FirstEnergy Nuclear Operating Company 2016 Key Employee Retention Plan, effective December 1, 2016 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.7, File No. 333-21011).
(B) 10-54	Amendment to FirstEnergy Nuclear Operating Company 2016 Key Employee Retention Plan, effective March 23, 2017 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.8, File No. 333-21011).
(B) 10-55	Second Amendment to FirstEnergy Nuclear Operating Company 2016 Key Employee Retention Plan, effective December 1, 2017 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.9, File No. 333-21011).
(B) 10-56	Form of FirstEnergy Nuclear Operating Company 2016 Key Employee Retention Agreement (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.10, File No. 333-21011).
(B) 10-57	FirstEnergy Nuclear Operating Company Replacement 2017 Long-Term Incentive Program (LTIP), effective March 6, 2017 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.11, File No. 333-21011).
(B) 10-58	Form of 2018-2019 Stock-Based Performance-Adjusted Restricted Stock Unit Award Agreement (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.12, File No. 333-21011).
(B) 10-59	FirstEnergy Solutions Corp. 2018 Annual Incentive Program, effective February 19, 2018 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.13, File No. 333-21011).
(B) 10-60	FirstEnergy Solutions Corp. Amended and Restated 2018 Annual Incentive Program (AIP), effective March 28, 2018 (incorporated by reference to FE's Form 10-Q filed April 23, 2018, Exhibit 10.14, File No. 333-21011).
(B) 10-61	Executive Voluntary Enhanced Retirement Program (incorporated by reference to FE's Form 8-K filed July 23, 2018, Exhibit 10.1, File No. 333-21011).
10-62	Settlement Agreement, dated as of August 26, 2018, by and among the Debtors, the FE Non-Debtor Parties, the Ad Hoc Noteholders Group, the Bruce Mansfield Certificateholders Group and the Committee (in each case, as defined therein) (incorporated by reference to FE's Form 8-K filed August 27, 2018, Exhibit 10.1, File No. 333-21011).
(A) 10-63	Term Loan Credit Agreement, dated as of October 19, 2018, among FirstEnergy Corp., the banks named therein and JPMorgan Chase Bank, N.A., as Administrative Agent.
(A) 10-64	Term Loan Credit Agreement, dated as of October 19, 2018, among FirstEnergy Corp., the banks named therein and Bank of Nova Scotia, as Administrative Agent.
(B) 10-65	FirstEnergy Solutions Corp. Voluntary Enhanced Retirement Option, effective as of January 2, 2019 (incorporated by referenced to FE's Form 8-K filed November 11, 2018, Exhibit 10.1, File No. 333-21011).
(B) 10-66	FirstEnergy Solutions Corp. 2019 Annual Incentive Program (incorporated by referenced to FE's Form 8-K filed December 4, 2018, Exhibit 10.1, File No. 333-21011).
(A) (B) 10-67	Form of 2019-2021 Cash-Based Performance-Adjusted Restricted Stock Unit Award Agreement.
(A) (B) 10-68	Form of 2019-2021 Stock-Based Performance-Adjusted Restricted Stock Unit Award Agreement.
(A) (B) 10-69	Form of 2019 Restricted Stock Award Agreement.
(A) 21	List of Subsidiaries of the Registrant at December 31, 2018.
(A) 23	Consent of Independent Registered Public Accounting Firm.
(A) 31-1	Certification of chief executive officer, pursuant to Rule 13a-14(a).
(A) 31-2	Certification of chief financial officer, pursuant to Rule 13a-14(a).

Exhibit Number	
(A) 32	Certification of chief executive officer and chief financial officer, pursuant to 18 U.S.C. §1350.
101	The following materials from the Annual Report on Form 10-K for FirstEnergy Corp. for the period ended December 31, 2018, formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Statements of Income (Loss) and Consolidated Statements of Comprehensive Income (Loss), (ii) Consolidated Balance Sheets, (iii) Consolidated Statements of Common Stockholders' Equity, (iv) Consolidated Statements of Cash Flows, (v) related notes to these financial statements and (vi) document and entity information.
(A)	Provided herein in electronic format as an exhibit.
(B)	Management contract or compensatory plan contract or arrangement filed pursuant to Item 601 of Regulation S-K.

Pursuant to paragraph (b)(4)(iii)(A) of Item 601 of Regulation S-K, FirstEnergy has not filed as an exhibit to this Form 10-K any instrument with respect to long-term debt if the respective total amount of securities authorized thereunder does not exceed 10% of its respective total assets, but hereby agrees to furnish to the SEC on request any such documents.

ITEM 16. FORM 10-K SUMMARY

None.

FIRSTENERGY CORP.

CONSOLIDATED VALUATION AND QUALIFYING ACCOUNTS
FOR THE YEARS ENDED DECEMBER 31, 2018, 2017 AND 2016

Description	Beginning Balance	Additions: Charged to Income	Additions: Charged to Other Accounts (1)	Deductions (2)	Ending Balance
			(In thousands)		
Year Ended December 31, 2018 (4):					
Accumulated provision for uncollectible accounts — customers	$ 48,937	$ 77,254	$ 60,307	$ 136,700	$ 49,798
— other	990	12,487	—	11,699	1,778
— affiliated companies (5)	$ —			$ 919,851	$ 919,851
Valuation allowance on various DTAs (3)	$ 312,135	$ 81,977	$ —	$ —	$ 394,112
Year Ended December 31, 2017(4):					
Accumulated provision for uncollectible accounts — customers	$ 48,409	$ 73,486	$ 49,728	$ 122,686	$ 48,937
— other	884	6,461	—	6,355	990
Valuation allowance on state and local DTAs	$ 240,289	$ 71,846	$ —	$ —	$ 312,135
Year Ended December 31, 2016 (4):					
Accumulated provision for uncollectible accounts — customers	$ 60,309	$ 76,953	$ 15,222	$ 104,075	$ 48,409
— other	2,731	13,597	11,329	26,773	884
Valuation allowance on state and local DTAs	$ 146,589	$ 93,700	$ —	$ —	$ 240,289

(1) Represents recoveries and reinstatements of accounts previously written off for uncollectible accounts.
(2) Represents the write-off of accounts considered to be uncollectible.
(3) Starting in 2018, valuation allowances are now being recorded against federal and state DTA's related to disallowed business interest and certain employee remuneration, in addition to the state and local DTA's in the prior years presented.
(4) Amounts exclude FES and FENOC.
(5) Amounts relate to FES and FENOC and are included in discontinued operations. See Note 3, "Discontinued Operations" for additional information.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

FIRSTENERGY CORP.

BY: /s/ Charles E. Jones
Charles E. Jones
President and Chief Executive Officer

Date: February 19, 2019

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated:

/s/ Charles E. Jones
Charles E. Jones
President and Chief Executive Officer and Director
(Principal Executive Officer)

/s/ Donald T. Misheff
Donald T. Misheff
Director
(Non-Executive Chairman of Board)

/s/ Steven E. Strah
Steven E. Strah
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

/s/ Jason J. Lisowski
Jason J. Lisowski
Vice President, Controller and Chief Accounting Officer
(Principal Accounting Officer)

/s/ Paul T. Addison
Paul T. Addison
Director

/s/ Christopher D. Pappas
Christopher D. Pappas
Director

/s/ Michael J. Anderson
Michael J. Anderson
Director

/s/ Sandra Pianalto
Sandra Pianalto
Director

/s/ Steven J. Demetriou
Steven J. Demetriou
Director

/s/ Luis A. Reyes
Luis A. Reyes
Director

/s/ Julia L. Johnson
Julia L. Johnson
Director

/s/ Jerry Sue Thornton
Jerry Sue Thornton
Director

/s/ Thomas N. Mitchell
Thomas N. Mitchell
Director

/s/ Leslie M. Turner
Leslie M. Turner
Director

/s/ James F. O'Neil III
James F. O'Neil III
Director

Date: February 19, 2019

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Section 2: EX-10.7 (EXHIBIT 10.7)

Exhibit 10.7

Amendment No. 3
to
FirstEnergy Corp. Deferred Compensation Plan for Outside Directors

(Amended and Restated Effective December 31, 2010)

WHEREAS, FirstEnergy Corp. (the "Company") amended and restated the FirstEnergy Corp. Deferred Compensation Plan for Outside Directors effective December 31, 2010 (the "Plan"); and

WHEREAS, Section 9.1 of the Plan generally provides that, prior to a Special Circumstance (as defined in the Plan) and subject to certain conditions, the Plan may be amended from time to time by action of the Board of Directors of the Company (the "Board"); and

WHEREAS, the Board desires to amend the Plan, effective April 1, 2018, to change the claims and appeals procedure for disability benefits.

NOW, THEREFORE, in accordance with Section 9.1 of the Plan, the Plan is amended, effective April 1, 2018, as follows:

Section 1

Sections 8.2 and 8.3 of the Plan are each hereby amended in their entirety to read as follows:

8.2 Initial Claim Review

In the case of claims regarding Disability ("Disability claims"), the Administrator will make a benefit determination within forty-five (45) days of its receipt of an application for benefits. This period may be extended up to an additional thirty (30) days, if the Administrator provides the Claimant with a written notice of the extension within the initial forty-five (45)-day period. The extension notice will explain the reason for the extension and the date by which the Administrator expects a decision will be made. The Administrator may obtain a second thirty (30)-day extension by providing written notice of such second extension to the Claimant within the initial thirty (30)-day extension. The second extension notice must include an explanation of the special circumstances necessitating the second extension and the date by which the Administrator's decision will be made. If the extension is necessary because additional information is needed to decide the claim, the extension notice will describe the required information. The Claimant will have forty-five (45) days after receiving the extension notice to provide the required information.

In the case of all other claims, the Administrator will make a benefit determination within ninety (90) days of its receipt of an application for benefits. This period may be extended up to an additional ninety (90) days, if the Administrator provides the Claimant with a written notice of the extension within the initial ninety (90)-day period. The extension notice will explain the reason for the extension and the date by which the Administrator expects a decision will be made.

The Administrator will notify the Claimant in writing (in a culturally and linguistically appropriate manner as described in Section 8.3 with respect to Disability claims) delivered in person or mailed by first-class mail to the Claimant's last known address, if any part of a claim for benefits under the Plan has been denied. The notice of a denial of any claim will include:

(a) the specific reason or reasons for the denial;

(b) reference to specific provisions of the Plan upon which the denial is based;

(c) a description of any additional material or information deemed necessary by the Administrator for such Claimant to perfect his claim, and an explanation of why such material or information is necessary;

(d) an explanation of the claim review procedure under the Plan, including applicable time limits; and

(e) for Disability claims, in addition to the information described in subparagraphs (a)-(d) above: (i) the specific internal rule, guidelines, protocols, standards or other similar criteria relied on in making the denial or a statement that such rules, etc. do not exist; (ii) a discussion of the decision, including an explanation for the basis for disagreeing with or not following (X) the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant; (Y), the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with the Claimant's adverse benefit determination, without regard to whether the advice was relied on in making the decision; and (Z) a disability determination regarding the Claimant presented to the Plan made by the Social Security Administration; (iii) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of all documents, records and other information relevant to the Claimant's claim for benefits; and (iv) if the determination is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination or a statement that such explanation will be provided free of charge upon request.

8.3 Review of Claim

If a claim for benefits is denied, in whole or in part, the Claimant may request to have the claim reviewed. The Claimant will have one hundred eighty (180) days in which to request a review of a Disability claim, and will have sixty (60) days in which to request a review of all other claims. The request must be in writing and delivered to the Appeals Committee. If no such review is requested, the initial decision of the Appeals Committee will be considered final and binding.

The request for review must specify the reason the Claimant believes the denial should be reversed. He or she may submit additional written comments, documents, records, and other information relating to and in support of the claim; all information submitted will be reviewed whether or not it was available for the initial review. The Claimant may request reasonable access to and copies of, all documents, records, and other information relevant to the Claimant's claim for benefits. A member of the Appeals Committee may not participate in the review of his or her own claim. In addition, if the Claimant requests a review, a member who is a subordinate of the original decision maker shall not participate in the review of the claim. The review will not defer to the initial adverse determination.

Upon receipt of a request for review, the Appeals Committee may schedule a hearing within thirty (30) days of its receipt of such request, subject to availability of the Claimant and the availability of the Appeals Committee, at a time and place convenient for all parties at which time the Claimant may appear before the person or committee designated by the Compensation Committee to hear appeals for a full and fair review of the Administrator's initial decision. The Claimant may indicate in writing at the time the Appeals Committee attempts to schedule the hearing, that he or she wishes to waive the right to a hearing. If the Claimant does not waive his or her right to a hearing, he or she must notify the Appeals Committee in writing, at least fifteen (15) days in advance of the date established for such hearing, of his or her intention

to appear at the appointed time and place. The Claimant must also specify any persons who will accompany him or her to the hearing, or such other persons will not be admitted to the hearing. If written notice is not timely provided, the hearing will be automatically canceled. The Claimant or the Claimant's duly authorized representative may review all pertinent documents relating to the claim in preparation for the hearing and may submit issues, documents, affidavits, arguments, and comments in writing prior to or during the hearing. The Appeals Committee will notify the Claimant of its decision following the review.

The following additional procedures apply with respect to Disability claims:

(a) Before the Appeals Committee may deny a Disability claim, it must provide the Claimant, free of charge, with any new or additional evidence considered, relied upon or generated by the Plan or any other person in making the benefit determination (or at the direction of the Plan or such other person) in connection with the claim; such evidence must be provided as soon as possible and sufficiently in advance of the date on which the Appeals Committee is required to render its final decision (as stated below) in order to give the Claimant a reasonable opportunity to respond prior to such date

(b) Before the Appeals Committee may deny a Disability claim based on a new or additional rationale, it must provide the claimant, free of charge, with the rationale; the rationale must be provided as soon as possible and sufficiently in advance of the date on which the Appeals Committee is required to render its final decision (as stated below) in order to give the Claimant a reasonable opportunity to respond prior to such date.

(c) In deciding an appeal where an adverse benefit determination was based, in whole or in part, on a medical judgment, including determinations regarding whether a treatment is experimental, investigational, or not medically necessary or appropriate, the Appeals Committee shall consult with a health care professional who has appropriate training and experience in the applicable field of medicine for the medical judgment and such professional shall not be an individual consulted in connection with the initial adverse benefit determination nor a subordinate of such an individual.

(d) The Plan shall provide the Claimant the identification of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with an adverse benefit determination whether or not the advice was relied upon in making the benefit determination.

(e) Decisions regarding hiring, compensation, termination, promotion or other similar matters with respect to any claims personnel shall not be made based upon the likelihood that the individual will support the denial of benefits.

(f) The Plan shall provide notices for Disability claims to Claimants in a culturally and linguistically appropriate manner by (i) providing services that include answering questions and providing assistance with filing claims and appeals in any applicable non-English language; (ii) providing, upon request, a notice in any applicable non-English language; and (iii) including in the English versions of all notices, a statement in any applicable non-English language indicating how to access the language services. With respect to an address in any county to which notice is sent, a non-English language is an "applicable non-English language" if ten percent (10%) or more of the population residing in the county is literate only in that non-English language.

In the case of a Disability claim, the Appeals Committee will render its final decision within forty-five (45) days of receipt of an appeal or such shorter period as may be required by law. If the Appeals Committee determines that an extension of the time for processing the claim is needed, it will notify the

Claimant of the reasons for the extension and the date by which the Appeals Committee expects a decision will be made. The extended date may not exceed ninety (90) days after the date of the filing of the appeal.

In the case of all other claims, the Appeals Committee will render its final decision within sixty (60) days of receipt of an appeal. If the Appeals Committee determines that an extension of the time for processing the claim is needed, it will notify the Claimant of the reasons for the extension and the date by which the Appeals Committee expects a decision will be made. The extended date may not exceed one hundred twenty (120) days after the date of the filing of the appeal

If after the review the claim continues to be denied, the Claimant will be provided a written notice of the denial of the appeal (in a culturally and linguistically appropriate manner as required with respect to Disability claims) which will contain the following information:

(a) the specific reason or reasons for the adverse determination;

(b) reference to specific provisions of the Plan upon which the denial is based;

(c) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant to the claim for benefits; and

(d) for Disability claims, in addition to the information described in subparagraphs (a)-(c) above: (i) the specific internal rule, guidelines, protocols, standards or other similar criteria relied on in making the denial or a statement that such rules, etc. do not exist; (ii) a discussion of the decision, including an explanation for the basis for disagreeing with or not following (X) the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant; (Y), the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with the Claimant's adverse benefit determination, without regard to whether the advice was relied on in making the decision; and (Z) a disability determination regarding the Claimant presented to the Plan made by the Social Security Administration; and (iii) if the determination is based upon a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination or a statement that such explanation shall be provided free of charge upon request.

IN WITNESS WHEREOF, the Board of Directors of FirstEnergy Corp. has caused this Amendment No. 3 to the FirstEnergy Corp. Deferred Compensation Plan for Outside Directors to become effective as of the date set forth above.

FIRSTENERGY CORP.

By: /s/Charles E. Jones
Charles E. Jones
President and Chief Executive Officer
of FirstEnergy Corp.

Date: January 14, 2019

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Section 3: EX-10.10 (EXHIBIT 10.10)

Exhibit 10.10

Amendment No. 2
to
FirstEnergy Corp. Supplemental Executive Retirement Plan

(Effective September 29, 1985, Amended and Restated as of January 1, 2005 and Further Amended and Restated Effective December 31, 2010)

WHEREAS, FirstEnergy Corp. (the "Company") amended and restated the FirstEnergy Corp. Supplemental Executive Retirement Plan effective December 31, 2010 (the "Plan"); and

WHEREAS, Section 8.2 of the Plan provides that the Plan may be amended, subject to certain conditions, at any time by action of the Board of Directors of the Company (the "Board") or the Compensation Committee of the Board (the "Compensation Committee") or by a writing executed on

behalf of the Board or the Compensation Committee by the Company's duly elected officers; and

WHEREAS, the Board desires to amend the Plan, effective April 1, 2018, to change the claims and appeals procedure for disability benefits to comply with regulatory changes.

NOW, THEREFORE, in accordance with Section 8.2 of the Plan, the Plan is amended, effective as of April 1, 2018, as follows:

Section 1

Sections 6.2 and 6.3 of the Plan are each hereby amended in their entirety to read as follows:

6.2 Initial Claim Review

In the case of claims regarding Disability ("Disability claims"), the Committee will make a benefit determination within forty-five (45) days of its receipt of an application for benefits. This period may be extended up to an additional thirty (30) days, if the Committee provides the Claimant with a written notice of the extension within the initial forty-five (45)-day period. The extension notice will explain the reason for the extension and the date by which the Committee expects a decision will be made. The Committee may obtain a second thirty (30)-day extension by providing written notice of such second extension to the Claimant within the initial thirty (30)-day extension. The second extension notice must include an explanation of the special circumstances necessitating the second extension and the date by which the Committee's decision will be made. If the extension is necessary because additional information is needed to decide the claim, the extension notice will describe the required information. The Claimant will have forty-five (45) days after receiving the extension notice to provide the required information.

In the case of all other claims, the Committee will make a benefit determination within ninety (90) days of its receipt of an application for benefits. This period may be extended up to an additional ninety (90) days, if the Committee provides the Claimant with a written notice of the extension within the initial ninety (90)-day period. The extension notice will explain the reason for the extension and the date by which the Committee expects a decision will be made.

The Committee will notify the Claimant in writing (in a culturally and linguistically appropriate manner as described in Section 6.3 with respect to Disability claims) delivered in person or mailed by first-class mail to the Claimant's last known address, if any part of a claim for benefits under the Plan has been denied. The notice of a denial of any claim will include:

(a) the specific reason or reasons for the denial;

(b) reference to specific provisions of the Plan upon which the denial is based;

(c) a description of any additional material or information deemed necessary by the Committee for such Claimant to perfect his claim, and an explanation of why such material or information is necessary;

(d) an explanation of the claim review procedure under the Plan, including applicable time limits;

(e) a statement of the Claimant's right to bring a civil action under Section 502(a) of ERISA following an adverse benefit determination on review; and

(f) for Disability claims, in addition to the information described in subparagraphs (a)-(e) above: (i) the specific internal rule, guidelines, protocols, standards or other similar criteria relied on in making the denial or a statement that such rules, etc. do not exist; (ii) a discussion of the decision, including an explanation for the basis for disagreeing with or not following (X) the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant; (Y), the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with the Claimant's adverse benefit determination, without regard to whether the advice was relied on in making the decision; and (Z) a disability determination regarding the Claimant presented to the Plan made by the Social Security Administration; (iii) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of all documents, records and other information relevant to the Claimant's claim for benefits; and (iv) if the determination is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination or a statement that such explanation will be provided free of charge upon request.

6.3 Review of Claim

If a claim for benefits is denied, in whole or in part, the Claimant may request to have the claim reviewed. The Claimant will have one hundred eighty (180) days in which to request a review of a Disability claim, and will have sixty (60) days in which to request a review of all other claims. The request must be in writing and delivered to the Compensation Committee. If no such review is requested, the initial decision of the Compensation Committee will be considered final and binding.

The request for review must specify the reason the Claimant believes the denial should be reversed. He or she may submit additional written comments, documents, records, and other information relating to and in support of the claim; all information submitted will be reviewed whether or not it was available for the initial review. The Claimant may request reasonable access to and copies of, all documents, records, and other information relevant to the Claimant's claim for benefits. A member of the Compensation Committee may not participate in the review of his or her own claim. In addition, if the Claimant requests a review, a member who is a subordinate of the original decision maker shall not participate in the review of the claim. The review will not defer to the initial adverse determination.

Upon receipt of a request for review, the Compensation Committee may schedule a hearing within thirty (30) days of its receipt of such request, subject to availability of the Claimant and the availability of the Compensation Committee, at a time and place convenient for all parties at which time the Claimant may appear before the person or committee designated by the Compensation Committee to hear appeals for a full and fair review of the Administrative Committee's initial decision. The Claimant may indicate in writing at

the time the Compensation Committee attempts to schedule the hearing, that he or she wishes to waive the right to a hearing. If the Claimant does not waive his or her right to a hearing, he or she must notify the Compensation Committee in writing, at least fifteen (15) days in advance of the date established for such hearing, of his or her intention to appear at the appointed time and place. The Claimant must also specify any persons who will accompany him or her to the hearing, or such other persons will not be admitted to the hearing. If written notice is not timely provided, the hearing will be automatically canceled. The Claimant or the Claimant's duly authorized representative may review all pertinent documents relating to the claim in preparation for the hearing and may submit issues, documents, affidavits, arguments, and comments in writing prior to or during the hearing. The Compensation Committee will notify the Claimant of its decision following the review.

The following additional procedures apply with respect to Disability claims:

(a) Before the Compensation Committee may deny a Disability claim, it must provide the Claimant, free of charge, with any new or additional evidence considered, relied upon or generated by the Plan or any other person in making the benefit determination (or at the direction of the Plan or such other person) in connection with the claim; such evidence must be provided as soon as possible and sufficiently in advance of the date on which the Compensation Committee is required to render its final decision (as stated below) in order to give the Claimant a reasonable opportunity to respond prior to such date

(b) Before the Compensation Committee may deny a Disability claim based on a new or additional rationale, it must provide the claimant, free of charge, with the rationale; the rationale must be provided as soon as possible and sufficiently in advance of the date on which the Compensation Committee is required to render its final decision (as stated below) in order to give the Claimant a reasonable opportunity to respond prior to such date.

(c) In deciding an appeal where an adverse benefit determination was based, in whole or in part, on a medical judgment, including determinations regarding whether a treatment is experimental, investigational, or not medically necessary or appropriate, the Compensation Committee shall consult with a health care professional who has appropriate training and experience in the applicable field of medicine for the medical judgment and such professional shall not be an individual consulted in connection with the initial adverse benefit determination nor a subordinate of such an individual.

(d) The Plan shall provide the Claimant the identification of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with an adverse benefit determination whether or not the advice was relied upon in making the benefit determination.

(e) Decisions regarding hiring, compensation, termination, promotion or other similar matters with respect to any claims personnel shall not be made based upon the likelihood that the individual will support the denial of benefits.

(f) The Plan shall provide notices for Disability claims to Claimants in a culturally and linguistically appropriate manner by (i) providing services that include answering questions and providing assistance with filing claims and appeals in any applicable non-English language; (ii) providing, upon request, a notice in any applicable non-English language; and (iii) including in the English versions of all notices, a statement in any applicable non-English language indicating how to access the language services. With respect to an address in any county to which notice is sent, a non-English language is an "applicable non-English language" if ten percent (10%) or more of the population residing in the county is literate only in that non-English language, as determined in guidance published by the Secretary of the Department of Labor.

In the case of a Disability claim, the Compensation Committee will render its final decision within forty-five (45) days of receipt of an appeal or such shorter period as may be required by law. If the Compensation Committee determines that an extension of the time for processing the claim is needed, it will notify the Claimant of the reasons for the extension and the date by which the Compensation Committee expects a decision will be made. The extended date may not exceed ninety (90) days after the date of the filing of the appeal.

In the case of all other claims, the Compensation Committee will render its final decision within sixty (60) days of receipt of an appeal. If the Compensation Committee determines that an extension of the time for processing the claim is needed, it will notify the Claimant of the reasons for the extension and the date by which the Compensation Committee expects a decision will be made. The extended date may not exceed one hundred twenty (120) days after the date of the filing of the appeal

If after the review the claim continues to be denied, the Claimant will be provided a written notice of the denial of the appeal (in a culturally and linguistically appropriate manner as required with respect to Disability claims) which will contain the following information:

(a) the specific reason or reasons for the adverse determination;

(b) reference to specific provisions of the Plan upon which the denial is based;

(c) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as determined in accordance with the Department of Labor regulations) to his claim for benefits;

(d) for Disability claims, in addition to the information described in subparagraphs (a)-(c) above and (e) below: (i) the specific internal rule, guidelines, protocols, standards or other similar criteria relied on in making the denial or a statement that such rules, etc. do not exist; (ii) a discussion of the decision, including an explanation for the basis for disagreeing with or not following (X) the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant; (Y), the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with the Claimant's adverse benefit determination, without regard to whether the advice was relied on in making the decision; and (Z) a disability determination regarding the Claimant presented to the Plan made by the Social Security Administration; and (iii) if the determination is based upon a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination or a statement that such explanation shall be provided free of charge upon request; and

(e) a statement describing the Claimant's right to bring a civil suit under Federal law (and, for Disability claims, any applicable contractual limitations periods that would apply to Claimant's rights to bring such an action, including the calendar date on which the contractual limitations period expires for the claim) and a statement concerning other voluntary appeal procedures.

Notwithstanding any provision in the Plan to the contrary, if the Plan does not follow applicable internal claims and appeals procedures, the Claimant is deemed to have exhausted the internal claims and appeals process and may pursue any available remedies under Section 502(a) of ERISA. In the case of a Disability claim, the Plan generally must strictly comply with its claims and appeals procedures; provided, however, that this strict compliance requirement will not be violated, and the claims and appeals process will

not be deemed exhausted, if the violation of such procedures is de minimis; does not cause, and is not likely to cause, prejudice or harm to the claimant; was for good cause or due to matters beyond the control of the Plan; and occurred in the context of an ongoing, good faith exchange of information between the Plan and the Claimant (the "de minimis exception"). The Claimant may request a written explanation of the violation from the Plan with respect to a Disability claim, and the Plan must provide such explanation within ten (10) days, describing why the violation should not cause the internal claims and appeals process to be deemed exhausted. If a court rejects the Claimant's request for immediate review of a Disability claim on the basis that the standards for the de minimis exception were satisfied, the claim shall be considered as re-filed on appeal upon the Plan's receipt of the court's decision, and within a reasonable time after receipt of the court's decision, the Plan shall notify the Claimant of the resubmission of the Disability claim.

IN WITNESS WHEREOF, pursuant to the delegation of authority made to an authorized officer of FirstEnergy Corp. on December 18, 2018, by the Board of Directors of FirstEnergy Corp., to approve the changes to the FirstEnergy Corp. Supplemental Executive Retirement Plan that are reflected in Amendment No. 2 to FirstEnergy Corp. Supplemental Executive Retirement Plan, this Amendment No. 2 is hereby executed this 14th day of January, 2019, effective as of the date set forth above.

FIRSTENERGY CORP.

By: /s/Charles E. Jones
Charles E. Jones
President and Chief Executive Officer
of FirstEnergy Corp.

Date: January 14, 2019

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Section 4: EX-10.23 (EXHIBIT 10.23)

Exhibit 10.23

Amendment No. 1
to
FirstEnergy Corp. Executive Deferred Compensation Plan

(Amended and Restated Effective As of November 1, 2015)

WHEREAS, FirstEnergy Corp. (the "Company") amended and restated the FirstEnergy Corp. Executive Deferred Compensation Plan effective as of November 1, 2015 (the "Plan"); and

WHEREAS, Section 10.1 of the Plan provides that the Plan may be amended, subject to certain conditions, at any time by action of the Board of Directors of the Company (the "Board") or the Compensation Committee of the Board (the "Compensation Committee") or by a writing executed on behalf of the Board or the Compensation Committee by the Company's duly elected officers; and

WHEREAS, the Board desires to amend the Plan, effective April 1, 2018, to change the claims and appeals procedure for disability benefits to comply with regulatory changes.

NOW, THEREFORE, in accordance with Section 10.1 of the Plan, the Plan is amended, effective as of April 1, 2018, as follows:

Section 1

Sections 9.2 and 9.3 of the Plan are each hereby amended in their entirety to read as follows:

9.2 Initial Claim Review

In the case of claims regarding Disability ("Disability claims"), the Administrative Committee will make a benefit determination within forty-five (45) days of its receipt of an application for benefits. This period may be extended up to an additional thirty (30) days, if the Administrative Committee provides the Claimant with a written notice of the extension within the initial forty-five (45)-day period. The extension notice will explain the reason for the extension and the date by which the Administrative Committee expects a decision will be made. The Administrative Committee may obtain a second thirty (30)-day extension by providing written notice of such second extension to the Claimant within the initial thirty (30)-day extension. The second extension notice must include an explanation of the special circumstances necessitating the second extension and the date by which the Administrative Committee's decision will be made. If the extension is necessary because additional information is needed to decide the claim, the extension notice will describe the required information. The Claimant will have forty-five (45) days after receiving the extension notice to provide the required information.

In the case of all other claims, the Administrative Committee will make a benefit determination within ninety (90) days of its receipt of an application for benefits. This period may be extended up to an additional ninety (90) days, if the Administrative Committee provides the Claimant with a written notice of the extension within the initial ninety (90)-day period. The extension notice will explain the reason for the extension and the date by which the Administrative Committee expects a decision will be made.

The Administrative Committee will notify the Claimant in writing (in a culturally and linguistically appropriate manner as described in Section 9.3 with respect to Disability claims) delivered in person or

mailed by first-class mail to the Claimant's last known address, if any part of a claim for benefits under the Plan has been denied. The notice of a denial of any claim will include:

(a) the specific reason or reasons for the denial;

(b) reference to specific provisions of the Plan upon which the denial is based;

(c) a description of any additional material or information deemed necessary by the Administrative Committee for such Claimant to perfect his claim, and an explanation of why such material or information is necessary;

(d) an explanation of the claim review procedure under the Plan, including applicable time limits;

(e) a statement of the Claimant's right to bring a civil action under Section 502(a) of ERISA following an adverse benefit determination on review; and

(f) for Disability claims, in addition to the information described in subparagraphs (a)-(e) above: (i) the specific internal rule, guidelines, protocols, standards or other similar criteria relied on in making the denial or a statement that such rules, etc. do not exist; (ii) a discussion of the decision, including an explanation for the basis for disagreeing with or not following (X) the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant; (Y), the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with the Claimant's adverse benefit determination, without regard to whether the advice was relied on in making the decision; and (Z) a disability determination regarding the Claimant presented to the Plan made by the Social Security Administration; (iii) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of all documents, records and other information relevant to the Claimant's claim for benefits; and (iv) if the determination is based on a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination or a statement that such explanation will be provided free of charge upon request.

9.3 Review of Claim

If a claim for benefits is denied, in whole or in part, the Claimant may request to have the claim reviewed. The Claimant will have one hundred eighty (180) days in which to request a review of a Disability claim, and will have sixty (60) days in which to request a review of all other claims. The request must be in writing and delivered to the Compensation Committee. If no such review is requested, the initial decision of the Administrative Committee will be considered final and binding. For purposes of this Section 9.3, subsequent references to the "Compensation Committee" shall be deemed to include any delegate appointed by the Compensation Committee.

The request for review must specify the reason the Claimant believes the denial should be reversed. He or she may submit additional written comments, documents, records, and other information relating to and in support of the claim; all information submitted will be reviewed whether or not it was available for the initial review. The Claimant may request reasonable access to and copies of, all documents, records, and other information relevant to the Claimant's claim for benefits. A member of the Compensation Committee may not participate in the review of his or her own claim. In addition, if the Claimant requests a review, a member who is a subordinate of the original decision maker shall not participate in the review of the claim. The review will not defer to the initial adverse determination.

Upon receipt of a request for review, the Compensation Committee may schedule a hearing within thirty (30) days of its receipt of such request, subject to availability of the Claimant and the availability of the Compensation Committee, at a time and place convenient for all parties at which time the Claimant may appear before the person or committee designated by the Compensation Committee to hear appeals for a full and fair review of the Administrative Committee's initial decision. The Claimant may indicate in writing at the time the Compensation Committee attempts to schedule the hearing, that he or she wishes to waive the right to a hearing. If the Claimant does not waive his or her right to a hearing, he or she must notify the Compensation Committee in writing, at least fifteen (15) days in advance of the date established for such hearing, of his or her intention to appear at the appointed time and place. The Claimant must also specify any persons who will accompany him or her to the hearing, or such other persons will not be admitted to the hearing. If written notice is not timely provided, the hearing will be automatically canceled. The Claimant or the Claimant's duly authorized representative may review all pertinent documents relating to the claim in preparation for the hearing and may submit issues, documents, affidavits, arguments, and comments in writing prior to or during the hearing. The Compensation Committee will notify the Claimant of its decision following the review.

The following additional procedures apply with respect to Disability claims:

(a) Before the Compensation Committee may deny a Disability claim, it must provide the Claimant, free of charge, with any new or additional evidence considered, relied upon or generated by the Plan or any other person in making the benefit determination (or at the direction of the Plan or such other person) in connection with the claim; such evidence must be provided as soon as possible and sufficiently in advance of the date on which the Compensation Committee is required to render its final decision (as stated below) in order to give the Claimant a reasonable opportunity to respond prior to such date

(b) Before the Compensation Committee may deny a Disability claim based on a new or additional rationale, it must provide the claimant, free of charge, with the rationale; the rationale must be provided as soon as possible and sufficiently in advance of the date on which the Compensation Committee is required to render its final decision (as stated below) in order to give the Claimant a reasonable opportunity to respond prior to such date.

(c) In deciding an appeal where an adverse benefit determination was based, in whole or in part, on a medical judgment, including determinations regarding whether a treatment is experimental, investigational, or not medically necessary or appropriate, the Compensation Committee shall consult with a health care professional who has appropriate training and experience in the applicable field of medicine for the medical judgment and such professional shall not be an individual consulted in connection with the initial adverse benefit determination nor a subordinate of such an individual.

(d) The Plan shall provide the Claimant the identification of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with an adverse benefit determination whether or not the advice was relied upon in making the benefit determination.

(e) Decisions regarding hiring, compensation, termination, promotion or other similar matters with respect to any claims personnel shall not be made based upon the likelihood that the individual will support the denial of benefits.

(f) The Plan shall provide notices for Disability claims to Claimants in a culturally and linguistically appropriate manner by (i) providing services that include answering questions and providing assistance with filing claims and appeals in any applicable non-English language; (ii) providing, upon request,

a notice in any applicable non-English language; and (iii) including in the English versions of all notices, a statement in any applicable non-English language indicating how to access the language services. With respect to an address in any county to which notice is sent, a non-English language is an "applicable non-English language" if ten percent (10%) or more of the population residing in the county is literate only in that non-English language, as determined in guidance published by the Secretary of the Department of Labor.

In the case of a Disability claim, the Compensation Committee will render its final decision within forty-five (45) days of receipt of an appeal or such shorter period as may be required by law. If the Compensation Committee determines that an extension of the time for processing the claim is needed, it will notify the Claimant of the reasons for the extension and the date by which the Compensation Committee expects a decision will be made. The extended date may not exceed ninety (90) days after the date of the filing of the appeal.

In the case of all other claims, the Compensation Committee will render its final decision within sixty (60) days of receipt of an appeal. If the Compensation Committee determines that an extension of the time for processing the claim is needed, it will notify the Claimant of the reasons for the extension and the date by which the Compensation Committee expects a decision will be made. The extended date may not exceed one hundred twenty (120) days after the date of the filing of the appeal

If after the review the claim continues to be denied, the Claimant will be provided a written notice of the denial of the appeal (in a culturally and linguistically appropriate manner as required with respect to Disability claims) which will contain the following information:

(a) the specific reason or reasons for the adverse determination;

(b) reference to specific provisions of the Plan upon which the denial is based;

(c) a statement that the Claimant is entitled to receive, upon request and free of charge, reasonable access to, and copies of, all documents, records, and other information relevant (as determined in accordance with the Department of Labor regulations) to his claim for benefits;

(d) for Disability claims, in addition to the information described in subparagraphs (a)-(c) above and (e) below: (i) the specific internal rule, guidelines, protocols, standards or other similar criteria relied on in making the denial or a statement that such rules, etc. do not exist; (ii) a discussion of the decision, including an explanation for the basis for disagreeing with or not following (X) the views presented by the Claimant to the Plan of health care professionals treating the Claimant and vocational professionals who evaluated the Claimant; (Y), the views of medical or vocational experts whose advice was obtained on behalf of the Plan in connection with the Claimant's adverse benefit determination, without regard to whether the advice was relied on in making the decision; and (Z) a disability determination regarding the Claimant presented to the Plan made by the Social Security Administration; and (iii) if the determination is based upon a medical necessity or experimental treatment or similar exclusion or limit, either an explanation of the scientific or clinical judgment for the determination or a statement that such explanation shall be provided free of charge upon request; and

(e) a statement describing the Claimant's right to bring a civil suit under Federal law (and, for Disability claims, any applicable contractual limitations periods that would apply to Claimant's rights to bring such an action, including the calendar date on which the contractual limitations period expires for the claim) and a statement concerning other voluntary appeal procedures.

Notwithstanding any provision in the Plan to the contrary, if the Plan does not follow applicable internal claims and appeals procedures, the Claimant is deemed to have exhausted the internal claims and appeals process and may pursue any available remedies under Section 502(a) of ERISA. In the case of a Disability claim, the Plan generally must strictly comply with its claims and appeals procedures; provided, however, that this strict compliance requirement will not be violated, and the claims and appeals process will not be deemed exhausted, if the violation of such procedures is de minimis; does not cause, and is not likely to cause, prejudice or harm to the claimant; was for good cause or due to matters beyond the control of the Plan; and occurred in the context of an ongoing, good faith exchange of information between the Plan and the Claimant (the "de minimis exception"). The Claimant may request a written explanation of the violation from the Plan with respect to a Disability claim, and the Plan must provide such explanation within ten (10) days, describing why the violation should not cause the internal claims and appeals process to be deemed exhausted. If a court rejects the Claimant's request for immediate review of a Disability claim on the basis that the standards for the de minimis exception were satisfied, the claim shall be considered as re-filed on appeal upon the Plan's receipt of the court's decision, and within a reasonable time after receipt of the court's decision, the Plan shall notify the Claimant of the resubmission of the Disability claim.

IN WITNESS WHEREOF, pursuant to the delegation of authority made to an authorized officer of FirstEnergy Corp. on December 18, 2018, by the Board of Directors of FirstEnergy Corp., to approve the changes to the FirstEnergy Corp. Executive Deferred Compensation Plan that are reflected in Amendment No. 1 to FirstEnergy Corp. Executive Deferred Compensation Plan, this Amendment No. 1 is hereby executed this 14th day of January, 2019, effective as of the date set forth above.

FIRSTENERGY CORP.

By: /s/Charles E. Jones
Charles E. Jones
President and Chief Executive Officer
of FirstEnergy Corp.

Date: January 14, 2019

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Section 5: EX-10.38 (EXHIBIT 10.38)

Exhibit 10.38

EXECUTION VERSION

AMENDMENT NO. 1 TO CREDIT AGREEMENT

dated as of October 19, 2018

among

FIRSTENERGY CORP.,
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY,
METROPOLITAN EDISON COMPANY,
OHIO EDISON COMPANY,
PENNSYLVANIA POWER COMPANY,
THE TOLEDO EDISON COMPANY,
JERSEY CENTRAL POWER & LIGHT COMPANY,

MONONGAHELA POWER COMPANY,
PENNSYLVANIA ELECTRIC COMPANY,
THE POTOMAC EDISON COMPANY,
and
WEST PENN POWER COMPANY,
as Borrowers,

THE LENDERS NAMED HEREIN,
as Lenders,

MIZUHO BANK, LTD.,
as Administrative Agent,

THE FRONTING BANKS NAMED HEREIN,
as Fronting Banks

and

THE SWING LINE LENDERS NAMED HEREIN,
as Swing Line Lenders

MIZUHO BANK, LTD., JPMORGAN CHASE BANK, N.A. and
MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED,
as Joint Lead Arrangers

AMENDMENT NO. 1 TO
CREDIT AGREEMENT

This AMENDMENT NO. 1, dated as of October 19, 2018 (this "***Amendment***"), to the Existing Credit Agreement referred to below, is entered into by and among FirstEnergy Corp. ("***FE***"), The Cleveland Electric Illuminating Company ("***CEI***"), Metropolitan Edison Company ("***Met-Ed***"), Ohio Edison Company ("***OE***"), Pennsylvania Power Company ("***Penn***"), The Toledo Edison Company ("***TE***"), Jersey Central Power & Light Company ("***JCP&L***"), Monongahela Power Company ("***MP***"), Pennsylvania Electric Company ("***Penelec***"), The Potomac Edison Company ("***PE***") and West Penn Power Company ("***West-Penn***", and together with FE, CEI, Met-Ed, OE, Penn, TE, JCP&L, MP, Penelec and PE, the "***Borrowers***"), the banks and other financial institutions (the "***Lenders***") listed on the signature pages hereof, Mizuho Bank, Ltd. ("***Mizuho***"), as Administrative Agent (in such capacity, the "***Administrative Agent***") for the Lenders hereunder, the fronting banks (the "***Fronting Banks***") listed on the signature pages hereof and the swing line lenders (the "***Swing Line Lenders***") listed on the signature pages hereof.

PRELIMINARY STATEMENTS

1. The Borrowers, the Lenders, the Administrative Agent, the Fronting Banks and the Swing Line Lenders are parties to that certain Credit Agreement, dated as of December 6, 2016 (the "***Existing Credit Agreement***", as amended by this Amendment, the "***Amended Agreement***", and as the Amended Agreement may hereafter be amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to such terms in the Amended Agreement. On or before the date hereof, the aggregate amount of the Commitments has been reduced to $2,500,000,000.

2. The Borrowers desire to amend the Existing Credit Agreement in certain particulars, including, without limitation, to (i) extend the Termination Date by one year to December 6, 2022 and (ii) modify the Borrower Sublimits, and the Lenders, the Administrative Agent, the Fronting Banks and the Swing Line Lenders have agreed to such amendments on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

SECTION 1. ***Amendments to Existing Credit Agreement.*** The Existing Credit Agreement is, effective as of the date hereof and subject to the satisfaction or waiver of the conditions precedent set forth in Section 2 hereof, hereby amended as follows:

(a) The definition of "*Alternate Base Rate*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"***Alternate Base Rate***" means, for any period, a fluctuating interest rate *per annum* as shall be in effect from time to time, which rate per annum shall at all times be equal to the highest of (i) the prime rate as most recently published by *The Wall Street Journal* from time to time, (ii) the sum of 1/2 of 1% *per annum* plus the Federal Funds Rate in effect from time to time and (iii) the rate of interest *per annum* (rounded upwards, if necessary, to the nearest 1/100 of 1%) appearing on the Service equal to the one-month London interbank offered rate for deposits in Dollars as determined at approximately 11:00 a.m. (London time) on such day (or if such day is not a Business Day, on the next preceding Business Day), plus 1%.

(h) The definition of "*Borrower Sublimit*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"***Borrower Sublimit***" means, as to any Borrower, the amount set forth opposite such Borrower's name below, as modified from time to time pursuant to Section 2.06:

Borrower	**Borrower Sublimit**
FE	$2,500,000,000
CEI	$500,000,000
Met-Ed	$500,000,000
OE	$500,000,000
Penn	$100,000,000
TE	$300,000,000
JCP&L	$500,000,000
MP	$500,000,000
Penelec	$300,000,000
PE	$150,000,000
West-Penn	$200,000,000

(b) The definition of "*Disclosure Documents*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows

"***Disclosure Documents***" means (i) FE's Annual Report on Form 10-K for the year ended December 31, 2017, Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2018 and June 30, 2018, and Current Reports on Form 8-K filed in 2018 and prior to the Amendment No. 1 Effective Date, (ii) with respect to each other Borrower, such Borrower's (A) consolidated balance sheet as of December 31, 2017, and the related consolidated statements of income, retained earnings and cash flows for the fiscal year then ended, certified by PricewaterhouseCoopers LLP, with, in each case, any accompanying notes, and (B) unaudited consolidated balance sheet as of June 30, 2018, and the related consolidated statements of income, retained earnings and cash flows for the six-month period then ended, in each case with respect to the foregoing clauses (A) and

(B), prepared in accordance with GAAP (but, in the case of such statements that are unaudited, subject to year-end adjustments and the exclusion of detailed footnotes) and copies of which have been furnished to each Lender, each Swing Line Lender and each Fronting Bank, and (iii) with respect to any Borrower referenced in clause (ii) above, the matters, if any, described in the portion of Schedule V hereto applicable to such Borrower as indicated thereon.

(c) The definition of "*Eurodollar Rate*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"Eurodollar Rate" means, for the Interest Period for any Eurodollar Rate Advance made in connection with any Borrowing, the greater of (a) 0.00% and (b) the rate of interest *per annum* (rounded upward to the nearest 1/100 of 1%) as calculated by ICE Benchmark Administration Limited (or any other Person which takes over the administration of that rate) and obtained through a nationally recognized service such as the Dow Jones Market Service (Telerate), Reuters or other such service then being used by the Administrative Agent to ascertain such rates of interest (in each case, the "*Service*") as the London interbank offered rate for deposits in Dollars at approximately 11:00 a.m. (London time) two Business Days before the first day of such Interest Period for a period equal to such Interest Period; *provided*, *however*, that if the Administrative Agent in its reasonable discretion determines that such rate is no longer capable of being determined or that such circumstance has not arisen but that the supervisor for the administrator of such rate or a Governmental Authority having jurisdiction over the Administrative Agent has made a public statement identifying a specific date after which such rate shall no longer be used for determining interest rates for loans, then the Administrative Agent and the Borrowers shall endeavor to establish an alternate rate of interest to the rate described in clause (b) above that gives due consideration to any evolving or then-prevailing market convention for determining a rate of interest for syndicated loans in the United States at such time and adequately and fairly reflects the costs to the Lenders of funding Eurodollar Rate Advances (any such proposed alternate rate, a "***LIBOR Successor Rate***"). Upon the Administrative Agent and the Borrowers reaching agreement on a LIBOR Successor Rate, the Administrative Agent and the Borrowers shall enter into an amendment to this Agreement to reflect such LIBOR Successor Rate and such other related changes to this Agreement as may be applicable (a copy of which shall be promptly provided by the Administrative Agent to the Lenders), and notwithstanding anything to the contrary contained in Section 8.01, such amendment shall become effective without any further action or consent of any other party to this Agreement so long as the Administrative Agent shall not have received, within five (5) Business Days after the date a copy of such amendment is provided to the Lenders by the Administrative Agent, a written notice from the Majority Lenders stating that the Majority Lenders object to such amendment; *provided*, *however*, that if the Administrative Agent has notified the Lenders and the Borrowers that the rate described in clause (b) above is no longer capable of being determined or is no longer used for determining interest rates for loans (such notice

being referred to herein as a "***LIBOR Termination Notice***"), then unless and until an amendment implementing a LIBOR Successor Rate is effective, (i) the obligation of the Lenders to make or maintain Eurodollar Rate Advances will be suspended and (ii) the rate of interest set forth in clause (iii) of the definition of "Alternate Base Rate" contained in this Section 1.01 (the "***LIBOR Component***") will no longer be utilized in determining the Alternate Base Rate. Notwithstanding the foregoing, an amendment implementing a LIBOR Successor Rate shall not become effective with respect to any Borrower (other than FE) unless and until such Borrower (A) receives all required Governmental Actions and Approvals (if any) authorizing such Borrower to pay such LIBOR Successor Rate on its Advances hereunder and (B) notifies the Administrative Agent in writing that such Borrower has received all such Governmental Actions and Approvals (or that such Borrower is not required under Applicable Law to obtain any such Governmental Actions or Approvals). Upon receipt of any LIBOR Termination Notice, the Borrowers may revoke any pending request for a Borrowing of, or Conversion to, Eurodollar Rate Advances (to the extent of the impacted Eurodollar Rate Advances or Interest Periods) or, failing that, shall be deemed to have converted such request into a request for a Borrowing of Alternate Base Rate Pro-Rata Advances (except that the LIBOR Component will no longer be utilized in determining the Alternate Base Rate for any such Advances) in the amount specified therein.

(d) The definition of "*Federal Funds Rate*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"***Federal Funds Rate***" means, for any period, the greater of (a) 0.00% and (b) a fluctuating interest rate *per annum* (rounded upward, if necessary, to the nearest whole multiple of 1/100 of 1% *per annum*) equal for each day during such period to the weighted average of the rates on overnight Federal funds transactions with members of the Federal Reserve System, as published for such day (or, if such day is not a Business Day, for the next preceding Business Day) by the Federal Reserve Bank of New York, or, if such rate is not so published for any day that is a Business Day, the average rate (rounded upward to the nearest whole multiple of 1/100 of 1% *per annum*, if such average is not such a multiple) charged to Mizuho on such day on such transactions as determined by the Administrative Agent.

(e) The definition of "*Multiemployer Plan*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"Multiemployer Plan" means a "multiemployer plan" as defined in Section 4001(a)(3) of ERISA to which any Borrower or any member of the Controlled Group has, or may reasonably be expected to have, an obligation to make contributions, or with respect to which any Borrower has, or may reasonably be expected to incur, liability.

(f) The definition of "*Termination Date*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"***Termination Date***" means December 6, 2022, subject, for certain Lenders, to the extension described in Section 2.19 hereof, or, in any case, the earlier date of termination in whole of the Commitments pursuant to Section 2.06 or Section 6.01 hereof.

(g) The definition of "*Unregulated Money Pool Agreement*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"***Unregulated Money Pool Agreement***" means the FirstEnergy Substitute Non-Utility Money Pool Agreement, dated as of January 1, 2018, among FE, FirstEnergy Service Company and certain non-utility Subsidiaries of FE, as amended, modified, restated or replaced from time to time.

(h) The following definitions are hereby added to Section 1.01 of the Existing Credit Agreement in the appropriate alphabetical order:

"***Amendment No. 1***" means Amendment No. 1, dated as of October 19, 2018, by and among the Borrowers, the Lenders party thereto, the Administrative Agent, the Fronting Banks and the Swing Line Lenders, which Amendment No. 1 amended this Agreement pursuant to the terms thereof.

"***Amendment No. 1 Effective Date***" means the Amendment Effective Date (as defined in Amendment No. 1), which date is October 19, 2018.

"***Beneficial Ownership Certification***" means a certification regarding beneficial ownership as required by the Beneficial Ownership Regulation.

"***Beneficial Ownership Regulation***" means 31 C.F.R. § 1010.230, as amended, or any successor thereto.

(i) Section 1.03 of the Existing Credit Agreement is hereby amended by adding the following sentence at the end thereof:

"Notwithstanding anything to the contrary contained in this Agreement, any lease that was or would have been treated as an operating lease under GAAP as in effect on the Amendment No. 1 Effective Date that would become or be treated as a capital lease solely as a result of a change in GAAP after the Amendment No. 1 Effective Date shall always be treated as an operating lease for purposes of determining compliance with the financial and other covenants set forth in this Agreement and the other Loan Documents."

(j) Section 4.01 of the Existing Credit Agreement is hereby amended by adding the following new subsection (o) at the end thereof:

"(o) ***Beneficial Ownership Certification***. As of the Amendment No. 1 Effective Date, the information included in the Beneficial Ownership Certifications delivered by the Borrowers to the Administrative Agent on or before the Amendment No. 1 Effective Date is true and correct in all respects."

(k) Section 5.01(g)(x) of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"(x) (A) promptly upon the occurrence of a Reportable Compliance Event, notice of such occurrence, and (B) promptly after any Borrower becomes aware of any change in the information provided in a Beneficial Ownership Certification that would result in a change to the list of beneficial owners identified in parts (c) or (d) of such certification, a written notice specifying any such change; and"

(l) Section 5.03(b)(i)(C) of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"(C) deposits, in an aggregate amount not to exceed $250,000,000 at any one time outstanding, made by FE to secure, or in lieu of, surety, appeal, or customs bonds to which any Unregulated Subsidiary is a party,"

(m) Section 8.01 of the Existing Credit Agreement is hereby amended by deleting the phrase "Subject to Section 2.21(b), no amendment or waiver" in its entirety and substituting therefor the new phrase "Subject to Section 2.21(b) and except as otherwise expressly provided in the definition of "Eurodollar Rate" set forth in Section 1.01, no amendment or waiver".

(n) Section 8.01 of the Existing Credit Agreement is hereby further amended by adding the following sentence at the end thereof:

"Notwithstanding the foregoing, the Borrowers and the Administrative Agent may amend this Agreement and the other Loan Documents without the consent of any Lender or any Fronting Bank to the extent necessary (a) to cure any ambiguity, omission, mistake, error, defect or inconsistency (as determined by the Administrative Agent in its reasonable discretion) or (b) to make administrative changes of a technical or immaterial nature, provided, that, in each case, (x) such amendment does not adversely affect the rights of any Lender or any Fronting Bank and (y) the Lenders and the Fronting Banks shall have received at least five (5) Business Days' prior written notice thereof and the Administrative Agent shall not have received, within five (5) Business Days of the date of such notice to the Lenders and the Fronting Banks, a written notice from the Majority Lenders or any Fronting Bank stating that the Majority Lenders or such Fronting Bank, as the case may be, object to such amendment."

(o) Schedule I (*List of Commitments and Lending Offices*) to the Existing Credit Agreement is hereby amended and restated in its entirety by Schedule I attached hereto.

(p) Schedule V (*Disclosure Documents*) to the Existing Credit Agreement is hereby amended and restated in its entirety by Schedule V attached hereto.

SECTION 2. ***Conditions to Effectiveness*****.**

This Amendment shall become effective as of the date first above written (the "***Amendment Effective Date***") when, and only when, the following conditions have been satisfied (or waived by the Administrative Agent and the Lenders party hereto in their sole discretion):

(a) The Administrative Agent shall have received, in immediately available funds, (i) for the account of each Lender (including, without limitation, Mizuho) that delivered an executed counterpart signature page to this Amendment at or before 5:00 p.m. (New York City time) on October 19, 2018, an amendment fee equal to 0.05% of each such Lender's Commitment as of the Amendment Effective Date (after giving effect to any permanent reductions in the aggregate amount of the Commitments on the Amendment Effective Date), and (ii) to the extent invoiced two days prior to the Closing Date, reimbursement or payment of all reasonable out-of-pocket costs and expenses of the Administrative Agent (including, but not limited to, the reasonable fees and expenses of counsel to the Administrative Agent) required to be reimbursed or paid by the Borrowers hereunder or under any other Loan Document.

(b) The Administrative Agent shall have received the following documents, each document being dated the date of receipt thereof by the Administrative Agent (which date shall be the same for all such documents, except as otherwise specified below), in form and substance satisfactory to the Administrative Agent:

(i) either (A) counterparts of this Amendment duly executed by each of the Borrowers, the Lenders, the Administrative Agent, the Fronting Banks and the Swing Line Lenders or (B) written evidence satisfactory to the Administrative Agent (which may include telecopy or other electronic transmission of a signed signature page of this Amendment) that such parties have signed counterparts of this Amendment;

(ii) Notes requested by any Lender pursuant to Section 2.18(d) of the Amended Agreement, duly completed and executed by each Borrower and payable to such Lender;

(iii) Certified copies of (A) the resolutions of the Board of Directors of each Borrower approving this Amendment (including, without limitation, the extension of the Termination Date and the change (if any) in such Borrower's Borrower Sublimit), the Amended Agreement and the other Loan Documents being executed and delivered in connection with this Amendment to which such Borrower is, or is to be, a party and (B) all documents evidencing any other necessary corporate action with respect to this Amendment (including, without limitation, the extension of the Termination Date and the change (if any) in such Borrower's Borrower Sublimit), the Amended Agreement and such other Loan Documents;

(iv) Good standing certificates with respect to each Borrower issued no earlier than fifteen (15) days prior to the Amendment Effective Date;

(v) A certificate of the Secretary or an Assistant Secretary of each Borrower certifying (A) the names and true signatures of the officers of such Borrower authorized to sign this Amendment and each other Loan Document being executed and delivered in connection with this Amendment to which such Borrower is, or is to become, a party and the other documents to be delivered hereunder, (B) that attached thereto are true and correct copies of the Organizational Documents of such Borrower, in each case as in effect on such date, and (C) that attached thereto are true and correct copies of all governmental and regulatory authorizations and approvals (including such Borrower's Approval) required for (1) the due execution, delivery and performance by such Borrower of this Amendment, the Amended Agreement and each other Loan Document being executed and delivered in connection with this Amendment to which such Borrower is, or is to become, a party this Agreement and each other Loan Document to which such Borrower is, or is to become, a party and (2) in the case of each Borrower whose Borrower Sublimit (as defined in the Existing Credit Agreement) is being increased pursuant to this Amendment, such increase in such Borrower Sublimit;

(vi) Copies of all the Disclosure Documents (it being agreed that those Disclosure Documents publicly available on the SEC's EDGAR Database or on FE's website no later than the Business Day immediately preceding the Amendment Effective Date will be deemed to have been delivered under this clause (vi));

(vii) An opinion of James A. Arcuri, Associate General Counsel of FirstEnergy Service Company, counsel for the Borrowers;

(viii) An opinion of Jones Day, special counsel for the Borrowers;

(ix) Opinions of (A) Venable LLP, special Maryland counsel to PE, (B) Hunton Andrews Kurth LLP, special Virginia counsel to PE and (C) Windels Marx Lane & Mittendorf, LLP, special New Jersey counsel to JCP&L;

(x) In respect of any Borrower that qualifies as a "legal entity customer" under the Beneficial Ownership Regulation, a Beneficial Ownership Certification in relation to such Borrower, in form and substance reasonably satisfactory to any Lender that requests a Beneficial Ownership Certification;

(xi) A certificate of an Authorized Officer of each Borrower (the statements in which shall be true) certifying that, both before and after giving effect to this Amendment (including, without limitation, the extension of the Termination Date and the change in any Borrower's Borrower Sublimit), (A) no event has occurred and is continuing that constitutes an Event of Default or an Unmatured Default with respect to such Borrower and (B) all representations and warranties of such Borrower contained in the Amended Agreement and each other Loan Document to which such Borrower is a party are true and correct in all material respects (or, in the case of any such representation or warranty already qualified

by “Material Adverse Effect” or any other materiality qualification, true and correct in all respects) on and as of the Amendment Effective Date, as though made on and as of such date (other than any such representation or warranty that by its terms refers to a specific date, in which case such representation and warranty shall be true and correct as of such specific date); and

(xii) Such other certifications, opinions, financial or other information, approvals and documents as the Administrative Agent, any Fronting Bank, any Swing Line Lender or any other Lender may have reasonably requested at least one (1) Business Day prior to the Amendment Effective Date, all in form and substance satisfactory to the Administrative Agent, such Fronting Bank, such Swing Line Lender or such other Lender (as the case may be).

(c) FE shall have paid all of the fees payable in accordance with the First Arranger Fee Letter and the Second Arranger Fee Letter (as such terms are defined in that certain Commitment Letter, dated September 28, 2018, among Mizuho, JPMorgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Bank of America, N.A., PNC Capital Markets LLC, PNC Bank, National Association, Barclays Bank PLC, MUFG Bank, Ltd., The Bank of Nova Scotia, Citigroup Global Markets Inc., FE and FirstEnergy Transmission, LLC).

(d) The Administrative Agent shall have received all documentation and information required by regulatory authorities under applicable “know your customer” and anti-money laundering rules and regulations, including, without limitation, the Patriot Act and the Beneficial Ownership Regulation, to the extent such documentation or information is requested by the Administrative Agent on behalf of any Lender prior to the Amendment Effective Date.

SECTION 3. ***Representations and Warranties*****.**

Each Borrower represents and warrants as follows:

(a) ***Due Authorization***. The execution, delivery and performance by it of this Amendment and each other Loan Document being executed and delivered in connection with this Amendment to which such Borrower is, or is to become, a party, and the performance by such Borrower of the Amended Agreement, have been duly authorized by all necessary corporate action on its part and do not, and will not, require the consent or approval of its shareholders or members, as the case may be, other than such consents and approvals as have been duly obtained, given or accomplished.

(b) ***No Violation, Etc.*** Neither the execution, delivery or performance by it of this Amendment or any other Loan Document being executed and delivered in connection with this Amendment to which it is, or is to become, a party, nor the consummation by it of the transactions contemplated hereby or thereby, nor compliance by it with the provisions hereof or thereof, nor the performance by it of the Amended Agreement, contravenes or will contravene, or results or will result in a breach of, any of the provisions of its Organizational Documents, any Applicable Law, or any indenture, mortgage, deed of trust, lease, license or any other agreement or instrument to which it or any of its Subsidiaries is party or by which its property or the property of any of its

Subsidiaries is bound, or results or will result in the creation or imposition of any Lien upon any of its property or the property of any of its Subsidiaries, except to the extent such contravention or breach, or the creation or imposition of any such Lien, individually or in the aggregate, has not had and would not reasonably be expected to have a Material Adverse Effect with respect to such Borrower.

(c) ***Governmental Actions***. No Governmental Action is or will be required in connection with (i) the execution, delivery or performance by it of, or the consummation by it of the transactions contemplated by, this Amendment or any other Loan Document being executed and delivered in connection with this Amendment to which it is, or is to become, a party, or (ii) the performance by it of the Amended Agreement, in each case, other than such Borrower's Approval, as applicable, which has been duly issued and is in full force and effect.

(d) ***Execution and Delivery***. This Amendment and the other Loan Documents being executed and delivered in connection with this Amendment to which it is, or is to become, a party have been or will be (as the case may be) duly executed and delivered by it, and each of this Amendment and the Amended Agreement is, and upon execution and delivery thereof each such other Loan Document will be, the legal, valid and binding obligation of it enforceable against it in accordance with its terms, *subject, however*, to the application by a court of general principles of equity and to the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally.

(e) ***No Material Misstatements.*** The reports, financial statements and other written information furnished by or on behalf of such Borrower to the Administrative Agent, any Fronting Bank or any Lender pursuant to or in connection with this Amendment and the transactions contemplated hereby, when taken together with the Disclosure Documents, do not contain, when taken as a whole, any untrue statement of a material fact and do not omit, when taken as a whole, to state any fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading in any material respect.

(f) ***Litigation.*** There are no actions, suits or proceedings by or before any arbitrator or Governmental Authority pending against or, to the knowledge of such Borrower, threatened against such Borrower or any of its Subsidiaries that involve this Amendment, the Amended Agreement or any other Loan Document.

(g) ***No Default***. No Unmatured Default or Event of Default has occurred and is continuing or would occur as a result of (i) the execution, delivery or performance by such Borrower of this Amendment or any other Loan Document being executed and delivered in connection with this Amendment to which it is, or is to become, a party or (ii) the performance by such Borrower of the Amended Agreement.

SECTION 4. ***Reference to and Effect on the Credit Agreement and the Other Loan Documents.***

(a) Except as expressly amended hereby, all of the representations, warranties, terms, covenants and conditions of the Credit Agreement and the other Loan Documents shall remain in

full force and effect in accordance with their respective terms and are hereby in all respects ratified and confirmed. The amendments set forth herein shall be limited precisely as provided for herein and shall not be deemed to be a waiver of, amendment of, consent to departure from or modification of any term or provision of the Loan Documents or any other document or instrument referred to therein or of any transaction or further or future action on the part of any Borrower requiring the consent of the Administrative Agent, the Fronting Banks, the Swing Line Lenders or the Lenders except to the extent specifically provided for herein. Except as expressly set forth herein, the Administrative Agent and the Lenders have not and shall not be deemed to have waived any of their respective rights and remedies against the Borrowers for any existing or future Unmatured Default or Event of Default. The Administrative Agent, the Fronting Banks, the Swing Line Lenders and the Lenders reserve the right to insist on strict compliance with the terms of the Credit Agreement and the other Loan Documents, and the Borrowers expressly acknowledge such reservation of rights. Any future or additional amendment of any provision of the Credit Agreement or any other Loan Document shall be effective only if set forth in a writing separate and distinct from this Amendment and executed by the appropriate parties in accordance with the terms thereof.

(b) Upon the effectiveness of this Amendment: (i) each reference in the Existing Credit Agreement to “this Agreement”, “hereunder”, “hereof” or words of like import referring to the Existing Credit Agreement shall mean and be a reference to the Amended Agreement; and (ii) each reference in any other Loan Document to “the Credit Agreement”, “thereunder”, “thereof” or words of like import referring to the Existing Credit Agreement shall mean and be a reference to the Amended Agreement. This Amendment shall constitute a “Loan Document” for all purposes under the Credit Agreement and the other Loan Documents.

(c) The execution, delivery and effectiveness of this Amendment shall not, except as expressly provided herein, operate as a waiver of any right, power or remedy of the Lenders, the Administrative Agent, the Fronting Banks or the Swing Line Lenders under the Existing Credit Agreement or any other Loan Document, nor constitute a waiver of any provision of the Existing Credit Agreement or any other Loan Document.

SECTION 5. ***Costs and Expenses*****.**

Each Borrower agrees to pay on demand all reasonable out-of-pocket costs and expenses incurred by the Administrative Agent, each Fronting Bank and each Swing Line Lender in connection with the preparation, execution, delivery, syndication and administration of this Amendment and the other documents to be delivered hereunder, including, without limitation, the reasonable fees and out-of-pocket expenses of counsel for the Administrative Agent, the Fronting Banks and the Swing Line Lenders with respect thereto and with respect to advising the Administrative Agent, the Fronting Banks and each Swing Line Lender as to their rights and responsibilities under this Amendment. Each Borrower further agrees to pay on demand all reasonable out-of-pocket costs and expenses, if any (including, without limitation, reasonable fees and expenses of counsel), incurred by the Administrative Agent, the Fronting Banks, the Swing Line Lenders and the Lenders in connection with the enforcement (whether through negotiations, legal proceedings or otherwise) of this Amendment, the Amended Agreement and the other documents to be delivered hereunder,

including, without limitation, counsel fees and expenses in connection with the enforcement of rights under this Section.

SECTION 6. ***Counterparts*****.**

This Amendment may be executed in any number of counterparts (and by different parties hereto in separate counterparts), each of which when so executed and delivered shall be deemed to be an original and all of which taken together shall constitute but one and the same instrument. Delivery of an executed signature page to this Amendment by facsimile or other electronic transmission (including, without limitation, by Adobe portable document format file (also known as a "PDF" file)) shall be as effective as delivery of a manually signed counterpart of this Amendment.

SECTION 7. ***Governing Law*****.**

This Amendment shall be governed by, and construed in accordance with, the laws of the State of New York.

SECTION 8. ***Miscellaneous*****.**

This Amendment shall be subject to the provisions of Sections 8.05, 8.10, 8.11 and 8.12 of the Credit Agreement, each of which is incorporated by reference herein, *mutatis mutandis*.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK; SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by their respective officers thereunto duly authorized, as of the date first above written.

FIRSTENERGY CORP.
THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
METROPOLITAN EDISON COMPANY
OHIO EDISON COMPANY
PENNSYLVANIA POWER COMPANY
THE TOLEDO EDISON COMPANY
MONONGAHELA POWER COMPANY
PENNSYLVANIA ELECTRIC COMPANY
THE POTOMAC EDISON COMPANY
WEST PENN POWER COMPANY

By */s/ Steven R. Staub*
Name: Steven R. Staub
Title: Vice President and Treasurer

JERSEY CENTRAL POWER & LIGHT COMPANY

By */s/ Weizhong Wang*
Name: Weizhong Wang
Title: Treasurer

MIZUHO BANK, LTD., as Administrative Agent, as a Lender and as a Swing Line Lender

By */s/ Donna DeMagistris*
Name: Donna DeMagistris
Title: Authorized Signatory

JPMORGAN CHASE BANK, N.A., as a Lender and as a Fronting Bank

By */s/ Juan Javellana*
Name: Juan Javellana
Title: Executive Director
BANK OF AMERICA, N.A., as a Lender

By */s/ J.B. Meanor*
Name: JB Meanor
Title: Managing Director

PNC BANK, NATIONAL ASSOCIATION, as a Lender

By */s/ Thomas E. Redmond*
Name: Thomas E. Redmond
Title: Managing Director

MUFG BANK, LTD. (formerly known as The Bank of Tokyo-Mitsubishi UFJ, Ltd.), as a Lender and as a Fronting Bank

By */s/ Jeffrey Flagg*
Name: Jeffrey Flagg
Title: Director
THE BANK OF NOVA SCOTIA, as a Lender and as a Fronting Bank

By */s/ Nick Giarratano*
Name: Nick Giarratano
Title: Director
CITIBANK, N.A., as a Lender and as a Fronting Bank

By */s/ Richard Rivera*
Name: Richard Rivera
Title: Vice President
BARCLAYS BANK PLC, as a Lender and as a Fronting Bank

By */s/ Sydney G. Dennis*
Name: Sydney G. Dennis
Title: Director
COBANK, ACB, as a Lender

By */s/ John H. Kemper*
Name: John H. Kemper
Title: Vice President
CANADIAN IMPERIAL BANK OF
COMMERCE, NEW YORK BRANCH, as a
Lender

By */s/ Gordon R. Eadon*

Name: Gordon R. Eadon
Title: Authorized Signatory

By */s/ Joshua Hogarth*
Name: Joshua Hogarth
Title: Authorized Signatory

ROYAL BANK OF CANADA, as a Lender

By */s/ Justin Painter*
Name: Justin Painter
Title: Authorized Signatory

MORGAN STANLEY BANK, N.A., as a Lender

By */s/ Michael King*
Name: Michael King
Title: Authorized Signatory

MORGAN STANLEY SENIOR FUNDING, INC., as a Lender

By */s/ Michael King*
Name: Michael King
Title: Vice President

SUMITOMO MITSUI BANKING CORPORATION, as a Lender

By */s/ James Weinstein*
Name: James Weinstein
Title: Managing Director

TD BANK, N.A., as a Lender

By */s/ Shannon Batchman*
Name: Shannon Batchman
Title: Senior Vice President

U.S. BANK NATIONAL ASSOCIATION, as a Lender

By */s/ Eric J. Cosgrove*
Name: Eric J. Cosgrove
Title: Senior Vice President

KEYBANK NATIONAL ASSOCIATION, as a Lender

By */s/ Renee M. Bonnell*
Name: Renee M. Bonnell
Title: Vice President

SANTANDER BANK, N.A., as a Lender

By */s/ Andres Barbosa*
Andres Barbosa
Executive Director

By */s/ Daniel Kostman*
Daniel Kostman
Executive Director

FIFTH THIRD BANK, as a Lender

By */s/ William Merritt*
Name: William Merritt
Title: Director II

INDUSTRIAL AND COMMERCIAL BANK OF CHINA LIMITED, NEW YORK BRANCH, as a Lender

By */s/ C. McKay*
Name: Christopher McKay
Title: Director

By */s/ Pinyen Shih*
Name: Pinyeh Shih
Title: Executive Director

THE BANK OF NEW YORK MELLON, as a Lender

By */s/ Richard K. Fronapfel, Jr.*
Name: Richard K. Fronapfel, Jr.
Title: Director

CITIZENS BANK, N.A., as a Lender

By */s/ Stephen A. Maenhout*
Name: Stephen A. Maenhout
Title: Senior Vice President

THE HUNTINGTON NATIONAL BANK, as a Lender

By: */s/ Brian H. Gallagher*
Name: Brian H. Gallagher
Title: Managing Director

FIRST NATIONAL BANK OF PENNSYLVANIA,
as a Lender

By: */s/ Robert G. Henler*
Name: Robert G. Henler
Title: Vice Pres.

SCHEDULE I

List of Commitments and Lending Offices

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
Mizuho Bank, Ltd.	$157,218,750.00	1251 Avenue of the Americas New York, NY 10020 Contact: Adam Cohen Phone: Fax: Email:	Same as Domestic Lending Office
JPMorgan Chase Bank, N.A.	$152,656,250.00	500 Stanton Christiana Road, Ops 2, Floor 3 Newark, DE 19713-2107 Contact: Jiabei Han Phone: Email:	Same as Domestic Lending Office
PNC Bank, National Association	$152,656,250.00	249 First Avenue Pittsburgh, PA 15222 Contact: Maja Kuljic Phone: Fax: Email:	Same as Domestic Lending Office
Bank of America, N.A.	$148,281,250.00	100 North Tryon Street NC1-007-17-18 Charlotte, NC 28255-0001 Contact: Jerry Wells Phone: Email:	Same as Domestic Lending Office
MUFG Bank, Ltd. (formerly known as The Bank of Tokyo-Mitsubishi UFJ, Ltd.)	$148,281,250.00	1251 Avenue of the Americas New York, NY 10020-1104 Contact: Nadia Sleiman Phone: Email:	Same as Domestic Lending Office

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
The Bank of Nova Scotia	$152,656,250.00	40 King Street West, 55th Floor Toronto, ON Canada M5H 1H1 Contact: Nick Giarratano Phone: Fax: Email:	Same as Domestic Lending Office
Citibank, N.A.	$157,281,250.00	388 Greenwich St. New York, NY 10013 Contact: Amit Vasani Phone: Email:	Same as Domestic Lending Office
Barclays Bank PLC	$152,656,250.00	745 7th Avenue New York, NY 10019 Contact: Leah Kaniampuram Phone: Fax: Email:	Same as Domestic Lending Office
CoBank, ACB	$56,312,500.00	6340 S. Fiddlers Green Circle Greenwood Village CO 80111 Contact: Yolanda Fitzpatrick Phone: Email:	Same as Domestic Lending Office
Canadian Imperial Bank of Commerce, New York Branch	$78,125,000.00	30 Madison Avenue, 5th Floor New York, NY 10017 Contact: Gordon Eadon Phone: Fax: Email:	Same as Domestic Lending Office
Royal Bank of Canada	$124,125,000.00	Three World Financial Center 200 Vesey Street New York, NY 10281 Contact: Monica Downer Phone: Fax: Email:	Same as Domestic Lending Office

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
Morgan Stanley Bank, N.A.	$55,525,000.00	1300 Thames Street Wharf, 4th Floor Baltimore, MD 21231 Contact: Morgan Stanley Loan Servicing Phone: Fax: Email:	Same as Domestic Lending Office
Morgan Stanley Senior Funding, Inc.	$68,600,000.00	1300 Thames Street Wharf, 4th Floor Baltimore, MD 21231 Contact: Morgan Stanley Loan Servicing Phone: Fax: Email:	Same as Domestic Lending Office
Sumitomo Mitsui Banking Corporation	$116,875,000.00	277 Park Avenue New York, NY 10172 Contact: Emily Estevez Phone: Fax: Email:	Same as Domestic Lending Office
TD Bank, N.A.	$116,875,000.00	444 Madison Avenue, 2nd Floor New York, NY 10022 Contact: Shannon Batchman Phone: Email:	Same as Domestic Lending Office
U.S. Bank National Association	$116,875,000.00	425 Walnut Street Cincinnati, Ohio 45202 Contact: Eric Cosgrove Phone: Fax: Email:	Same as Domestic Lending Office
KeyBank National Association	$107,937,500.00	127 Public Square Cleveland, OH 44114 Contact: Renee Bonnell Phone: Email:	Same as Domestic Lending Office

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
Santander Bank, N.A.	$95,187,500.00	45 E. 53rd Street New York, NY 10022 Contact: Kyle Hoffman Phone: Email:	Same as Domestic Lending Office
Fifth Third Bank	$80,625,000.00	38 Fountain Square Plaza Cincinnati, Ohio 45263 Contact: Mark Stapleton Phone: Email:	Same as Domestic Lending Office
Industrial and Commercial Bank of China Limited, New York Branch	$111,437,500.00	1633 Broadway, 28th Floor New York, NY 10019 Contact: Yung Tuen Lee Phone: Fax:	Same as Domestic Lending Office
The Bank of New York Mellon	$65,875,000.00	225 Liberty Street, 17th Floor New York, NY 10286 Contact: Richard Fronapfel Phone: Fax: Email:	Same as Domestic Lending Office
Citizens Bank, N.A.	$40,312,500.00	71 S. Wacker Drive, 29th Floor Chicago, IL 60606 Contact: Steve Maenhout Phone: Email:	Fax: 855-724-2361
The Huntington National Bank	$29,437,500.00	41 S. High Street Columbus, OH 43215 Contact: Martin McGinty Phone: Email:	Same as Domestic Lending Office

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
First National Bank of Pennsylvania	$14,187,500.00	4140 East State Street Hermitage, PA 15148 Contact: Robert E Heuler Phone: Fax: Email:	Same as Domestic Lending Office
TOTAL	**$2,500,000,000.00**		

SCHEDULE V

Disclosure Documents

None

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Section 6: EX-10.40 (EXHIBIT 10.40)

Exhibit 10.40

EXECUTION VERSION

AMENDMENT NO. 1 TO CREDIT AGREEMENT

dated as of October 19, 2018

among

FIRSTENERGY TRANSMISSION, LLC,
AMERICAN TRANSMISSION SYSTEMS, INCORPORATED,
MID-ATLANTIC INTERSTATE TRANSMISSION, LLC,
and
TRANS-ALLEGHENY INTERSTATE LINE COMPANY,
as Borrowers,

THE LENDERS NAMED HEREIN,
as Lenders,

PNC BANK, NATIONAL ASSOCIATION,
as Administrative Agent,

and

THE FRONTING BANKS NAMED HEREIN,
as Fronting Banks

MIZUHO BANK, LTD., JPMORGAN CHASE BANK, N.A. and
MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED,
as Joint Lead Arrangers

AMENDMENT NO. 1 TO
CREDIT AGREEMENT

This AMENDMENT NO. 1, dated as of October 19, 2018 (this "***Amendment***"), to the Existing Credit Agreement referred to below, is entered into by and among FirstEnergy Transmission, LLC ("***FET***"), American Transmission Systems, Incorporated ("***ATSI***"), Mid-Atlantic Interstate Transmission, LLC ("***MAIT***") and Trans-Allegheny Interstate Line Company ("***TrAILCo***", and together with FET, ATSI and MAIT, the "***Borrowers***"), the banks and other financial institutions (the "***Lenders***") listed on the signature pages hereof, PNC Bank, National Association ("***PNC***"), as Administrative Agent (in such capacity, the "***Administrative Agent***") for the Lenders hereunder, and the fronting banks (the "***Fronting Banks***") listed on the signature pages hereof.

PRELIMINARY STATEMENTS

1. The Borrowers, the Lenders, the Administrative Agent and the Fronting Banks are parties to that certain Credit Agreement, dated as of December 6, 2016 (the "***Existing Credit Agreement***", as amended by this Amendment, the "***Amended Agreement***", and as the Amended Agreement may hereafter be amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to such terms in the Amended Agreement.

2. The Borrowers desire to amend the Existing Credit Agreement in certain particulars, including, without limitation, to extend the Termination Date by one year to December 6, 2022, and the Lenders, the Administrative Agent and the Fronting Banks have agreed to such amendments on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

SECTION 1. ***Amendments to Existing Credit Agreement.*** The Existing Credit Agreement is, effective as of the date hereof and subject to the satisfaction or waiver of the conditions precedent set forth in Section 2 hereof, hereby amended as follows:

(a) The definition of "*Disclosure Documents*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows

"***Disclosure Documents***" means (i) FE's Annual Report on Form 10-K for the year ended December 31, 2017, Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2018 and June 30, 2018, and Current Reports on Form 8-K filed in 2018 and prior to the Amendment No. 1 Effective Date, (ii) with respect to each other Borrower, such Borrower's (A) consolidated balance sheet as of December 31, 2017, and the related consolidated statements of income, retained earnings and cash flows for the fiscal year then ended, certified by

PricewaterhouseCoopers LLP, with, in each case, any accompanying notes, and (B) unaudited consolidated balance sheet as of June 30, 2018, and the related consolidated statements of income, retained earnings and cash flows for the six-month period then ended, in each case with respect to the foregoing clauses (A) and (B), prepared in accordance with GAAP (but, in the case of such statements that are unaudited, subject to year-end adjustments and the exclusion of detailed footnotes) and copies of which have been furnished to each Lender and each Fronting Bank, and (iii) with respect to any Borrower referenced in clause (ii) above, the matters, if any, described in the portion of Schedule V hereto applicable to such Borrower as indicated thereon.

(c) The definition of "*Eurodollar Rate*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"Eurodollar Rate" means, for the Interest Period for any Eurodollar Rate Advance made in connection with any Borrowing, the greater of (a) 0.00% and (b) the rate of interest *per annum* (rounded upward to the nearest 1/100 of 1%) as calculated by ICE Benchmark Administration Limited (or any other Person which takes over the administration of that rate) and obtained through a nationally recognized service such as the Dow Jones Market Service (Telerate), Reuters or other such service then being used by the Administrative Agent to ascertain such rates of interest (in each case, the "*Service*") as the London interbank offered rate for deposits in Dollars at approximately 11:00 a.m. (London time) two Business Days before the first day of such Interest Period for a period equal to such Interest Period; *provided*, *however*, that if the Administrative Agent in its reasonable discretion determines that such rate is no longer capable of being determined or that such circumstance has not arisen but that the supervisor for the administrator of such rate or a Governmental Authority having jurisdiction over the Administrative Agent has made a public statement identifying a specific date after which such rate shall no longer be used for determining interest rates for loans, then the Administrative Agent and the Borrowers shall endeavor to establish an alternate rate of interest to the rate described in clause (b) above that gives due consideration to any evolving or then-prevailing market convention for determining a rate of interest for syndicated loans in the United States at such time and adequately and fairly reflects the costs to the Lenders of funding Eurodollar Rate Advances (any such proposed alternate rate, a "***LIBOR Successor Rate***"). Upon the Administrative Agent and the Borrowers reaching agreement on a LIBOR Successor Rate, the Administrative Agent and the Borrowers shall enter into an amendment to this Agreement to reflect such LIBOR Successor Rate and such other related changes to this Agreement as may be applicable (a copy of which shall be promptly provided by the Administrative Agent to the Lenders), and notwithstanding anything to the contrary contained in Section 8.01, such amendment shall become effective without any further action or consent of any other party to this Agreement so long as the Administrative Agent shall not have received, within five (5) Business Days after the date a copy of such amendment is provided to the Lenders by the Administrative Agent, a written notice from the

Majority Lenders stating that the Majority Lenders object to such amendment; *provided*, *however*, that if the Administrative Agent has notified the Lenders and the Borrowers that the rate described in clause (b) above is no longer capable of being determined or is no longer used for determining interest rates for loans (such notice being referred to herein as a "***LIBOR Termination Notice***"), then unless and until an amendment implementing a LIBOR Successor Rate is effective, (i) the obligation of the Lenders to make or maintain Eurodollar Rate Advances will be suspended and (ii) the rate of interest set forth in clause (iii) of the definition of "Alternate Base Rate" contained in this Section 1.01 (the "***LIBOR Component***") will no longer be utilized in determining the Alternate Base Rate. Notwithstanding the foregoing, an amendment implementing a LIBOR Successor Rate shall not become effective with respect to any Borrower (other than FET) unless and until such Borrower (A) receives all required Governmental Actions and Approvals (if any) authorizing such Borrower to pay such LIBOR Successor Rate on its Advances hereunder and (B) notifies the Administrative Agent in writing that such Borrower has received all such Governmental Actions and Approvals (or that such Borrower is not required under Applicable Law to obtain any such Governmental Actions or Approvals). Upon receipt of any LIBOR Termination Notice, the Borrowers may revoke any pending request for a Borrowing of, or Conversion to, Eurodollar Rate Advances (to the extent of the impacted Eurodollar Rate Advances or Interest Periods) or, failing that, shall be deemed to have converted such request into a request for a Borrowing of Alternate Base Rate Advances (except that the LIBOR Component will no longer be utilized in determining the Alternate Base Rate for any such Advances) in the amount specified therein.

(d) The definition of "*Federal Funds Rate*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"***Federal Funds Rate***" means, for any period, the greater of (a) 0.00% and (b) a fluctuating interest rate *per annum* (rounded upward, if necessary, to the nearest whole multiple of 1/100 of 1% *per annum*) equal for each day during such period to the weighted average of the rates on overnight Federal funds transactions with members of the Federal Reserve System, as published for such day (or, if such day is not a Business Day, for the next preceding Business Day) by the Federal Reserve Bank of New York, or, if such rate is not so published for any day that is a Business Day, the average rate (rounded upward to the nearest whole multiple of 1/100 of 1% *per annum*, if such average is not such a multiple) charged to PNC on such day on such transactions as determined by the Administrative Agent.

(e) The definition of "*Multiemployer Plan*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"Multiemployer Plan" means a "multiemployer plan" as defined in Section 4001(a)(3) of ERISA to which any Borrower or any member of the Controlled Group has, or may reasonably be expected to have, an obligation to make

contributions, or with respect to which any Borrower has, or may reasonably be expected to incur, liability.

(f) The definition of "*Termination Date*" contained in Section 1.01 of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"***Termination Date***" means December 6, 2022, subject, for certain Lenders, to the extension described in Section 2.18 hereof, or, in any case, the earlier date of termination in whole of the Commitments pursuant to Section 2.06 or Section 6.01 hereof.

(g) The following definitions are hereby added to Section 1.01 of the Existing Credit Agreement in the appropriate alphabetical order:

"***Amendment No. 1***" means Amendment No. 1, dated as of October 19, 2018, by and among the Borrowers, the Lenders party thereto, the Administrative Agent and the Fronting Banks, which Amendment No. 1 amended this Agreement pursuant to the terms thereof.

"***Amendment No. 1 Effective Date***" means the Amendment Effective Date (as defined in Amendment No. 1), which date is October 19, 2018.

"***Beneficial Ownership Certification***" means a certification regarding beneficial ownership as required by the Beneficial Ownership Regulation.

"***Beneficial Ownership Regulation***" means 31 C.F.R. § 1010.230, as amended, or any successor thereto.

(i) Section 1.03 of the Existing Credit Agreement is hereby amended by adding the following sentence at the end thereof:

"Notwithstanding anything to the contrary contained in this Agreement, any lease that was or would have been treated as an operating lease under GAAP as in effect on the Amendment No. 1 Effective Date that would become or be treated as a capital lease solely as a result of a change in GAAP after the Amendment No. 1 Effective Date shall always be treated as an operating lease for purposes of determining compliance with the financial and other covenants set forth in this Agreement and the other Loan Documents."

(j) Section 4.01 of the Existing Credit Agreement is hereby amended by adding the following new subsection (o) at the end thereof:

"(o) ***Beneficial Ownership Certification***. As of the Amendment No. 1 Effective Date, the information included in the Beneficial Ownership Certifications delivered by the Borrowers to the Administrative Agent on or before the Amendment No. 1 Effective Date is true and correct in all respects."

(k) Section 5.01(g)(x) of the Existing Credit Agreement is hereby amended and restated in its entirety to read as follows:

"(x) (A) promptly upon the occurrence of a Reportable Compliance Event, notice of such occurrence, and (B) promptly after any Borrower becomes aware of any change in the information provided in a Beneficial Ownership Certification that would result in a change to the list of beneficial owners identified in parts (c) or (d) of such certification, a written notice specifying any such change; and"

(l) Section 8.01 of the Existing Credit Agreement is hereby amended by deleting the phrase "Subject to Section 2.20(b), no amendment or waiver" in its entirety and substituting therefor the new phrase "Subject to Section 2.20(b) and except as otherwise expressly provided in the definition of "Eurodollar Rate" set forth in Section 1.01, no amendment or waiver".

(m) Section 8.01 of the Existing Credit Agreement is hereby further amended by adding the following sentence at the end thereof:

"Notwithstanding the foregoing, the Borrowers and the Administrative Agent may amend this Agreement and the other Loan Documents without the consent of any Lender or any Fronting Bank to the extent necessary (a) to cure any ambiguity, omission, mistake, error, defect or inconsistency (as determined by the Administrative Agent in its reasonable discretion) or (b) to make administrative changes of a technical or immaterial nature, provided, that, in each case, (x) such amendment does not adversely affect the rights of any Lender or any Fronting Bank and (y) the Lenders and the Fronting Banks shall have received at least five (5) Business Days' prior written notice thereof and the Administrative Agent shall not have received, within five (5) Business Days of the date of such notice to the Lenders and the Fronting Banks, a written notice from the Majority Lenders or any Fronting Bank stating that the Majority Lenders or such Fronting Bank, as the case may be, object to such amendment."

(n) Schedule III (*Disclosure Documents*) to the Existing Credit Agreement is hereby amended and restated in its entirety by Schedule III attached hereto.

SECTION 2. ***Conditions to Effectiveness*****.**

This Amendment shall become effective as of the date first above written (the "***Amendment Effective Date***") when, and only when, the following conditions have been satisfied (or waived by the Administrative Agent and the Lenders party hereto in their sole discretion):

(a) The Administrative Agent shall have received, in immediately available funds, (i) for the account of each Lender (including, without limitation, PNC) that delivered an executed counterpart signature page to this Amendment at or before 5:00 p.m. (New York City time) on October 19, 2018, an amendment fee equal to 0.05% of each such Lender's Commitment as of the Amendment Effective Date, and (ii) to the extent invoiced two days prior to the Closing Date,

reimbursement or payment of all reasonable out-of-pocket costs and expenses of the Administrative Agent (including, but not limited to, the reasonable fees and expenses of counsel to the Administrative Agent) required to be reimbursed or paid by the Borrowers hereunder or under any other Loan Document.

(b) The Administrative Agent shall have received the following documents, each document being dated the date of receipt thereof by the Administrative Agent (which date shall be the same for all such documents, except as otherwise specified below), in form and substance satisfactory to the Administrative Agent:

(i) either (A) counterparts of this Amendment duly executed by each of the Borrowers, the Lenders, the Administrative Agent and the Fronting Banks or (B) written evidence satisfactory to the Administrative Agent (which may include telecopy or other electronic transmission of a signed signature page of this Amendment) that such parties have signed counterparts of this Amendment;

(ii) [Reserved];

(iii) Certified copies of (A) the resolutions of the Board of Directors of each Borrower approving this Amendment (including, without limitation, the extension of the Termination Date), the Amended Agreement and the other Loan Documents being executed and delivered in connection with this Amendment to which such Borrower is, or is to be, a party and (B) all documents evidencing any other necessary corporate action with respect to this Amendment (including, without limitation, the extension of the Termination Date), the Amended Agreement and such other Loan Documents;

(iv) Good standing certificates with respect to each Borrower issued no earlier than fifteen (15) days prior to the Amendment Effective Date;

(v) A certificate of the Secretary or an Assistant Secretary of each Borrower certifying (A) the names and true signatures of the officers of such Borrower authorized to sign this Amendment and each other Loan Document being executed and delivered in connection with this Amendment to which such Borrower is, or is to become, a party and the other documents to be delivered hereunder, (B) that attached thereto are true and correct copies of the Organizational Documents of such Borrower, in each case as in effect on such date, and (C) that attached thereto are true and correct copies of all governmental and regulatory authorizations and approvals (including such Borrower's Approval) required for the due execution, delivery and performance by such Borrower of this Amendment, the Amended Agreement and each other Loan Document being executed and delivered in connection with this Amendment to which such Borrower is, or is to become, a party;

(vi) Copies of all the Disclosure Documents (it being agreed that those Disclosure Documents publicly available on the SEC's EDGAR Database or on FE's website no later than the Business Day immediately preceding the Amendment Effective Date will be deemed to have been delivered under this clause (vi));

(vii) An opinion of James A. Arcuri, Associate General Counsel of FirstEnergy Service Company, counsel for the Borrowers;

(viii) An opinion of Jones Day, special counsel for the Borrowers;

(ix) Opinions of (A) Venable LLP, special Maryland counsel to TrAILCo, and (B) Hunton Andrews Kurth LLP, special Virginia counsel to TrAILCo;

(x) In respect of any Borrower that qualifies as a "legal entity customer" under the Beneficial Ownership Regulation, a Beneficial Ownership Certification in relation to such Borrower, in form and substance reasonably satisfactory to any Lender that requests a Beneficial Ownership Certification;

(xi) A certificate of an Authorized Officer of each Borrower (the statements in which shall be true) certifying that, both before and after giving effect to this Amendment (including, without limitation, the extension of the Termination Date), (A) no event has occurred and is continuing that constitutes an Event of Default or an Unmatured Default with respect to such Borrower and (B) all representations and warranties of such Borrower contained in the Amended Agreement and each other Loan Document to which such Borrower is a party are true and correct in all material respects (or, in the case of any such representation or warranty already qualified by "Material Adverse Effect" or any other materiality qualification, true and correct in all respects) on and as of the Amendment Effective Date, as though made on and as of such date (other than any such representation or warranty that by its terms refers to a specific date, in which case such representation and warranty shall be true and correct as of such specific date); and

(xii) Such other certifications, opinions, financial or other information, approvals and documents as the Administrative Agent, any Fronting Bank or any other Lender may have reasonably requested at least one (1) Business Day prior to the Amendment Effective Date, all in form and substance satisfactory to the Administrative Agent, such Fronting Bank or such other Lender (as the case may be).

(c) The Borrowers and FE shall have paid all of the fees payable in accordance with the First Arranger Fee Letter and the Second Arranger Fee Letter (as such terms are defined in that certain Commitment Letter, dated September 28, 2018, among Mizuho Bank, Ltd., JPMorgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Bank of America, N.A., PNC Capital Markets LLC, PNC, Barclays Bank PLC, MUFG Bank, Ltd., The Bank of Nova Scotia, Citigroup Global Markets Inc., FE and FET).

(d) The Administrative Agent shall have received all documentation and information required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including, without limitation, the Patriot Act and the Beneficial Ownership Regulation, to the extent such documentation or information is requested by the Administrative Agent on behalf of any Lender prior to the Amendment Effective Date.

SECTION 3. ***Representations and Warranties*****.**

Each Borrower represents and warrants as follows:

(a) ***Due Authorization***. The execution, delivery and performance by it of this Amendment and each other Loan Document being executed and delivered in connection with this Amendment to which such Borrower is, or is to become, a party, and the performance by such Borrower of the Amended Agreement, have been duly authorized by all necessary corporate action on its part and do not, and will not, require the consent or approval of its shareholders or members, as the case may be, other than such consents and approvals as have been duly obtained, given or accomplished.

(b) ***No Violation, Etc.*** Neither the execution, delivery or performance by it of this Amendment or any other Loan Document being executed and delivered in connection with this Amendment to which it is, or is to become, a party, nor the consummation by it of the transactions contemplated hereby or thereby, nor compliance by it with the provisions hereof or thereof, nor the performance by it of the Amended Agreement, contravenes or will contravene, or results or will result in a breach of, any of the provisions of its Organizational Documents, any Applicable Law, or any indenture, mortgage, deed of trust, lease, license or any other agreement or instrument to which it or any of its Subsidiaries is party or by which its property or the property of any of its Subsidiaries is bound, or results or will result in the creation or imposition of any Lien upon any of its property or the property of any of its Subsidiaries, except to the extent such contravention or breach, or the creation or imposition of any such Lien, individually or in the aggregate, has not had and would not reasonably be expected to have a Material Adverse Effect with respect to such Borrower.

(c) ***Governmental Actions***. No Governmental Action is or will be required in connection with (i) the execution, delivery or performance by it of, or the consummation by it of the transactions contemplated by, this Amendment or any other Loan Document being executed and delivered in connection with this Amendment to which it is, or is to become, a party, or (ii) the performance by it of the Amended Agreement, in each case, other than such Borrower's Approval, as applicable, which has been duly issued and is in full force and effect.

(d) ***Execution and Delivery***. This Amendment and the other Loan Documents being executed and delivered in connection with this Amendment to which it is, or is to become, a party have been or will be (as the case may be) duly executed and delivered by it, and each of this Amendment and the Amended Agreement is, and upon execution and delivery thereof each such other Loan Document will be, the legal, valid and binding obligation of it enforceable against it in accordance with its terms, *subject, however*, to the application by a court of general principles of equity and to the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally.

(e) ***No Material Misstatements.*** The reports, financial statements and other written information furnished by or on behalf of such Borrower to the Administrative Agent, any Fronting Bank or any Lender pursuant to or in connection with this Amendment and the transactions contemplated hereby, when taken together with the Disclosure Documents, do not contain, when

taken as a whole, any untrue statement of a material fact and do not omit, when taken as a whole, to state any fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading in any material respect.

(f) ***Litigation.*** There are no actions, suits or proceedings by or before any arbitrator or Governmental Authority pending against or, to the knowledge of such Borrower, threatened against such Borrower or any of its Subsidiaries that involve this Amendment, the Amended Agreement or any other Loan Document.

(g) ***No Default***. No Unmatured Default or Event of Default has occurred and is continuing or would occur as a result of (i) the execution, delivery or performance by such Borrower of this Amendment or any other Loan Document being executed and delivered in connection with this Amendment to which it is, or is to become, a party or (ii) the performance by such Borrower of the Amended Agreement.

SECTION 4. ***Reference to and Effect on the Credit Agreement and the Other Loan Documents*****.**

(a) Except as expressly amended hereby, all of the representations, warranties, terms, covenants and conditions of the Credit Agreement and the other Loan Documents shall remain in full force and effect in accordance with their respective terms and are hereby in all respects ratified and confirmed. The amendments set forth herein shall be limited precisely as provided for herein and shall not be deemed to be a waiver of, amendment of, consent to departure from or modification of any term or provision of the Loan Documents or any other document or instrument referred to therein or of any transaction or further or future action on the part of any Borrower requiring the consent of the Administrative Agent, the Fronting Banks or the Lenders except to the extent specifically provided for herein. Except as expressly set forth herein, the Administrative Agent and the Lenders have not and shall not be deemed to have waived any of their respective rights and remedies against the Borrowers for any existing or future Unmatured Default or Event of Default. The Administrative Agent, the Fronting Banks and the Lenders reserve the right to insist on strict compliance with the terms of the Credit Agreement and the other Loan Documents, and the Borrowers expressly acknowledge such reservation of rights. Any future or additional amendment of any provision of the Credit Agreement or any other Loan Document shall be effective only if set forth in a writing separate and distinct from this Amendment and executed by the appropriate parties in accordance with the terms thereof.

(b) Upon the effectiveness of this Amendment: (i) each reference in the Existing Credit Agreement to “this Agreement”, “hereunder”, “hereof” or words of like import referring to the Existing Credit Agreement shall mean and be a reference to the Amended Agreement; and (ii) each reference in any other Loan Document to “the Credit Agreement”, “thereunder”, “thereof” or words of like import referring to the Existing Credit Agreement shall mean and be a reference to the Amended Agreement. This Amendment shall constitute a “Loan Document” for all purposes under the Credit Agreement and the other Loan Documents.

(c) The execution, delivery and effectiveness of this Amendment shall not, except as expressly provided herein, operate as a waiver of any right, power or remedy of the Lenders, the

Administrative Agent or the Fronting Banks under the Existing Credit Agreement or any other Loan Document, nor constitute a waiver of any provision of the Existing Credit Agreement or any other Loan Document.

SECTION 5. ***Costs and Expenses*****.**

Each Borrower agrees to pay on demand all reasonable out-of-pocket costs and expenses incurred by the Administrative Agent and each Fronting Bank in connection with the preparation, execution, delivery, syndication and administration of this Amendment and the other documents to be delivered hereunder, including, without limitation, the reasonable fees and out-of-pocket expenses of counsel for the Administrative Agent and the Fronting Banks with respect thereto and with respect to advising the Administrative Agent and the Fronting Banks as to their rights and responsibilities under this Amendment. Each Borrower further agrees to pay on demand all reasonable out-of-pocket costs and expenses, if any (including, without limitation, reasonable fees and expenses of counsel), incurred by the Administrative Agent, the Fronting Banks and the Lenders in connection with the enforcement (whether through negotiations, legal proceedings or otherwise) of this Amendment, the Amended Agreement and the other documents to be delivered hereunder, including, without limitation, counsel fees and expenses in connection with the enforcement of rights under this Section.

SECTION 6. ***Counterparts*****.**

This Amendment may be executed in any number of counterparts (and by different parties hereto in separate counterparts), each of which when so executed and delivered shall be deemed to be an original and all of which taken together shall constitute but one and the same instrument. Delivery of an executed signature page to this Amendment by facsimile or other electronic transmission (including, without limitation, by Adobe portable document format file (also known as a "PDF" file)) shall be as effective as delivery of a manually signed counterpart of this Amendment.

SECTION 7. ***Governing Law*****.**

This Amendment shall be governed by, and construed in accordance with, the laws of the State of New York.

SECTION 8. ***Miscellaneous*****.**

This Amendment shall be subject to the provisions of Sections 8.05, 8.10, 8.11 and 8.12 of the Credit Agreement, each of which is incorporated by reference herein, *mutatis mutandis*.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK; SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed by their respective officers thereunto duly authorized, as of the date first above written.

FIRSTENERGY TRANSMISSION, LLC
AMERICAN TRANSMISSION SYSTEMS, INCORPORATED
MID-ATLANTIC INTERSTATE TRANSMISSION, LLC
TRANS-ALLEGHENY INTERSTATE LINE COMPANY

By */s/ Steven R. Staub*
Name: Steven R. Staub
Title: Vice President and Treasurer

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

PNC BANK, NATIONAL ASSOCIATION, as Administrative Agent, as a Lender and as a Fronting Bank

By */s/ Thomas E. Redmond*
Name: Thomas E. Redmond
Title: Managing Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

BANK OF AMERICA, N.A., as a Lender and as a Fronting Bank

By */s/ J.B. Meanor*
Name: J.B. Meanor
Title: Managing Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

MIZUHO BANK, LTD., as a Lender

By */s/ Donna DeMagistris*
Name: Donna DeMagistris
Title: Authorized Signatory

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

JPMORGAN CHASE BANK, N.A., as a Lender

By */s/ Juan Javellana*
Name: Juan Javellana
Title: Executive Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

MUFG BANK, LTD. (formerly known as The Bank of Tokyo-Mitsubishi UFJ, Ltd.), as a Lender

By */s/ Jeffrey Flagg*
Name: Jeffrey Flagg
Title: Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

THE BANK OF NOVA SCOTIA, as a Lender

By */s/ Nick Giarratano*
Name: Nick Giarratano
Title: Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

CITIBANK, N.A., as a Lender

By */s/ Richard Rivera*
Name: Richard Rivera
Title: Vice President

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

BARCLAYS BANK PLC, as a Lender

By */s/ Sydney G. Dennis*
Name: Sydney G. Dennis
Title: Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

COBANK, ACB, as a Lender

By */s/ John H. Kemper*
Name: John H. Kemper
Title: Vice President

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

CANADIAN IMPERIAL BANK OF
COMMERCE, NEW YORK BRANCH, as a Lender

By */s/ Gordon R. Eadon*
Name: Gordon R. Eadon
Title: Authorized Signatory

By */s/ Joshua Hogarth*
Name: Joshua Hogarth
Title: Authorized Signatory

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

ROYAL BANK OF CANADA, as a Lender

By */s/ Justin Painter*
Name: Justin Painter
Title: Authorized Signatory

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

MORGAN STANLEY BANK, N.A., as a Lender

By */s/ Michael King*
Name: Michael King
Title: Authorized Signatory

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

MORGAN STANLEY SENIOR FUNDING, INC., as a Lender

By */s/ Michael King*
Name: Michael King
Title: Vice President

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

SUMITOMO MITSUI BANKING CORPORATION, as a Lender

By */s/ James Weinstein*
Name: James Weinstein
Title: Managing Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

TD BANK, N.A., as a Lender

By */s/ Shannon Batchman*
Name: Shannon Batchman
Title: Senior Vice President

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

U.S. BANK NATIONAL ASSOCIATION, as a Lender

By */s/ Eric J. Cosgrove*
Name: Eric J. Cosgrove
Title: Senior Vice President

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

KEYBANK NATIONAL ASSOCIATION, as a Lender

By */s/ Renee M. Bonnell*
Name: Renee M. Bonnell
Title: Vice President

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

SANTANDER BANK, N.A., as a Lender

By */s/ Andres Barbosa*
Andres Barbosa
Executive Director

By */s/ Daniel Kostman*
Daniel Kostman
Executive Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

FIFTH THIRD BANK, as a Lender

By */s/ William Merritt*
Name: William Merritt
Title: Director II

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

THE BANK OF NEW YORK MELLON, as a Lender

By */s/ Richard K. Fronapfel, Jr.*
Name: Richard K. Fronapfel, Jr.
Title: Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

CITIZENS BANK, N.A., as a Lender

By */s/ Stephen A. Maenhout*
Name: Stephen A. Maenhout
Title: Senior Vice President

THE HUNTINGTON NATIONAL BANK, as a Lender

By: */s/ Brian H. Gallagher*
Name: Brian H. Gallagher
Title: Managing Director

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

FIRST NATIONAL BANK OF PENNSYLVANIA,
as a Lender

By: */s/ Robert E. Henler*
Name: Robert E. Henler
Title: Vice Pres.

[Signature Page to Amendment No. 1 to FirstEnergy Transmission, LLC Revolving Credit Agreement]

SCHEDULE III

Disclosure Documents

None

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Section 7: EX-10.63 (EXHIBIT 10.63)

Exhibit 10.63

EXECUTION VERSION

Deal CUSIP Number: 33763UAP6
Term Loan CUSIP Number: 33763UAQ4

U.S. $500,000,000

TERM LOAN CREDIT AGREEMENT

Dated as of October 19, 2018,

Among

FIRSTENERGY CORP.,
as Borrower,

THE BANKS NAMED HEREIN,
as Banks,

and

JPMORGAN CHASE BANK, N.A.,
as Administrative Agent

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED
MIZUHO BANK, LTD.
JPMORGAN CHASE BANK, N.A.
PNC CAPITAL MARKETS LLC
MUFG BANK, LTD.
THE BANK OF NOVA SCOTIA
CITIGROUP GLOBAL MARKETS INC.
BARCLAYS BANK PLC
Joint Lead Arrangers

MIZUHO BANK, LTD.
MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED
Syndication Agents

MUFG BANK, LTD.
PNC CAPITAL MARKETS LLC
BARCLAYS BANK PLC
THE BANK OF NOVA SCOTIA
CITIBANK, N.A.

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SCHEDULES AND EXHIBITS

TERM LOAN CREDIT AGREEMENT

TERM LOAN CREDIT AGREEMENT, dated as of October 19, 2018, among FIRSTENERGY CORP. ("***FE***" or the "***Borrower***"), the banks and other financial institutions (the "***Banks***") listed on the signature pages hereof and JPMORGAN CHASE BANK, N.A. ("***JPMorgan***"), as administrative agent (the "***Administrative Agent***") for the Lenders hereunder.

PRELIMINARY STATEMENTS

(1) The Borrower has requested that the Lenders provide the Borrower a term loan credit facility in the amount of $500,000,000, to be used for working capital and other general corporate purposes.

(2) Subject to the terms and conditions of this Agreement, the Lenders severally, to the extent of their respective Commitments (as defined herein), are willing to establish the requested term loan credit facility in favor of the Borrower.

NOW, **THEREFORE**, in consideration of the premises, the parties hereto agree as follows:

ARTICLE I
DEFINITIONS AND ACCOUNTING TERMS

SECTION 1.01. Certain Defined Terms

As used in this Agreement, the following terms shall have the following meanings (such meanings to be equally applicable to both the singular and plural forms of the terms defined):

"***Administrative Agent***" has the meaning set forth in the preamble hereto.

"***Administrative Questionnaire***" means an administrative questionnaire in a form supplied by the Administrative Agent.

"***Advance***" means an advance by a Lender to the Borrower as part of a Borrowing pursuant to Section 2.01 and refers to an Alternate Base Rate Advance or a Eurodollar Rate Advance, subject to Conversion pursuant to Section 2.07 or 2.08.

"***AESC***" means Allegheny Energy Supply Company, LLC, a Delaware limited liability company, and any successor thereto.

"***Affiliate***" means, as to any Person, any other Person that, directly or indirectly, controls, is controlled by or is under common control with such Person or is a director or officer of such Person.

"***Agent Parties***" has the meaning set forth in Section 8.03(c).

"***Agreement***" means this Term Loan Credit Agreement, as amended, modified and supplemented from time to time.

"***Alternate Base Rate***" means, for any period, a fluctuating interest rate *per annum* as shall be in effect from time to time, which rate *per annum* shall at all times be equal to the highest of (i) the prime rate as most recently published by *The Wall Street Journal* from time to time, (ii) the sum of 1/2 of 1% *per annum* plus the Federal Funds Rate in effect from time to time and (iii) the rate of interest *per annum* (rounded upwards, if necessary, to the nearest 1/100 of 1%) appearing on the Service equal to the one-month London interbank offered rate for deposits in Dollars as determined at approximately 11:00 a.m. (London time) on such day (or if such day is not a Business Day, on the next preceding Business Day), plus 1%.

"***Alternate Base Rate Advance***" means an Advance that bears interest as provided in Section 2.05(a).

"***Anti-Corruption Laws***" means all laws, rules, and regulations of any jurisdiction applicable to the Covered Entities or their respective activities from time to time concerning or relating to terrorism, money-laundering, bribery or corruption, including, without limitation, (i) the United States Foreign Corrupt Practices Act of 1977, as amended from time to time, and the applicable regulations thereunder, and (ii) the United Kingdom's Anti-Bribery Act 2010, as amended from time to time.

"***Applicable Law***" means all applicable laws, statutes, treaties, rules, codes, ordinances, regulations, permits, certificates, orders, interpretations, licenses and permits of any Governmental Authority and judgments, decrees, injunctions, writs, orders or like action of any court, arbitrator or other judicial or quasi-judicial tribunal of competent jurisdiction (including those pertaining to health, safety or the environment or otherwise).

"***Applicable Lending Office***" means, with respect to each Lender, such Lender's Domestic Lending Office in the case of an Alternate Base Rate Advance, and such Lender's Eurodollar Lending Office in the case of a Eurodollar Rate Advance.

"***Applicable Margin***" means, for any Alternate Base Rate Advance or any Eurodollar Rate Advance, the interest rate *per annum* set forth in the relevant row of the table immediately below, determined by reference to the Reference Ratings from time to time in effect:

BASIS FOR PRICING	LEVEL 1 Reference Ratings at least BBB by S&P *or* Baa2 by Moody's.	LEVEL 2 Reference Ratings lower than Level 1 but at least BBB- by S&P *or* Baa3 by Moody's.	LEVEL 3 Reference Ratings lower than BBB- by S&P *and* Baa3 by Moody's, or no Reference Ratings.
Applicable Margin for Eurodollar Rate Advances	0.80%	0.85%	0.95%
Applicable Margin for Alternate Base Rate Advances	0.00%	0.00%	0.00%

For purposes of the foregoing, (i) if there is a difference of one level in Reference Ratings of S&P and Moody's and the higher of such Reference Ratings falls in Level 1 or Level 2, then the higher Reference Rating will be used to determine the pricing level and (ii) if there is a difference of more than one level in Reference Ratings of S&P and Moody's, the Reference Rating that is one level above the lower of such Reference Ratings will be used to determine the pricing level, unless the lower of such Reference Ratings falls in Level 3, in which case the lower of such Reference Ratings will be used to determine the pricing level. If there exists only one Reference Rating, such Reference Rating will be used to determine the pricing level.

"***Approved Fund***" means any Fund that is administered or managed by (i) a Lender, (ii) an Affiliate of a Lender or (iii) an entity or an Affiliate of an entity that administers or manages a Lender.

"***Assignment and Assumption***" means an assignment and assumption entered into by a Lender and an Eligible Assignee (with the consent of any party whose consent is required by Section 8.08(b)), and accepted by the Administrative Agent, in substantially the form of Exhibit A hereto or any other form (including electronic documentation generated by use of an electronic platform) approved by the Administrative Agent (so long as such other form is not disadvantageous to the Borrower in any respect).

"***Attributable Securitization Obligations***" has the meaning set forth in the definition of "Permitted Securitization".

"***Authorized Officer***" means, with respect to any notice, certificate or other communication to be delivered by the Borrower hereunder, the chief executive officer, president, chief financial officer, treasurer, assistant treasurer, vice president or controller of the Borrower (which officer shall have all necessary corporate authorization to deliver such notice, certificate or other communication) or, solely with respect to any Notice of Borrowing, Notice of Conversion or Notice of Prepayment, any other officer or employee of the Borrower designated by any of the foregoing officers in a written notice to the Administrative Agent or any other officer or employee of the Borrower designated in or pursuant to an agreement between the Borrower and the Administrative Agent.

"***Bail-In Action***" means the exercise of any Write-Down and Conversion Powers by the applicable EEA Resolution Authority in respect of any liability of an EEA Financial Institution.

"***Bail-In Legislation***" means, with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule.

"***Bankruptcy Code***" means the Bankruptcy Reform Act of 1978, as amended from time to time, and any Federal law with respect to bankruptcy, insolvency, reorganization, liquidation, moratorium or similar laws affecting creditors' rights generally.

"***Bankruptcy Event***" means, with respect to any Person, such Person has become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee, administrator, custodian, assignee for the benefit of creditors or similar Person charged with the reorganization or liquidation of its business appointed for it, or, in the good faith determination of the Administrative Agent, has taken any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any such proceeding or appointment, provided that a Bankruptcy Event shall not result solely by virtue of any ownership interest, or the acquisition of any ownership interest, in such Person by a Governmental Authority or instrumentality thereof, provided, further, that such ownership interest does not result in or provide such Person with immunity from the jurisdiction of courts within the United States or from the enforcement of judgments or writs of attachment on its assets or permit such Person (or such Governmental Authority or instrumentality) to reject, repudiate, disavow or disaffirm any contracts or agreements made by such Person.

"***Banks***" has the meaning set forth in the preamble hereto.

"***Beneficial Ownership Certification***" shall mean a certification regarding beneficial ownership as required by the Beneficial Ownership Regulation.

"***Beneficial Ownership Regulation***" shall mean 31 C.F.R. § 1010.230, as amended, or any successor thereto.

"***Benefit Plan***" shall mean any of (a) an "employee benefit plan" (as defined in ERISA) that is subject to Title I of ERISA, (b) a "plan" as defined in and subject to Section 4975 of the Code or (c) any Person whose assets include (for purposes of Section 3(42) of ERISA or otherwise for purposes of Title I of ERISA or Section 4975 of the Code) the assets of any such "employee benefit plan" or "plan".

"***Borrower***" has the meaning set forth in the preamble hereto.

"***Borrower Materials***" has the meaning set forth in Section 5.01(g).

"***Borrowing***" means a borrowing consisting of simultaneous Advances of the same Type made by each of the Lenders pursuant to Section 2.01 or Converted pursuant to Section 2.07, 2.08 or 2.11.

"***Business Day***" means a day of the year on which banks are not required or authorized to close in New York City or Akron, Ohio and, if the applicable Business Day relates to any Eurodollar Rate Advances, a day on which dealings are carried on in the London interbank market.

"***Change in Law***" means the occurrence, after the date of this Agreement, of any of the following: (i) the adoption or taking effect of any law, rule, regulation or treaty, (ii) any change (other than any change by way of imposition or increase of reserve requirements included in the Eurodollar Rate Reserve Percentage) in any law, rule, regulation or treaty or in the administration, interpretation or application thereof by any Governmental Authority or (iii) the making or issuance of any request, guideline or directive (whether or not having the force of law) by any Governmental Authority; *provided, however*, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and all requests, rules, guidelines and directives promulgated thereunder, and all requests, rules, guidelines or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or foreign regulatory authorities, in each case pursuant to Basel III, shall in each case be deemed to have been introduced or adopted after the date of this Agreement, regardless of the date enacted or adopted.

"***Change of Control***" has the meaning set forth in Section 6.01(i).

"***Closing Date***" means October 19, 2018.

"***Code***" means the United States Internal Revenue Code of 1986, as amended from time to time, and the applicable regulations thereunder.

"***Commitment***" means, as to any Lender, the amount set forth opposite such Lender's name on Schedule I hereto or, if such Lender has entered into any Assignment and Assumption, set forth for such Lender in the Register maintained by the Administrative Agent pursuant to Section 8.08(c).

"***Commodity Trading Obligations***" means the obligations of any Person under any commodity swap agreement, commodity future agreement, commodity option agreement, commodity cap agreement, commodity floor agreement, commodity collar agreement, commodity hedge agreement, commodity forward contract or derivative transaction and any put, call or other agreement, arrangement or transaction, including natural gas, power, emissions forward contracts, renewable energy credits, or any combination of any such arrangements, agreements and/or transactions, employed in the ordinary course of such Person's business, including such Person's energy marketing, trading and asset optimization business. The term "commodity" shall include electric energy and/or capacity, transmission rights, coal, petroleum, natural gas, fuel transportation rights, emissions allowances, weather derivatives and related products and by-products and ancillary services.

"***Communications***" has the meaning set forth in Section 8.03(a).

"***Consolidated Debt***" means at any date of determination the aggregate Indebtedness of the Borrower and its Consolidated Subsidiaries determined on a consolidated basis in accordance with GAAP, but shall not include (i) Nonrecourse Indebtedness of the Borrower or any of its Subsidiaries, (ii) obligations under leases that shall have been or should be, in accordance with GAAP, recorded as operating leases in respect of which the Borrower or any of its Consolidated Subsidiaries is liable as a lessee, (iii) the aggregate principal and/or face amount of Attributable Securitization Obligations of the Borrower and its Consolidated Subsidiaries and (iv) the aggregate principal amount of Trust Preferred Securities and Junior Subordinated Deferred Interest Obligations not exceeding 15% of the Total Capitalization of the Borrower and its Consolidated Subsidiaries (determined, for purposes of such calculation, without regard to the amount of Trust Preferred Securities and Junior Subordinated Deferred Interest Debt Obligations outstanding); *provided* that the amount of any mandatory principal amortization or defeasance of Trust Preferred Securities or Junior Subordinated Deferred Interest Debt Obligations prior to the Maturity Date shall be included in this definition of Consolidated Debt.

"***Consolidated Subsidiary***" means, as to any Person, any Subsidiary of such Person the accounts of which are or are required to be consolidated with the accounts of such Person in accordance with GAAP.

"***Controlled Group***" means all members of a controlled group of corporations and all trades or businesses (whether or not incorporated) under common control that, together with the Borrower, are treated as a single employer under Section 414(b), (c), (m) or (o) of the Code.

"***Convert***", "***Conversion***" and "***Converted***" each refers to a conversion of Advances of one Type into Advances of another Type or the selection of a new, or the renewal of the same, Interest Period for Eurodollar Rate Advances pursuant to Section 2.07, 2.08 or 2.11.

"***Covered Entity***" means (i) the Borrower and each of its Subsidiaries and (ii) each Person that, directly or indirectly, is in control of a Person described in clause (i) above. For purposes of this definition, control of a Person shall mean the direct or indirect (x) ownership of, or power to vote, 25% or more of the issued and outstanding equity interests having ordinary voting power for the election of directors of such Person or other Persons performing similar functions for such Person, or (y) power to direct or cause the direction of the management and policies of such Person whether by ownership of equity interests, contract or otherwise.

"***Credit Parties***" has the meaning set forth in Section 8.15 hereto.

"***Debt to Capitalization Ratio***" means the ratio of Consolidated Debt to Total Capitalization.

"***Defaulting Lender***" means any Lender that (i) has failed, within three Business Days of the date required to be funded or paid, to (A) fund any portion of its Advances or (B) pay over to the Administrative Agent any other amount required to be paid by it hereunder, unless, in the case of clause (A) or (B) above, such Lender notifies the Administrative Agent in writing that such failure is the result of such Lender's good faith determination that a condition precedent to funding (specifically identified and including the particular default, if any) has not been satisfied, (ii) has notified the Borrower or the Administrative Agent in writing, or has made a public statement to the effect, that it does not intend or expect to comply with any of its funding obligations under this Agreement (unless such writing or public statement indicates that such position is based on such Lender's good faith determination that a condition precedent (specifically identified and including the particular default, if any) to funding a loan under this Agreement cannot be satisfied) or generally under other agreements in which it commits to extend credit, (iii) has failed, within three Business Days after written request by the Administrative Agent, acting in good faith, to provide a certification in writing from an authorized officer of such Lender that it will comply with its obligations to fund prospective Advances, *provided* that such Lender shall cease to be a Defaulting Lender pursuant to this clause (iii) upon the Administrative Agent's receipt of such certification in form and substance reasonably satisfactory to it and the Administrative Agent, (iv) has become the subject of a Bankruptcy Event or (v) has, or has a direct or indirect parent company that has, become the subject of a Bail-in Action.

"***Disclosure Documents***" means FE's Annual Report on Form 10-K for the year ended December 31, 2017, Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2018 and June 30, 2018, and Current Reports on Form 8-K filed in 2018 and prior to the date hereof.

"***Dollars***" and "***$***" each means lawful currency of the United States of America.

"***Domestic Lending Office***" means, with respect to any Lender, the office of such Lender specified as its "Domestic Lending Office" opposite its name on Schedule I hereto or in the Assignment and Assumption pursuant to which it became a Lender, or such other office of such Lender as such Lender may from time to time specify to the Administrative Agent.

"***EEA Financial Institution***" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a Subsidiary of an institution described in clause (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"***EEA Member Country***" means any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

"***EEA Resolution Authority***" means any public administrative authority or any Person entrusted with public administrative authority of any EEA Member Country

(including any delegee) having responsibility for the resolution of any EEA Financial Institution.

"***Eligible Assignee***" means any Person that meets the requirements to be an assignee under Section 8.08(b)(iii), (v) and (vi) (subject to such consents, if any, as may be required under Section 8.08(b)(iii)).

"***Environmental Laws***" means any federal, state or local laws, ordinances or codes, rules, orders, or regulations relating to pollution or protection of the environment, including, without limitation, laws relating to hazardous substances, laws relating to reclamation of land and waterways and laws relating to emissions, discharges, releases or threatened releases of pollutants, contaminants, chemicals, or industrial, toxic or hazardous substances or wastes into the environment (including, without limitation, ambient air, surface water, ground water, land surface or subsurface strata) or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of pollution, contaminants, chemicals, or industrial, toxic or hazardous substances or wastes.

"***ERISA***" means the Employee Retirement Income Security Act of 1974, and the regulations promulgated and rulings issued thereunder, each as amended, modified and in effect from time to time.

"***EU Bail-In Legislation Schedule***" means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor thereto), as in effect from time to time.

"***Eurocurrency Liabilities***" has the meaning assigned to that term in Regulation D of the Board of Governors of the Federal Reserve System, as in effect from time to time.

"***Eurodollar Lending Office***" means, with respect to any Lender, the office of such Lender specified as its "Eurodollar Lending Office" opposite its name on Schedule I hereto or in the Assignment and Assumption pursuant to which it became a Lender (or, if no such office is specified, its Domestic Lending Office), or such other office of such Lender as such Lender may from time to time specify to the Administrative Agent.

"Eurodollar Rate" means, for the Interest Period for any Eurodollar Rate Advance made in connection with any Borrowing, the greater of (a) 0.00% and (b) the rate of interest *per annum* (rounded upward to the nearest 1/100 of 1%) as calculated by ICE Benchmark Administration Limited (or any other Person which takes over the administration of that rate) and obtained through a nationally recognized service such as the Dow Jones Market Service (Telerate), Reuters or other such service then being used by the Administrative Agent to ascertain such rates of interest (in each case, the "*Service*") as the London interbank offered rate for deposits in Dollars at approximately 11:00 a.m. (London time) two Business Days before the first day of such Interest Period for a period equal to such Interest Period; *provided*, *however*, that if the Administrative Agent in its reasonable discretion determines that such rate is no longer capable of being determined or that such circumstance has not arisen but that the supervisor for the administrator of such rate or a Governmental Authority

having jurisdiction over the Administrative Agent has made a public statement identifying a specific date after which such rate shall no longer be used for determining interest rates for loans, then the Administrative Agent and the Borrower shall endeavor to establish an alternate rate of interest to the rate described in clause (b) above that gives due consideration to any evolving or then-prevailing market convention for determining a rate of interest for syndicated loans in the United States at such time and adequately and fairly reflects the costs to the Lenders of funding Eurodollar Rate Advances (any such proposed alternate rate, a "***LIBOR Successor Rate***"). Upon the Administrative Agent and the Borrower reaching agreement on a LIBOR Successor Rate, the Administrative Agent and the Borrower shall enter into an amendment to this Agreement to reflect such LIBOR Successor Rate and such other related changes to this Agreement as may be applicable (a copy of which shall be promptly provided by the Administrative Agent to the Lenders), and notwithstanding anything to the contrary contained in Section 8.01, such amendment shall become effective without any further action or consent of any other party to this Agreement so long as the Administrative Agent shall not have received, within five (5) Business Days after the date a copy of such amendment is provided to the Lenders by the Administrative Agent, a written notice from the Majority Lenders stating that the Majority Lenders object to such amendment; *provided*, *however*, that if the Administrative Agent has notified the Lenders and the Borrower that the rate described in clause (b) above is no longer capable of being determined or is no longer used for determining interest rates for loans, then unless and until an amendment implementing a LIBOR Successor Rate is effective, (i) the obligation of the Lenders to make or maintain Eurodollar Rate Advances will be suspended and (ii) the rate of interest set forth in clause (iii) of the definition of "Alternate Base Rate" contained in this Section 1.01 (the "***LIBOR Component***") will no longer be utilized in determining the Alternate Base Rate. Upon receipt of any such notice pursuant to the immediately preceding *proviso*, the Borrower may revoke any pending request for a Borrowing of, or Conversion to, Eurodollar Rate Advances (to the extent of the impacted Eurodollar Rate Advances or Interest Periods) or, failing that, shall be deemed to have converted such request into a request for a Borrowing of Alternate Base Rate Advances (except that the LIBOR Component will no longer be utilized in determining the Alternate Base Rate for any such Advances) in the amount specified therein.

"***Eurodollar Rate Advance***" means an Advance that bears interest as provided in Section 2.05(b).

"***Eurodollar Rate Reserve Percentage***" of any Lender for the Interest Period for any Eurodollar Rate Advance means the reserve percentage applicable during such Interest Period (or if more than one such percentage shall be so applicable, the daily average of such percentages for those days in such Interest Period during which any such percentage shall be so applicable) under regulations issued from time to time by the Board of Governors of the Federal Reserve System (or any successor) for determining the maximum reserve requirement (including, without limitation, any emergency, supplemental or other marginal reserve requirement) for such Lender with respect to liabilities or assets consisting of or including Eurocurrency Liabilities having a term equal to such Interest Period.

"***Event of Default***" has the meaning set forth in Section 6.01.

"***Exchange Act***" means the Securities Exchange Act of 1934, and the regulations promulgated thereunder, in each case as amended and in effect from time to time.

"***Excluded Taxes***" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient: (i) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (A) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its Applicable Lending Office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (B) that are Other Connection Taxes; (ii) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in an Advance or Commitment pursuant to a law in effect on the date on which (A) such Lender acquires such interest in the Advance or Commitment (other than pursuant to an assignment request by the Borrower under Section 2.17(b)) or (B) such Lender changes its Applicable Lending Office, except in each case to the extent that, pursuant to Section 2.13, amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its Applicable Lending Office; (iii) Taxes attributable to such Recipient's failure to comply with Section 2.13(g) and (iv) any U.S. federal withholding Taxes imposed under FATCA.

"***FATCA***" means Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof and any agreements entered into pursuant to Section 1471(b)(1) of the Code.

"***FE***" has the meaning set forth in the preamble hereto.

"***FE Revolving Credit Agreement***" means the Credit Agreement, dated as of December 6, 2016, as amended by Amendment No. 1 thereto, dated as of October 19, 2018, among FE, The Cleveland Electric Illuminating Company, Met-Ed, Ohio Edison Company, Pennsylvania Power Company, The Toledo Edison Company, Jersey Central Power & Light Company, MP, Penelec, The Potomac Edison Company and West Penn Power Company, as the borrowers, the financial institutions from time to time party thereto as lenders, Mizuho Bank, Ltd., as administrative agent, the fronting banks party thereto from time to time and the swing line lenders party thereto from time to time, as further amended, restated, amended and restated, supplemented or otherwise modified from time to time.

"***Federal Funds Rate***" means, for any period, the greater of (a) 0.00% and (b) a fluctuating interest rate *per annum* (rounded upward, if necessary, to the nearest whole multiple of 1/100 of 1% *per annum*) equal for each day during such period to the weighted average of the rates on overnight Federal funds transactions with members of the Federal

Reserve System, as published for such day (or, if such day is not a Business Day, for the next preceding Business Day) by the Federal Reserve Bank of New York.

"***Fee Letters***" means (i) the fee letter agreement, dated September 28, 2018, among the Borrower, The Cleveland Electric Illuminating Company, Met-Ed, Ohio Edison Company, Pennsylvania Power Company, The Toledo Edison Company, Jersey Central Power & Light Company, MP, Penelec, The Potomac Edison Company, West Penn Power Company, FirstEnergy Transmission, LLC, American Transmission Systems, Incorporated, Mid-Atlantic Interstate Transmission Systems, LLC, Trans-Allegheny Interstate Line Company, Mizuho Bank, Ltd., JPMorgan, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Bank of America, N.A., (ii) the fee letter agreement, dated September 28, 2018, among the Borrower, PNC Capital Markets LLC, PNC Bank, National Association, Barclays Bank PLC, The Bank of Nova Scotia, MUFG Bank, Ltd. and Citigroup Global Markets Inc., and (iii) the fee letter agreement, dated September 28, 2018, between the Borrower and JPMorgan, in each case, as amended, amended and restated, modified or supplemented from time to time.

"***FES***" means FirstEnergy Solutions Corp., an Ohio corporation, and any successor thereto.

"***First Mortgage Indenture***" means a first mortgage indenture pursuant to which the Borrower or any Subsidiary of the Borrower may issue bonds, notes or similar instruments secured by a lien on all or substantially all of the Borrower's or such Subsidiary's fixed assets, as the case may be.

"***Foreign Lender***" means any Lender that is organized under the laws of a jurisdiction other than that in which the Borrower is resident for tax purposes. For purposes of this definition, the United States of America, each State thereof and the District of Columbia shall be deemed to constitute a single jurisdiction.

"***Fund***" means any Person (other than a natural person) that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business.

"***GAAP***" means generally accepted accounting principles in the United States in effect from time to time.

"***Governmental Action***" means all authorizations, consents, approvals, waivers, exceptions, variances, orders, licenses, exemptions, publications, filings, notices to and declarations of or with any Governmental Authority (other than requirements the failure to comply with which will not affect the validity or enforceability of any Loan Document or have a material adverse effect on the transactions contemplated by any Loan Document or any material rights, power or remedy of any Person thereunder or any other action in respect of any Governmental Authority).

"***Governmental Authority***" means the government of the United States of America or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra-national bodies such as the European Union or the European Central Bank) and any group or body charged with setting financial accounting or regulatory capital rules or standards (including, without limitation, the Financial Accounting Standards Board, the Bank for International Settlements or the Basel Committee on Banking Supervision or any successor or similar authority to any of the foregoing).

"***Granting Lender***" has the meaning set forth in Section 8.08(g).

"***Hedging Obligations***" mean, with respect to any Person, the obligations of such Person under any interest rate or currency swap agreement, interest rate or currency future agreement, interest rate collar agreement, interest rate or currency hedge agreement, and any put, call or other agreement or arrangement designed to protect such Person against fluctuations in interest rates or currency exchange rates.

"***Hostile Acquisition***" means any Target Acquisition (as defined below) involving a tender offer or proxy contest that has not been recommended or approved by the board of directors (or similar governing body) of the Person that is the subject of such Target Acquisition. As used in this definition, the term "Target Acquisition" means any transaction, or any series of related transactions, by which any Person directly or indirectly (i) acquires all or substantially all of the assets or ongoing business of any other Person, whether through purchase of assets, merger or otherwise, (ii) acquires (in one transaction or as the most recent transaction in a series of transactions) control of at least a majority in ordinary voting power of the securities of any such Person that have ordinary voting power for the election of directors or (iii) otherwise acquires control of more than a 50% ownership interest in any such Person.

"***Indebtedness***" of any Person means at any date, without duplication, (i) all obligations of such Person for borrowed money, or with respect to deposits or advances of any kind, or for the deferred purchase price of property or services other than trade accounts payable, (ii) all obligations of such Person evidenced by bonds, debentures, notes or similar instruments, (iii) all obligations of such Person upon which interest charges are customarily paid, (iv) all obligations under leases that shall have been or should be, in accordance with GAAP, recorded as capital leases in respect of which such Person is liable as lessee, (v) withdrawal liability incurred under ERISA by such Person or any of its affiliates to any Multiemployer Plan, (vi) reimbursement obligations of such Person (whether contingent or otherwise) in respect of letters of credit, bankers acceptances, surety or other bonds and similar instruments, (vii) all Indebtedness of others secured by a Lien on any asset of such Person, whether or not such Indebtedness is assumed by such Person and (viii) obligations of such Person under direct or indirect guaranties in respect of, and obligations (contingent

or otherwise) to purchase or otherwise acquire, or otherwise to assure a creditor against loss in respect of, indebtedness or obligations of others of the kinds referred to above.

"***Indemnified Person***" has the meaning set forth in Section 8.05(c) hereto.

"***Indemnified Taxes***" means (i) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of the Borrower under any Loan Document and (ii) to the extent not otherwise described in clause (i), Other Taxes.

"***Information***" has the meaning set forth in Section 8.17.

"***Interest Period***" means, for each Eurodollar Rate Advance made as part of the same Borrowing, the period commencing on the date of such Eurodollar Rate Advance or the date of the Conversion of any Advance into such Eurodollar Rate Advance and ending on the last day of the period selected by the Borrower pursuant to the provisions below and, thereafter in the case of Advances, each subsequent period commencing on the last day of the immediately preceding Interest Period and ending on the last day of the period selected by the Borrower pursuant to the provisions below. The duration of each such Interest Period shall be, in the case of any Eurodollar Rate Advance, one week or one, two, three or six months, in each case, as the Borrower may select by notice to the Administrative Agent pursuant to Section 2.02(a) or Section 2.08(a); *provided, however,* that:

(i) the Borrower may not select any Interest Period that ends after the Maturity Date;

(ii) Interest Periods commencing on the same date for Advances made as part of the same Borrowing shall be of the same duration;

(iii) no more than five different Interest Periods shall apply to outstanding Eurodollar Rate Advances on any date of determination; and

(iv) whenever the last day of any Interest Period would otherwise occur on a day other than a Business Day, the last day of such Interest Period shall be extended to occur on the next succeeding Business Day, *provided*, that if such extension would cause the last day of such Interest Period to occur in the next following calendar month, the last day of such Interest Period shall occur on the next preceding Business Day.

"***IRS***" means the United States Internal Revenue Service.

"***JPMorgan***" has the meaning set forth in the preamble hereto.

"***Junior Subordinated Deferred Interest Debt Obligations***" means subordinated deferrable interest debt obligations of the Borrower or any of its Subsidiaries (i) for which the maturity date is subsequent to the Maturity Date and (ii) that are fully subordinated in right of payment to the Indebtedness hereunder.

"***Lenders***" means the Banks listed on the signature pages hereof and each assignee of a Bank or another Lender that shall become a party hereto pursuant to Section 8.08.

"***Lien***" means, with respect to any asset, any mortgage, deed of trust, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset. For the purposes of this Agreement, a Person or any of its Subsidiaries shall be deemed to own, subject to a Lien, any asset that it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such asset.

"***Loan Documents***" means this Agreement, any Note and the Fee Letters.

"***Majority Lenders***" means, at any time, Lenders having in excess of 50% in interest of the Commitments in effect at such time, or, if all Commitments have terminated, Lenders owed in excess of 50% of the then aggregate unpaid principal amount of the Advances owing to Lenders at such time. The Commitments and outstanding Advances of any Defaulting Lender shall be disregarded in determining Majority Lenders at any time.

"***Margin Stock***" has the meaning assigned to that term in Regulation U issued by the Board of Governors of the Federal Reserve System, and as amended and in effect from time to time.

"***Material Adverse Effect***" means (i) any material adverse effect on the business, property, operations or financial condition of the Borrower and its Consolidated Subsidiaries, taken as a whole, or (ii) any material adverse effect on the validity or enforceability against the Borrower of this Agreement or any Note.

"***Maturity Date***" means October 19, 2020 or the earlier date of termination of the Commitments or acceleration of the maturity of the Advances pursuant to Section 6.01 hereof.

"***Met-Ed***" means Metropolitan Edison Company, a Pennsylvania corporation, and any successor thereto.

"***Moody's***" means Moody's Investors Service, Inc.

"***MP***" means Monongahela Power Company, an Ohio corporation, and any successor thereto.

"***Multiemployer Plan***" means a "multiemployer plan" as defined in Section 4001(a)(3) of ERISA to which the Borrower or any member of the Controlled Group has, or may reasonably be expected to have, an obligation to make contributions, or with respect to which the Borrower has, or may reasonably be expected to incur, liability.

"***Non-Consenting Lender***" means any Lender that does not approve any consent, waiver or amendment that (i) requires the approval of all affected Lenders in accordance with the terms of Section 8.01 and (ii) has been approved by the Majority Lenders.

"***Nonrecourse Indebtedness***" means, with respect to the Borrower and its Subsidiaries, (i) any Indebtedness that finances the acquisition, development, construction or improvement of an asset in respect of which the Person to which such Indebtedness is owed has no recourse whatsoever to the Borrower or any of its Affiliates and (ii) any Indebtedness existing on the date of this Agreement that finances the ownership or operation of an asset in respect of which the Person to which such Indebtedness is owed has no recourse whatsoever to the Borrower or any of its Affiliates, in each case of clauses (i) and (ii), other than:

(A) recourse to the named obligor with respect to such Indebtedness (the "***Debtor***") for amounts limited to the cash flow or net cash flow (other than historic cash flow) from the asset; and

(B) recourse to the Debtor for the purpose only of enabling amounts to be claimed in respect of such Indebtedness in an enforcement of any security interest or lien given by the Debtor over the asset or the income, cash flow or other proceeds deriving from the asset (or given by any shareholder or the like in the Debtor over its shares or like interest in the capital of the Debtor) to secure the Indebtedness, but only if the extent of the recourse to the Debtor is limited solely to the amount of any recoveries made on any such enforcement; and

(C) recourse to the Debtor generally or indirectly to any Affiliate of the Debtor, under any form of assurance, undertaking or support, which recourse is limited to a claim for damages (other than liquidated damages and damages required to be calculated in a specified way) for a breach of an obligation (other than a payment obligation or an obligation to comply or to procure compliance by another with any financial ratios or other tests of financial condition) by the Person against which such recourse is available.

"***Note***" means any promissory note issued at the request of a Lender pursuant to Section 2.15 in the form of Exhibit B hereto.

"***Notice of Borrowing***" means a notice of a Borrowing pursuant to Section 2.02(a), which shall be substantially in the form of Exhibit C-1 or such other form as may be approved by the Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approved by the Administrative Agent), appropriately completed and signed by an Authorized Officer.

"***Notice of Conversion***" means a notice of a Conversion of Advances pursuant to Section 2.08 or 2.11, which shall be substantially in the form of Exhibit C-2 or such other form as may be approved by the Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approved by the Administrative Agent), appropriately completed and signed by an Authorized Officer.

"***Notice of Prepayment***" means a notice of prepayment of Advances, which shall be substantially in the form of Exhibit C-3 or such other form as may be approved by the

Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approved by the Administrative Agent), appropriately completed and signed by an Authorized Officer.

"***OECD***" means the Organization for Economic Cooperation and Development.

"***OFAC***" means The Office of Foreign Assets Control of the U.S. Department of the Treasury.

"***Organizational Documents***" means, as applicable to any Person, the charter, code of regulations, articles of incorporation, by-laws, certificate of formation, operating agreement, certificate of partnership, limited liability company agreement, operating agreement, partnership agreement, certificate of limited partnership, limited partnership agreement or other constitutive documents of such Person.

"***Other Connection Taxes***" means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Advance or Loan Document).

"***Other Taxes***" means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment (other than an assignment made pursuant to Section 2.17(b)).

"***Participant***" has the meaning set forth in Section 8.08(d).

"***Participant Register***" has the meaning set forth in Section 8.08(d).

"***Patriot Act***" means the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001), as in effect from time to time.

"***PBGC***" means the Pension Benefit Guaranty Corporation and any entity succeeding to any or all of its functions under ERISA.

"***Penelec***" means Pennsylvania Electric Company, a Pennsylvania corporation, and any successor thereto.

"***Percentage***" means, in respect of any Lender on any date of determination, the quotient (expressed as a percentage carried out to the ninth decimal place) obtained by (i) dividing such Lender's Commitment on such day by the total of the Commitments on such

day, or (ii) if the Commitments have terminated or expired, dividing the aggregate unpaid principal amount of the Advances owing to such Lender on such day by the aggregate unpaid principal amount of all Advances owing to the Lenders on such day.

"***Permitted Obligations***" mean (i) nonspeculative Hedging Obligations of any Person and its Subsidiaries arising in the ordinary course of business and in accordance with such Person's established risk management policies that are designed to protect such Person against, among other things, fluctuations in interest rates or currency exchange rates and which in the case of agreements relating to interest rates shall have a notional amount no greater than the payments due with respect to the applicable obligations being hedged and (ii) Commodity Trading Obligations. For the avoidance of doubt, such transactions shall be considered nonspeculative if undertaken in conformance with FE's Corporate Risk Management Policy then in effect, as approved by FE's Audit Committee, together with the Approved Business Unit Risk Management Policies referenced thereunder.

"***Permitted Securitization***" means, for the Borrower and its Subsidiaries, any sale, assignment, conveyance, grant and/or contribution, or series of related sales, assignments, conveyances, grants and/or contributions, by the Borrower or any of its Subsidiaries of Receivables (or purported sale, assignment, conveyance, grant and/or contribution) to a trust, corporation or other entity, where the purchase of such Receivables may be funded or exchanged in whole or in part by the incurrence or issuance by the applicable Securitization SPV, if any, of Indebtedness or securities (such Indebtedness and securities being "***Attributable Securitization Obligations***") that are to be secured by or otherwise satisfied by payments from, or that represent interests in, the cash flow derived primarily from such Receivables (*provided*, *however*, that "Indebtedness" as used in this definition shall not include Indebtedness incurred by a Securitization SPV owed to the Borrower or any of its Subsidiaries, which Indebtedness represents all or a portion of the purchase price or other consideration paid by such Securitization SPV for such receivables or interests therein), where (i) any representation, warranty, covenant, recourse, repurchase, hold harmless, indemnity or similar obligations of the Borrower or any of its Subsidiaries, as applicable, in respect of Receivables sold, assigned, conveyed, granted or contributed, or payments made in respect thereof, are customary for transactions of this type, and do not prevent the characterization of the transaction as a true sale under Applicable Laws (including debtor relief laws) and (ii) any representation, warranty, covenant, recourse, repurchase, hold harmless, indemnity or similar obligations of any Securitization SPV in respect of Receivables sold, assigned, conveyed, granted or contributed or payments made in respect thereof, are customary for transactions of this type.

"***Person***" means an individual, partnership, corporation (including a business trust), limited liability company, joint stock company, trust, unincorporated association, joint venture or other entity, or a government or any political subdivision or agency thereof.

"***Plan***" means, at any time, an "employee pension benefit plan" (as defined in Section 3(2) of ERISA), other than a Multiemployer Plan, that is covered by Title IV of ERISA or subject to the minimum funding standards under Section 412 or 430 of the Code and (i) is

(A) maintained by or contributed to by (or to which there is or may be an obligation to contribute to by) the Borrower or any member of the Controlled Group, or (B) maintained pursuant to a collective bargaining agreement or any other arrangement under which more than one employer makes contributions, or (ii) as to which the Borrower or a member of the Controlled Group has within the preceding five plan years maintained, contributed to or had an obligation to contribute to.

"***Platform***" has the meaning set forth in Section 5.01(g).

"***PPUC Order***" means the Pennsylvania Public Utility Commission opinion and order *Pennsylvania Public Utility Commission v. Pennsylvania Electric Company* and *Pennsylvania Public Utility Commission v. Metropolitan Edison Company* [consolidated], 210 WL 2911737 (Pa.P.U.C.) (March 3, 2010), as subsequently affirmed by an opinion and order of the Commonwealth Court of Pennsylvania on June 14, 2011, *Metropolitan Edison Company v. Pennsylvania Public Utility Commission*, 22 A.3d 353 (Pa.Commw. 2011), and left undisturbed by the United States District Court for the Eastern District of Pennsylvania in its order issued on September 30, 2013 (Civil Action No. 11-cv-04474), which order was affirmed by the United States Court of Appeals for the Third Circuit on September 16, 2014, and the petition for rehearing was denied on October 15, 2014. A petition for writ of certiorari was filed with the United States Supreme Court on February 12, 2015, which was denied on May 26, 2015.

"***PTE***" shall mean a prohibited transaction class exemption issued by the U.S. Department of Labor, as any such exemption may be amended from time to time.

"***Public Lender***" has the meaning set forth in Section 5.01(g).

"***Receivables***" means any accounts receivable, payment intangibles, notes receivable, rights to receive future payments and related rights (whether now existing or arising or acquired in the future, whether constituting accounts, chattel paper, instruments, general intangibles or otherwise, and including the right to payment of any interest or finance charges), including (i) financial transmission rights ("***FTRs***") or any other rights to payment from PJM Interconnection LLC or another regional transmission authority of the Borrower or any of its Subsidiaries or (ii) the right to impose, charge, collect and receive special, irrevocable, nonbypassable charges based upon the consumption of electricity imposed pursuant to Applicable Law on the Borrower's or any of its Subsidiaries' ratepayers, and any supporting obligations and other financial assets related thereto (including all collateral securing such accounts receivables, FTRs or other assets, contracts and contract rights, all guarantees with respect thereto, and all proceeds thereof) that are transferred, or in respect of which security interests are granted in one or more transactions that are customary for asset securitizations of such Receivables.

"***Recipient***" means, as applicable, (i) the Administrative Agent and (ii) any Lender.

"***Reference Ratings***" means the ratings assigned by S&P and Moody's to the senior unsecured non-credit enhanced debt of the Borrower; *provided* that, if there is no such rating,

"Reference Ratings" shall mean the ratings that are one level below the respective ratings assigned by S&P and Moody's to the senior secured debt of the Borrower.

"***Register***" has the meaning set forth in Section 8.08(c).

"***Related Parties***" means, with respect to any Person, such Person's Affiliates and the partners, directors, officers, employees, agents, trustees, administrators, managers, advisors and representatives of such Person and of such Person's Affiliates.

"***Reportable Compliance Event***" means that any Covered Entity becomes a Sanctioned Person, or is charged by indictment, criminal complaint or similar charging instrument, arraigned, or custodially detained in connection with any Anti-Corruption Law or any predicate crime to any Anti-Corruption Law, or has knowledge of facts or circumstances to the effect that it is reasonably likely that any aspect of its operations is in actual or probable violation of any Anti-Corruption Law.

"***Resignation Effective Date***" has the meaning set forth in Section 7.07(a).

"***S&P***" means S&P Global Ratings, a business unit of Standard & Poor's Financial Services LLC, a subsidiary of S&P Global Inc.

"***Sanctioned Country***" means, at any time, a region, country or territory which is, or whose government is, the subject or target of any Sanctions (at the date of this Agreement, the Crimea region of Ukraine, Cuba, Iran, North Korea and Syria).

"***Sanctioned Person***" means (a) any Person named on the list of Specially Designated Nationals maintained by OFAC, or any other Sanctions-related list of designated Persons maintained by the U.S. Department of State, the U.S. Department of Commerce, the U.S. Department of the Treasury or any other U.S. Governmental Authority, or maintained by the United Nations Security Council, Her Majesty's Treasury of the United Kingdom, the European Union or any member state thereof, as may be amended, supplemented or substituted from time to time, (b) any Person that is (i) operating, located, organized or resident in a Sanctioned Country, to the extent such presence in the Sanctioned Country means that such Person is the target of Sanctions, or (ii) the subject or target of any Sanctions, or (c) any Person controlled by any such Person described in the foregoing clause (a) or clause (b). For purposes of the foregoing clause (c), "control" shall have the meaning ascribed to such term in the definition of "Covered Entity".

"***Sanctions***" means economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the U.S. government, including those administered by OFAC, the U.S. Department of State or the U.S. Department of Treasury, or (b) the United Nations Security Council, the European Union or Her Majesty's Treasury of the United Kingdom.

"***SEC***" means the United States Securities and Exchange Commission.

"***Securitization SPV***" means any trust, partnership or other Person established by the Borrower or a Subsidiary of the Borrower to implement a Permitted Securitization.

"***Service***" has the meaning set forth in the definition of "Eurodollar Rate".

"***Significant Subsidiaries***" means (i) The Cleveland Electric Illuminating Company, Met-Ed, Ohio Edison Company, Pennsylvania Power Company, The Toledo Edison Company, Jersey Central Power & Light Company, MP, Penelec, The Potomac Edison Company, West Penn Power Company, FirstEnergy Transmission, LLC, American Transmission Systems, Incorporated, Trans-Allegheny Interstate Line Company and Mid-Atlantic Interstate Transmission, LLC, and any successor to any of them, and (ii) any significant subsidiary (as such term is defined in Regulation S-X of the SEC (17 C.F.R. §210.1-02(w)), or any successor provision) of the Borrower (excluding Securitization SPVs); *provided*, *however*, that the Unregulated Subsidiaries shall be specifically excluded from the definition of Significant Subsidiaries.

"***SPC***" has the meaning set forth in Section 8.08(g).

"***Subsidiary***" means, with respect to any Person, any corporation or other entity of which securities or other ownership interests having ordinary voting power to elect a majority of the Board of Directors or other persons performing similar functions are at the time directly or indirectly owned by such a Person, or one or more Subsidiaries, or by such Person and one or more of its Subsidiaries.

"***Taxes***" means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"***Termination Event***" means (i) a Reportable Event described in Section 4043(c) of ERISA and the regulations issued thereunder (other than a Reportable Event not subject to the provision for 30-day notice to the PBGC under such regulations), or (ii) the withdrawal of the Borrower or any member of the Controlled Group from a Plan during a plan year in which it was a "substantial employer" as defined in Section 4001(a)(2) of ERISA, or (iii) a cessation of operations with respect to which the Borrower or any member of the Controlled Group has incurred liability under Section 4062(e) of ERISA, or (iv) the filing of a notice of intent to terminate a Plan or the treatment of a Plan amendment as a termination under Section 4041 or 4042 of ERISA, or (v) the institution of proceedings to terminate a Plan by the PBGC, or (vi) any other event or condition that might constitute grounds under Section 4042 of ERISA for the termination of, or the appointment by a court of competent jurisdiction of a trustee to administer, any Plan.

"***Total Capitalization***" means, at any date of determination, the sum, without duplication, of (i) Consolidated Debt, (ii) the capital stock (but excluding treasury stock and capital stock subscribed and unissued) and other equity accounts (including retained earnings and paid in capital but excluding accumulated other comprehensive income and loss) of the

Borrower and its Consolidated Subsidiaries, (iii) consolidated equity of the preference stockholders of the Borrower and its Consolidated Subsidiaries, and (iv) the aggregate principal amount of Trust Preferred Securities and Junior Subordinated Deferred Interest Debt Obligations of the Borrower and its Consolidated Subsidiaries; *provided*, *however*, that, commencing with the fiscal quarter ending December 31, 2018 and for each fiscal quarter ending thereafter, "***Total Capitalization***" shall be determined subject to the following adjustments:

(A) there shall be excluded in such determination the following after-tax effects resulting from non-cash write-downs and non-cash charges occurring and recognized for the periods indicated below as reflected in the consolidated financial statements of the Borrower for such periods:

(1) in respect of pension and other postemployment benefits occurring and recognized in fiscal years 2011 and 2012, which shall not exceed in the aggregate $691,600,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation);

(2) in respect of asset impairments attributable to the Albright, Rivesville and Willow Island Plants owned by MP, the Armstrong and R. Paul Plants owned by AESC, and the Bay Shore (Units 2-4 only), Eastlake (Units 4-5 only), Fremont and Richland Plants owned by FirstEnergy Generation, LLC occurring and recognized in fiscal year 2011, which shall not exceed in the aggregate $255,400,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation);

(3) in respect of asset impairments attributable to the Hatfield's Ferry Power Station and the Mitchell Power Station owned by AESC occurring and recognized in fiscal year 2013 through September 30, 2013, which shall not exceed in the aggregate $317,300,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation); and

(4) in respect of asset impairments attributable to the power generation assets owned by the Unregulated Subsidiaries occurring and recognized during the fiscal quarter ending December 31, 2016 and from time to time thereafter, which shall not exceed in the aggregate $5,500,000,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation); and

(B) in addition to the adjustments described in clause (A) above, there shall be excluded in such determination the after-tax effects resulting from non-cash write-downs and non-cash charges attributable or relating to the following: (1)(i) pension and other postemployment benefits, (ii) impairment of regulatory and other long-lived assets, (iii) disallowance of regulatory assets, and (iv) goodwill impairment, in each case, occurring and recognized during the fiscal quarter ended December 31, 2013 and in any fiscal quarter ended or ending thereafter as reflected in the consolidated financial statements of the

Borrower for such periods, and (2) disallowance of regulatory assets consisting of marginal transmission line losses of Met-Ed and Penelec occurring during the period from January 11, 2007 through December 31, 2010 as described in the PPUC Order, in each case, occurring and recognized during the fiscal quarter ended September 30, 2013 as reflected in the consolidated financial statements of the Borrower for such period, but such adjustments shall not exceed in the aggregate $1,500,000,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation).

"***Trust Preferred Securities***" means any securities, however denominated, (i) issued by the Borrower or any Consolidated Subsidiary of the Borrower, (ii) that are not subject to mandatory redemption or the underlying securities, if any, of which are not subject to mandatory redemption, (iii) that are perpetual or mature no less than 30 years from the date of issuance, (iv) the indebtedness issued in connection with which, including any guaranty, is subordinate in right of payment to the unsecured and unsubordinated indebtedness of the issuer of such indebtedness or guaranty, and (v) the terms of which permit the deferral of the payment of interest or distributions thereon to a date occurring after the Maturity Date.

"***Type***" means the designation of a Borrowing or an Advance as a Eurodollar Rate Borrowing or Advance or as an Alternate Base Rate Borrowing or Advance.

"***United States***" and "***U.S.***" each means the United States of America.

"***Unmatured Default***" means any event that, with the giving of notice or the passage of time, or both, would constitute an Event of Default.

"***Unregulated Money Pool Agreement***" means the FirstEnergy Substitute Non-Utility Money Pool Agreement, dated as of January 1, 2018, among the Borrower, FirstEnergy Service Company and certain non-utility Subsidiaries of the Borrower, as amended, modified, restated or replaced from time to time.

"***Unregulated Subsidiaries***" means FES, AESC, FirstEnergy Nuclear Operating Company, Bay Shore Power Company and, as applicable, their respective Subsidiaries.

"***U.S. Person***" means any Person that is a "United States person" as defined in Section 7701(a)(30) of the Code.

"***U.S. Tax Compliance Certificate***" has the meaning set forth in Section 2.13(g)(ii)(B)(iii).

"***Withholding Agent***" means the Borrower and the Administrative Agent.

"***Write-Down and Conversion Powers***" means, with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule.

SECTION 1.02. Computation of Time Periods.

In this Agreement in the computation of periods of time from a specified date to a later specified date, the word "from" means "from and including" and the words "to" and "until" each means "to but excluding".

SECTION 1.03. Accounting Terms.

All accounting terms not specifically defined herein shall be construed in accordance with GAAP consistent with those applied in the preparation of the financial statements referred to in Section 4.01(g). Notwithstanding anything to the contrary contained in this Agreement, any lease that was or would have been treated as an operating lease under GAAP as in effect on the Closing Date that would become or be treated as a capital lease solely as a result of a change in GAAP after the Closing Date shall always be treated as an operating lease for purposes of determining compliance with the financial and other covenants set forth in this Agreement and the other Loan Documents.

SECTION 1.04. Terms Generally.

Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation". The word "will" shall be construed to have the same meaning and effect as the word "shall". Unless the context requires otherwise, (i) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, amended and restated, supplemented or otherwise modified (subject to any restrictions on such amendments, restatements, supplements or modifications set forth herein), (ii) any reference herein to any Person shall be construed to include such Person's successors and assigns, (iii) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provisions hereof, (iv) all references herein to Articles, Sections, Exhibits and Schedules shall be construed to refer to Articles and Sections of, and Exhibits and Schedules to, this Agreement, and (v) the definitions of terms herein shall apply equally to the singular and plural forms of the terms defined.

ARTICLE II
AMOUNTS AND TERMS OF THE ADVANCES

SECTION 2.01. The Advances.

Each Lender severally agrees, on the terms and conditions hereinafter set forth, to make Advances to the Borrower in Dollars only on the Closing Date, in an aggregate amount not to exceed

at any time outstanding the Commitment of such Lender. Each Borrowing shall be in an aggregate amount not less than $5,000,000 or an integral multiple of $1,000,000 in excess thereof and shall consist of Advances having the same Interest Period made or Converted on the same day by the Lenders ratably according to their respective Commitments. The Borrower may make multiple Borrowings on the Closing Date, each with a different Interest Period, provided, that all Advances made as part of a single Borrowing will have the same Interest Period. Within the limits of each Lender's Commitment, and subject to the conditions set forth in Article III and the other terms and conditions hereof, the Borrower may request Borrowings hereunder for funding on the Closing Date, and repay or prepay Advances pursuant to Section 2.09; *provided*, *however*, that once repaid or prepaid, no Advances may be reborrowed. Any unused portion of the Commitments will terminate on the making of the Borrowings on the Closing Date.

SECTION 2.02. Making the Advances.

(a) The Borrowings to be made on the Closing Date pursuant to Section 2.01 shall be made on notice, which may be given by telephone or a Notice of Borrowing (*provided*, that any telephonic notice must be confirmed immediately by delivery to the Administrative Agent of a Notice of Borrowing). Such Notice of Borrowing must be given by the Borrower to the Administrative Agent (i) in the case of a Borrowing comprising Eurodollar Rate Advances, not later than 11:00 a.m. (New York time) on the third Business Day prior to the Closing Date (or such other time as the Administrative Agent and the Lenders may agree in their sole discretion), and (ii) in the case of a Borrowing comprising Alternate Base Rate Advances, not later than 11:00 a.m. (New York time) on the Closing Date, and the Administrative Agent shall give to each Lender prompt notice thereof. Such telephonic notice and Notice of Borrowing shall specify the requested (A) Type of Advances to be made in connection with such Borrowing, (B) aggregate amount of such Borrowing and (C) in the case of a Borrowing comprising Eurodollar Rate Advances, the initial Interest Period for each such Advance, which Borrowing shall be subject to the limitations stated in the definition of "Interest Period" in Section 1.01. Each Lender shall, before 1:00 p.m. (New York time) on the Closing Date, make available for the account of its Applicable Lending Office to the Administrative Agent at its address referred to in Section 8.02, in same day funds, such Lender's Percentage of each such Borrowing. After the Administrative Agent's receipt of such funds and upon fulfillment of the applicable conditions set forth in Article III, the Administrative Agent will make such funds available to the Borrower at the Administrative Agent's aforesaid address.

(b) The Notice of Borrowing delivered pursuant to Section 2.02(a) shall be irrevocable and binding on the Borrower. In the event that such Notice of Borrowing requests Eurodollar Rate Advances, the Borrower shall indemnify each Lender against any loss, cost or expense incurred by such Lender as a result of any failure by the Borrower to fulfill on or before the date specified in such Notice of Borrowing the applicable conditions set forth in Article III, including, without limitation, any loss (including loss of anticipated profits), cost or expense incurred by reason of the liquidation or redeployment of deposits or other funds acquired by such Lender to fund the Advance to be made by such Lender as part of such Borrowing when such Advance, as a result of such failure, is not made on such date.

(c) Unless the Administrative Agent shall have received written notice via facsimile transmission from a Lender prior to (A) 5:00 p.m. (New York time) one Business Day prior to the date of a Borrowing comprising Eurodollar Rate Advances or (B) 12:00 noon (New York time) on the date of a Borrowing comprising Alternate Base Rate Advances that such Lender will not make available to the Administrative Agent such Lender's Percentage of such Borrowing, the Administrative Agent may assume that such Lender has made such portion available to the Administrative Agent on the date of such Borrowing in accordance with subsection (a) of this Section 2.02 and the Administrative Agent may, in reliance upon such assumption, make available to the Borrower on such date a corresponding amount. If and to the extent that such Lender shall not have so made such Percentage of such Borrowing available to the Administrative Agent, such Lender and the Borrower severally agree to repay to the Administrative Agent forthwith on demand such corresponding amount together with interest thereon, for each day from the date such amount is made available to the Borrower until the date such amount is repaid to the Administrative Agent, at (i) in the case of the Borrower, the interest rate applicable at the time to Advances made in connection with such Borrowing and (ii) in the case of such Lender, the Federal Funds Rate. If such Lender shall repay to the Administrative Agent such corresponding amount, such amount so repaid shall constitute such Lender's Advance as part of such Borrowing for purposes of this Agreement.

(d) The obligations of the Lenders hereunder to make Advances and to make payments pursuant to Section 7.06 are several and not joint. The failure of any Lender to make the Advance to be made by it as part of any Borrowing or to make any payment under Section 7.06 on any date required hereunder shall not relieve any other Lender of its corresponding obligation to do so on such date, and no Lender shall be responsible for the failure of any other Lender to make the Advance to be made by such other Lender on the date of any Borrowing or to make its payment under Section 7.06.

SECTION 2.03. Fees.

The Borrower agrees to pay the fees payable by it in such amounts and payable on such terms as set forth in the Fee Letters.

SECTION 2.04. Repayment of Advances.

The Borrower agrees to repay the principal amount of each Advance made by each Lender no later than the Maturity Date.

SECTION 2.05. Interest on Advances.

The Borrower agrees to pay interest on the unpaid principal amount of each Advance made by each Lender from the date of such Advance until such principal amount shall be paid in full, at the following rates *per annum*, subject to Section 2.12(f):

(a) ***Alternate Base Rate Advances***. If such Advance is an Alternate Base Rate Advance, a rate *per annum* equal at all times to the Alternate Base Rate in effect from time to time *plus* the Applicable Margin for such Alternate Base Rate Advance in effect from time to time, payable quarterly in arrears on the last Business Day of each March, June, September and December, on the Maturity Date and on the date such Alternate Base Rate Advance shall be Converted or be paid in full and as provided in Section 2.09; and

(b) ***Eurodollar Rate Advances***. If such Advance is a Eurodollar Rate Advance, a rate *per annum* equal at all times during the Interest Period for such Advance to the sum of the Eurodollar Rate for such Interest Period *plus* the Applicable Margin for such Eurodollar Rate Advance in effect from time to time, payable on the last day of each Interest Period for such Eurodollar Rate Advance (and, in the case of any Interest Period of six months, on the last Business Day of the third month of such Interest Period), on the Maturity Date and on the date such Eurodollar Rate Advance shall be Converted or be paid in full and as provided in Section 2.09.

SECTION 2.06. Additional Interest on Advances.

The Borrower agrees to pay to each Lender, so long as such Lender shall be required under regulations of the Board of Governors of the Federal Reserve System to maintain reserves with respect to liabilities or assets consisting of or including Eurocurrency Liabilities, additional interest on the unpaid principal amount of each Eurodollar Rate Advance made by such Lender, from the date of such Advance until such principal amount is paid in full, at an interest rate *per annum* equal at all times to the remainder obtained by subtracting (i) the Eurodollar Rate for the Interest Period for such Advance from (ii) the rate obtained by dividing such Eurodollar Rate by a percentage equal to 100% minus the Eurodollar Rate Reserve Percentage of such Lender for such Interest Period, payable on each date on which interest is payable on such Advance; *provided*, that no Lender shall be entitled to demand additional interest under this Section 2.06 more than 90 days following the last day of the Interest Period in respect of which such demand is made; *provided further, however*, that the foregoing proviso shall in no way limit the right of any Lender to demand or receive such additional interest to the extent that such additional interest relates to the retroactive application by the Board of Governors of the Federal Reserve System of any regulation described above if such demand is made within 90 days after the implementation of such retroactive regulation. Such additional interest shall be determined by such Lender and notified to the Borrower through the Administrative Agent, and such determination shall be conclusive and binding for all purposes, absent manifest error.

SECTION 2.07. Interest Rate Determination.

(a) The Administrative Agent shall give prompt notice to the Borrower and the Lenders of the applicable interest rate determined by the Administrative Agent for purposes of Section 2.05(a) or (b).

(b) If, with respect to any Eurodollar Rate Advances, the Majority Lenders notify the Administrative Agent that (i) Dollar deposits are not being offered to banks in the London interbank

eurodollar market for the applicable amount and Interest Period of such Eurodollar Rate Advances, (ii) adequate and reasonable means do not exist for determining the Eurodollar Rate or (iii) the Eurodollar Rate for any Interest Period for such Advances will not adequately reflect the cost to such Majority Lenders of making or funding their respective Eurodollar Rate Advances for such Interest Period, the Administrative Agent shall forthwith so notify the Borrower and the Lenders, whereupon, subject to the definition of "Eurodollar Rate" set forth in Section 1.01,

(i) each Eurodollar Rate Advance will automatically, on the last day of the then existing Interest Period therefor, Convert into an Alternate Base Rate Advance, and

(ii) the obligation of the Lenders to make, or to Convert Advances into, Eurodollar Rate Advances shall be suspended until the Administrative Agent shall notify the Borrower and the Lenders that the circumstances causing such suspension no longer exist.

(c) Upon the occurrence and during the continuance of any Event of Default, (i) each Eurodollar Rate Advance will automatically, on the last day of the then existing Interest Period therefor, Convert into a Base Rate Advance, and the obligation of the Lenders to make or to Convert Advances into, Eurodollar Rate Advances shall be suspended.

SECTION 2.08. Conversion of Advances.

(a) ***Voluntary***. The Borrower may on any Business Day, upon notice which may be given by telephone or a Notice of Conversion (*provided*, that (x) any telephonic notice must be confirmed immediately by delivery to the Administrative Agent of a Notice of Conversion, and (y) such Notice of Conversion must be given by the Borrower to the Administrative Agent not later than 11:00 a.m. (New York time) on the third Business Day prior to the date of any proposed Conversion into Eurodollar Rate Advances, and on the date of any proposed Conversion into Alternate Base Rate Advances), and subject to the provisions of Sections 2.07 and 2.11, Convert all Advances of one Type made to Borrower in connection with the same Borrowing into Advances of another Type or Types or Advances of the same Type having the same or a new Interest Period; *provided, however*, that any Conversion of, or with respect to, any Eurodollar Rate Advances into Advances of another Type or Advances of the same Type having the same or new Interest Periods, shall be made on, and only on, the last day of an Interest Period for such Eurodollar Rate Advances, unless the Borrower shall also reimburse the Lenders in respect thereof pursuant to Section 8.05(b) on the date of such Conversion. Each such Notice of Conversion shall, within the restrictions specified above, specify (i) the date of such Conversion, (ii) the Advances to be Converted, and (iii) if such Conversion is into, or with respect to, Eurodollar Rate Advances, the duration of the Interest Period for each such resulting Advance.

(b) ***Mandatory***. If the Borrower shall fail to select the Type of any Advance or the duration of any Interest Period for any Borrowing comprising Eurodollar Rate Advances in accordance with the provisions contained in the definition of "Interest Period" in Section 1.01 and Section 2.08(a), or if any proposed Conversion of a Borrowing that is to comprise Eurodollar Rate Advances upon Conversion shall not occur as a result of the circumstances described in

paragraph (c) below, the Administrative Agent will forthwith so notify the Borrower and the Lenders, and such Advances will automatically, on the last day of the then existing Interest Period therefor, Convert into Alternate Base Rate Advances.

(c) ***Failure to Convert***. Each Notice of Conversion pursuant to subsection (a) above shall be irrevocable and binding on the Borrower. In the case of any Borrowing that is to comprise Eurodollar Rate Advances upon Conversion, the Borrower agrees to indemnify each Lender against any loss, cost or expense incurred by such Lender as a result of any failure of such Conversion to occur pursuant to the provisions of Section 2.07(c), including, without limitation, any loss, cost or expense incurred by reason of the liquidation or redeployment of deposits or other funds acquired by such Lender to fund such Eurodollar Rate Advances upon such Conversion, when such Conversion does not occur. The Borrower's obligations under this subsection (c) shall survive the repayment of all other amounts owing by the Borrower to the Lenders and the Administrative Agent under this Agreement and any Note and the termination of this Agreement.

SECTION 2.09. Optional Prepayments.

The Borrower may at any time prepay the outstanding principal amounts of the Advances made as part of the same Borrowing in whole or ratably in part, together with accrued interest to the date of such prepayment on the principal amount prepaid, upon notice thereof, which shall be in the form of a Notice of Prepayment, given to the Administrative Agent by the Borrower not later than 11:00 a.m. (New York time) (i) on the date of any such prepayment in the case of Alternate Base Rate Advances and (ii) on the second Business Day prior to any such prepayment in the case of Eurodollar Rate Advances; *provided, however*, that (x) each partial prepayment of any Borrowing shall be in an aggregate principal amount not less than $5,000,000 and (y) in the case of any such prepayment of a Eurodollar Rate Advance, the Borrower shall be obligated to reimburse the Lenders in respect thereof pursuant to Section 8.05(b) on the date of such prepayment.

SECTION 2.10. Increased Costs.

(a) If, due to any Change in Law, there shall be any increase in the cost (other than in respect of Taxes, which are addressed exclusively in Section 2.13) to any Lender of agreeing to make or making, funding or maintaining Eurodollar Rate Advances, then the Borrower shall from time to time, upon demand by such Lender (with a copy of such demand to the Administrative Agent), pay to the Administrative Agent for the account of such Lender additional amounts sufficient to compensate such Lender for such increased cost. A certificate as to the amount of such increased cost and the basis therefor, submitted to the Borrower and the Administrative Agent by such Lender, shall constitute such demand and shall be conclusive and binding for all purposes, absent manifest error.

(b) If any Lender determines that any Change in Law affects or would affect the amount of capital or liquidity required or expected to be maintained by such Lender or any Person controlling such Lender and that the amount of such capital or liquidity is increased by or based upon the existence of (i) such Lender's commitment to lend hereunder and other commitments of this type

or (ii) the Advances made by such Lender, then, upon demand by such Lender (with a copy of such demand to the Administrative Agent), the Borrower shall immediately pay to the Administrative Agent for the account of such Lender, from time to time as specified by such Lender, additional amounts sufficient to compensate such Lender or such Person in the light of such circumstances, to the extent that such Lender determines such increase in capital or liquidity to be allocable to the existence of such Lender's commitment to lend hereunder or the Advances made by such Lender. A certificate as to such amounts submitted to the Borrower and the Administrative Agent by such Lender shall constitute such demand and shall be conclusive and binding for all purposes, absent manifest error.

(c) Failure or delay on the part of any Lender to demand compensation pursuant to this Section shall not constitute a waiver of such Lender's right to demand such compensation, *provided* that the Borrower shall not be required to compensate a Lender pursuant to this Section for any increased costs or additional amounts incurred more than 180 days prior to the date that such Lender notifies the Borrower of such Lender's intention to claim such compensation (except that, if such Change in Law giving rise to such increased costs is retroactive, then the 180-day period referred to above shall be extended to include the period of retroactive effect thereof).

(d) The Borrower's obligations under this Section 2.10 shall survive (x) the repayment of all amounts owing to the Lenders and the Administrative Agent under this Agreement and any Note and (y) the termination of this Agreement, in each case to the extent such obligations were incurred prior to such repayment and termination.

SECTION 2.11. Illegality.

Notwithstanding any other provision of this Agreement, if any Lender shall notify the Administrative Agent that the introduction of or any change in or in the interpretation of any law or regulation makes it unlawful, or any central bank or other governmental authority asserts that it is unlawful, for any Lender or its Eurodollar Lending Office to perform its obligations hereunder to make Eurodollar Rate Advances or to fund or maintain Eurodollar Rate Advances hereunder, (i) the obligation of the Lenders to make, or to Convert Advances into, Eurodollar Rate Advances shall be suspended until the Administrative Agent shall notify the Borrower and the Lenders that the circumstances causing such suspension no longer exist and (ii) the Borrower shall forthwith prepay in full all Eurodollar Rate Advances of all Lenders then outstanding, together with interest accrued thereon, unless (A) the Borrower, within five Business Days of notice from the Administrative Agent, Converts all Eurodollar Rate Advances of all Lenders then outstanding into Advances of another Type in accordance with Section 2.08 or (B) the Administrative Agent notifies the Borrower that the circumstances causing such prepayment no longer exist.

SECTION 2.12. Payments and Computations.

(a) The Borrower shall make each payment hereunder and under any Note not later than 12:00 noon (New York time) on the day when due in Dollars to the Administrative Agent at its address referred to in Section 8.02 in same day funds, without set-off, counterclaim or defense and

any such payment to the Administrative Agent shall constitute payment by the Borrower hereunder or under any Note, as the case may be, for all purposes, and upon such payment the Lenders shall look solely to the Administrative Agent for their respective interests in such payment. The Administrative Agent will promptly after any such payment cause to be distributed like funds relating to the payment of principal or interest ratably (other than amounts payable pursuant to Section 2.02(c), 2.03, 2.06, 2.08(c), 2.10, 2.13, 2.16 or 8.05(b)) (according to the Lenders' respective Percentages) to the Lenders for the account of their respective Applicable Lending Offices, and like funds relating to the payment of any other amount payable to any Lender to such Lender for the account of its Applicable Lending Office, in each case to be applied in accordance with the terms of this Agreement. Upon its acceptance of an Assignment and Assumption and recording of the information contained therein in the Register pursuant to Section 8.08(c), from and after the effective date specified in such Assignment and Assumption, the Administrative Agent shall make all payments hereunder and under any Note in respect of the interest assigned thereby to the Lender assignee thereunder, and the parties to such Assignment and Assumption shall make all appropriate adjustments in such payments for periods prior to such effective date directly between themselves.

(b) The Borrower hereby authorizes each Lender, if and to the extent payment owed to such Lender is not made by the Borrower to the Administrative Agent when due hereunder or under any Note held by such Lender, to charge from time to time against any or all of the Borrower's accounts (other than any payroll account maintained by the Borrower with such Lender, if and to the extent that such Lender shall have expressly waived its set-off rights in writing in respect of such payroll account) with such Lender any amount so due.

(c) All computations of interest based on the Alternate Base Rate (based upon *The Wall Street Journal*'s published "prime rate") shall be made by the Administrative Agent on the basis of a year of 365 or 366 days, as the case may be, and all computations of interest based on the Alternate Base Rate (based upon the Federal Funds Rate or upon clause (iii) of the definition of Alternate Base Rate), the Eurodollar Rate or the Federal Funds Rate shall be made by the Administrative Agent, and all computations of interest pursuant to Section 2.06 shall be made by a Lender, on the basis of a year of 360 days, in each case for the actual number of days (including the first day but excluding the last day) occurring in the period for which such commitment fees or interest are payable. Each determination by the Administrative Agent (or, in the case of Section 2.06, by a Lender) of an interest rate hereunder shall be conclusive and binding for all purposes, absent manifest error.

(d) Whenever any payment hereunder or under any Note shall be stated to be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day, and such extension of time shall in such case be included in the computation of payment of interest; *provided, however*, if such extension would cause payment of interest on or principal of Eurodollar Rate Advances to be made in the next following calendar month, such payment shall be made on the next preceding Business Day.

(e) Unless the Administrative Agent shall have received notice from the Borrower prior to the date on which any payment is due to the Lenders hereunder that the Borrower will not make such payment in full, the Administrative Agent may assume that the Borrower has made such

payment in full to the Administrative Agent on such date and the Administrative Agent may, in reliance upon such assumption, cause to be distributed to each Lender on such due date an amount equal to the amount then due such Lender. If and to the extent that the Borrower shall not have so made such payment in full to the Administrative Agent, each Lender shall repay to the Administrative Agent forthwith on demand such amount distributed to such Lender together with interest thereon, for each day from the date such amount is distributed to such Lender until the date such Lender repays such amount to the Administrative Agent, at the Federal Funds Rate.

(f) The principal amount of any Advance (or any portion thereof) payable by the Borrower hereunder or under any Note that is not paid when due (whether at stated maturity, by acceleration or otherwise) shall (to the fullest extent permitted by law) bear interest from the date when due until paid in full at a rate *per annum* equal at all times to the rate otherwise applicable to such Advance *plus* 2% *per annum*, payable upon demand. Any other amount payable by the Borrower hereunder or under any Note that is not paid when due (whether at stated maturity, by acceleration or otherwise) shall (to the fullest extent permitted by law) bear interest from the date when due until paid in full at a rate *per annum* equal at all times to the rate of interest applicable to Alternate Base Rate Advances *plus* 2% *per annum*, payable upon demand.

(g) To the extent that any payment by or on behalf of the Borrower is made to the Administrative Agent or any Lender, or the Administrative Agent or any Lender exercises its right of setoff, and such payment or the proceeds of such setoff or any part thereof is subsequently invalidated, declared to be fraudulent or preferential, set aside or required (including pursuant to any settlement entered into by the Administrative Agent or such Lender in its discretion) to be repaid to a trustee, receiver or any other party, in connection with any proceeding under any bankruptcy, insolvency or other similar law now or hereafter in effect or otherwise, then (i) to the extent of such recovery, the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such setoff had not occurred, and (ii) each Lender severally agrees to pay to the Administrative Agent upon demand its applicable share (without duplication) of any amount so recovered from or repaid by the Administrative Agent, *plus* interest thereon from the date of such demand to the date such payment is made at a rate *per annum* equal to the Federal Funds Rate from time to time in effect. The obligations of the Lenders under clause (ii) of the preceding sentence shall survive the payment in full of any amounts hereunder and the termination of this Agreement.

SECTION 2.13. Taxes.

(a) ***Defined Terms***. For purposes of this Section 2.13, the term “Applicable Law” includes FATCA.

(b) ***Payments Free of Taxes.*** Any and all payments by or on account of any obligation of the Borrower under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by Applicable Law. If any Applicable Law (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then the applicable Withholding Agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted

or withheld to the relevant Governmental Authority in accordance with Applicable Law and, if such Tax is an Indemnified Tax, then the sum payable by the Borrower shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.

(c) ***Payment of Other Taxes by the Borrower.*** The Borrower shall timely pay to the relevant Governmental Authority in accordance with Applicable Law, or at the option of the Administrative Agent timely reimburse it for the payment of, any Other Taxes.

(d) ***Indemnification by the Borrower.*** The Borrower shall indemnify each Recipient, within 30 days after written demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to the Borrower by a Lender (with a copy to the Administrative Agent), or by the Administrative Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error. The Borrower shall, and does hereby, indemnify the Administrative Agent, and shall make payment in respect thereof within 10 days after demand therefor, for any amount which a Lender for any reason fails to pay indefeasibly to the Administrative Agent as required pursuant to Section 2.13(e) below.

(e) ***Indemnification by the Lenders.*** Each Lender shall severally indemnify the Administrative Agent, within 30 days after demand therefor, for (i) any Indemnified Taxes attributable to such Lender (but only to the extent that the Borrower has not already indemnified the Administrative Agent for such Indemnified Taxes and without limiting the obligation of the Borrower to do so), (ii) any Taxes attributable to such Lender's failure to comply with the provisions of Section 8.08(d) relating to the maintenance of a Participant Register and (iii) any Excluded Taxes attributable to such Lender, in each case, that are payable or paid by the Administrative Agent in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to any Lender by the Administrative Agent shall be conclusive absent manifest error. Each Lender hereby authorizes the Administrative Agent to set off and apply any and all amounts at any time owing to such Lender under any Loan Document or otherwise payable by the Administrative Agent to the Lender from any other source against any amount due to the Administrative Agent under this subsection (e), including any such amount that had been so due to the Administrative Agent pursuant to the foregoing clause (ii) or clause (iii) (including any reasonable expenses arising therefrom or with respect thereto as provided above) but was paid by the Borrower pursuant to the last sentence of subsection (d) above, in which case the Administrative Agent may effect such set off and application for the benefit of the Borrower to the extent of the aggregate of such amounts paid by the Borrower and the proceeds of such set off and application (if any) shall be promptly remitted to the Borrower in immediately available funds by the Administrative Agent.

(f) ***Evidence of Payments.*** As soon as practicable after any payment of Taxes by the Borrower to a Governmental Authority pursuant to this Section 2.13, the Borrower shall deliver to the Administrative Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to the Administrative Agent.

(g) ***Status of Lenders.*** (i) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to the Borrower and the Administrative Agent, at the time or times reasonably requested by the Borrower or the Administrative Agent, such properly completed and executed documentation reasonably requested by the Borrower or the Administrative Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by the Borrower or the Administrative Agent, shall deliver such other documentation prescribed by Applicable Law or reasonably requested by the Borrower or the Administrative Agent as will enable the Borrower or the Administrative Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Section 2.13(g)(ii)(A), (ii)(B) and (ii)(D) below) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.

(ii) Without limiting the generality of the foregoing, in the event that the Borrower is a U.S. Person,

(A) any Lender that is a U.S. Person shall deliver to the Borrower and the Administrative Agent on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), executed originals of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

(B) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), whichever of the following is applicable:

(i) in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed originals of IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN-E establishing an

exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

(ii) executed originals of IRS Form W-8ECI;

(iii) in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Code, (x) a certificate substantially in the form of Exhibit D-1 to the effect that such Foreign Lender is not a "bank" within the meaning of Section 881(c)(3)(A) of the Code, a "10 percent shareholder" of the Borrower within the meaning of Section 881(c)(3)(B) of the Code, or a "controlled foreign corporation" described in Section 881(c)(3)(C) of the Code (a "***U.S. Tax Compliance Certificate***") and (y) executed originals of IRS Form W-8BEN-E; or

(iv) to the extent a Foreign Lender is not the beneficial owner, executed originals of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN-E, a U.S. Tax Compliance Certificate substantially in the form of Exhibit D-2 or Exhibit D-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; *provided* that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit D-4 on behalf of each such direct and indirect partner;

(C) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), executed originals of any other form prescribed by Applicable Law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by Applicable Law to permit the Borrower or the Administrative Agent to determine the withholding or deduction required to be made; and

(D) if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender shall deliver to the Borrower and the Administrative Agent at the time or times prescribed by law and at such time or times reasonably requested by the Borrower or the Administrative Agent such documentation prescribed by Applicable Law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and such additional documentation reasonably requested by the Borrower or the Administrative Agent as may be necessary for the Borrower and the Administrative Agent to comply with

their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (D), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

Each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify the Borrower and the Administrative Agent in writing of its legal inability to do so.

(h) ***Treatment of Certain Refunds.*** If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to this Section 2.13 (including by the payment of additional amounts pursuant to this Section 2.13), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under this Section with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund). Such indemnifying party, upon the request of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this subsection (h) (*plus* any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that such indemnified party is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this subsection (h), in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this subsection (h) the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This subsection shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

(i) ***Survival.*** Each party's obligations under this Section 2.13 shall survive the resignation or replacement of the Administrative Agent or any assignment of rights by, or the replacement of, a Lender, the termination of this Agreement and the repayment, satisfaction or discharge of all obligations under any Loan Document.

SECTION 2.14. Sharing of Payments, Etc.

(a) If any Lender shall obtain any payment (whether voluntary, involuntary, through the exercise of any right of set-off, or otherwise) on account of the Advances made by it (other than pursuant to Section 2.02(c), 2.03, 2.06, 2.08(c), 2.10, 2.13, 2.16 or 8.05(b)) in excess of its ratable share of payments on account of the Advances obtained by all the Lenders, such Lender shall forthwith purchase from the other Lenders such participations in the Advances made by them as shall be necessary to cause such purchasing Lender to share the excess payment ratably with each of them; *provided, however*, that if all or any portion of such excess payment is thereafter recovered from such purchasing Lender, such purchase from each Lender shall be rescinded and such Lender shall repay to the purchasing Lender the purchase price to the extent of such recovery together with

an amount equal to such Lender's ratable share (according to the proportion of (a) the amount of such Lender's required repayment to (b) the total amount so recovered from the purchasing Lender) of any interest or other amount paid or payable by the purchasing Lender in respect of the total amount so recovered. The Borrower agrees that any Lender so purchasing a participation from another Lender pursuant to this Section 2.14(a) may, to the fullest extent permitted by law, exercise all its rights of payment (including the right of set-off) with respect to such participation as fully as if such Lender were the direct creditor of the Borrower in the amount of such participation.

(b) If any Lender shall fail to make any payment required to be made by it pursuant to Section 2.02(c) or 7.06, then the Administrative Agent may, in its discretion and notwithstanding any contrary provision hereof, (i) apply any amounts thereafter received by the Administrative Agent for the account of such Lender for the benefit of the Administrative Agent to satisfy such Lender's obligations to it under such Section until all such unsatisfied obligations are fully paid, and/or (ii) hold any such amounts in a segregated account as cash collateral for, and application to, any future funding obligations of such Lender under any such Section, in the case of each of clauses (i) and (ii) above, in any order as determined by the Administrative Agent in its discretion.

SECTION 2.15. Noteless Agreement; Evidence of Indebtedness

(a) Each Lender shall maintain in accordance with its usual practice an account or accounts evidencing the indebtedness of the Borrower to such Lender resulting from each Advance made by such Lender from time to time, including the amounts of principal and interest payable and paid to such Lender from time to time hereunder.

(b) The Administrative Agent shall also maintain accounts in which it will record (i) the amount of each Advance made hereunder, the Type thereof and the Interest Period (if any) with respect thereto, (ii) the amount of any principal or interest due and payable or to become due and payable from the Borrower to each Lender hereunder, and (iii) the amount of any sum received by the Administrative Agent hereunder from the Borrower and each Lender's share thereof.

(c) Subject to Section 8.08(c), the entries maintained in the accounts maintained pursuant to subsections (a) and (b) above shall be prima facie evidence of the existence and amounts of the obligations therein recorded; *provided*, *however*, that the failure of the Administrative Agent or any Lender to maintain such accounts or any error therein shall not in any manner affect the obligation of the Borrower to repay such obligations in accordance with their terms.

(d) Any Lender may request that its Advances be evidenced by a Note. In such event, the Borrower shall prepare, execute and deliver to such Lender a Note payable to such Lender and its registered assigns. Thereafter, the Advances evidenced by such Note and interest thereon shall at all times (including after any assignment pursuant to Section 8.08(b)) be represented by one or more Notes payable to the payee named therein, or to its registered assigns pursuant to Section 8.08(b), except to the extent that any such Lender or assignee subsequently returns any such Note for cancellation and requests that such Advances once again be evidenced as described in subsections (a) and (b) above.

SECTION 2.16. Defaulting Lenders.

(a) ***Defaulting Lender Adjustments***. Notwithstanding anything to the contrary contained in this Agreement, if any Lender becomes a Defaulting Lender, then, until such time as such Lender is no longer a Defaulting Lender, to the extent permitted by Applicable Law:

(i) ***Waivers and Amendments***. Such Defaulting Lender's right to approve or disapprove any amendment, waiver or consent with respect to this Agreement shall be restricted as set forth in the definition of Majority Lenders and in Section 8.01.

(ii) ***Defaulting Lender Waterfall***. Any payment of principal, interest, fees or other amounts received by the Administrative Agent for the account of such Defaulting Lender (whether voluntary or mandatory, at maturity, pursuant to Article VI or otherwise) shall be applied at such time or times as may be determined by the Administrative Agent as follows: *first*, to the payment of any amounts owing by such Defaulting Lender to the Administrative Agent hereunder; *second*, as the Borrower may request (so long as no Unmatured Default or Event of Default exists), to the funding of any Advance in respect of which such Defaulting Lender has failed to fund its portion thereof as required by this Agreement, as determined by the Administrative Agent; *third*, to the payment of any amounts owing to the Lenders as a result of any judgment of a court of competent jurisdiction obtained by any Lender against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations under this Agreement; *fourth*, so long as no Unmatured Default or Event of Default exists, to the payment of any amounts owing to the Borrower as a result of any judgment of a court of competent jurisdiction obtained by the Borrower against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations under this Agreement; and *fifth*, to such Defaulting Lender or as otherwise directed by a court of competent jurisdiction; *provided* that, if (x) such payment is a payment of the principal amount of any Advances in respect of which such Defaulting Lender has not fully funded its appropriate share, and (y) such Advances were made at a time when the conditions set forth in Section 3.01 were satisfied or waived, such payment shall be applied solely to pay the Advances of all non-Defaulting Lenders on a pro rata basis prior to being applied to the payment of any Advances of such Defaulting Lender until such time as all Advances are held by the Lenders pro rata in accordance with the Commitments. Any payments, prepayments or other amounts paid or payable to a Defaulting Lender that are applied (or held) to pay amounts owed by a Defaulting Lender pursuant to this Section 2.16(a)(ii) shall be deemed paid to and redirected by such Defaulting Lender, and each Lender irrevocably consents hereto.

(b) ***Defaulting Lender Cure***. If the Borrower and the Administrative Agent agree in writing that a Lender is no longer a Defaulting Lender, the Administrative Agent will so notify the parties hereto, whereupon as of the effective date specified in such notice and subject to any conditions set forth therein, such Lender will cease to be a Defaulting Lender; *provided* that no adjustments will be made retroactively with respect to payments made by or on behalf of the

Borrower while that Lender was a Defaulting Lender; and *provided*, *further*, that except to the extent otherwise expressly agreed in writing by the affected parties, no change hereunder from Defaulting Lender to Lender will constitute a waiver or release of any claim of any party hereunder arising from that Lender's having been a Defaulting Lender.

SECTION 2.17. Mitigation Obligations; Replacement of Lenders.

(a) ***Designation of a Different Lending Office.***

(i) If any Lender requests compensation under Section 2.10, or requires the Borrower to pay any Indemnified Taxes or additional amounts to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.13, then such Lender shall (at the request of the Borrower) use reasonable efforts to designate a different Applicable Lending Office for funding or booking its Advances hereunder or to assign its rights and obligations hereunder to another of its offices, branches or Affiliates, if, in the judgment of such Lender, such designation or assignment (i) would eliminate or reduce amounts payable pursuant to Section 2.10 or 2.13, as the case may be, in the future, and (ii) would not subject such Lender to any unreimbursed cost or expense and would not otherwise be disadvantageous to such Lender.

(ii) Any Lender that becomes aware of circumstances that would permit such Lender to notify the Administrative Agent of any illegality under Section 2.11 shall use its commercially reasonable efforts (consistent with its internal policy and legal and regulatory restrictions) to change the jurisdiction of its Applicable Lending Office if the making of such change would avoid or eliminate such illegality and would not, in the reasonable judgment of such Lender, be otherwise disadvantageous to such Lender.

(iii) The Borrower hereby agrees to pay all reasonable costs and expenses incurred by any Lender in connection with any such designation or assignment.

(b) ***Replacement of Lenders.*** If any Lender requests compensation under Section 2.10 or delivers any notice to the Administrative Agent pursuant to Section 2.11 resulting in the suspension of obligations of the Lenders with respect to Eurodollar Rate Advances, or if the Borrower is required to pay any Indemnified Taxes or additional amounts to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.13, and, in each case, such Lender has declined or is unable to designate a different Applicable Lending Office in accordance with Section 2.17 (a), or if any Lender is a Defaulting Lender or a Non-Consenting Lender, then the Borrower may, at its sole expense and effort, upon notice to such Lender and the Administrative Agent, require such Lender to assign and delegate, without recourse (in accordance with and subject to the restrictions contained in, and consents required by, Section 8.08(b)), all of its interests and rights (other than its existing rights to payments pursuant to Section 2.10, 2.11 or Section 2.13) under this Agreement and the related Loan Documents to an Eligible Assignee (which assignee may be another Lender, if a Lender accepts such assignment); *provided* that:

(i) the Borrower shall have paid to the Administrative Agent the assignment fee (if any) specified in Section 8.08(b);

(ii) such Lender shall have received payment of an amount equal to the outstanding principal amount of its Advances, accrued interest thereon and all other amounts payable to it hereunder and under the other Loan Documents (including any amounts under Section 8.05(b)) from the assignee (to the extent of such outstanding principal and accrued interest) or the Borrower (in the case of all other amounts);

(iii) in the case of any such assignment resulting from a claim for compensation under Section 2.10 or payments required to be made pursuant to Section 2.13, such assignment will result in a reduction in such compensation or payments thereafter;

(iv) such assignment does not conflict with Applicable Law; and

(v) in the case of any assignment resulting from a Lender becoming a Non-Consenting Lender, the applicable assignee shall have consented to the applicable amendment, waiver or consent.

A Lender shall not be required to make any such assignment or delegation if, prior thereto, as a result of a waiver by such Lender or otherwise, the circumstances entitling the Borrower to require such assignment and delegation cease to apply.

ARTICLE III
CONDITIONS OF LENDING

SECTION 3.01. Conditions Precedent to Effectiveness and Advances.

The obligation of each Lender to make its Advances in connection with the Borrowings on the Closing Date are subject to the conditions precedent (or waiver thereof in accordance with Section 8.01) that on or before the date of any such Borrowings:

(a) The Administrative Agent shall have received the following, each dated the same date (except for the financial statements referred to in paragraph (iv)), in form and substance satisfactory to the Administrative Agent:

(i) This Agreement, duly executed by each of the parties hereto, and Notes requested by any Lender pursuant to Section 2.15(d), duly completed and executed by the Borrower and payable to such Lender;

(ii) Certified copies of the resolutions of the Board of Directors of the Borrower approving this Agreement and the other Loan Documents to which it is, or is to be, a party and of all documents evidencing any other necessary corporate action with respect to this Agreement and such Loan Documents;

(iii) A certificate of the Secretary or an Assistant Secretary of the Borrower certifying (A) the names and true signatures of the officers of the Borrower authorized to sign each Loan Document to which the Borrower is, or is to become, a party and the other documents to be delivered hereunder; (B) that attached thereto are true and correct copies of the Organizational Documents of the Borrower, in each case as in effect on such date, and (C) that there is no Governmental Action required for the due execution, delivery and performance by the Borrower of this Agreement and each other Loan Document to which the Borrower is, or is to become, a party;

(iv) Copies of all the Disclosure Documents (it being agreed that those Disclosure Documents publicly available on the SEC's EDGAR Database or on FE's website no later than the Business Day immediately preceding the date of such Borrowings will be deemed to have been delivered under this clause (iv));

(v) [Reserved];

(vi) An opinion of Jones Day, special counsel for the Borrower; and

(vii) Such other certifications, opinions, financial or other information, approvals and documents as the Administrative Agent or any Lender may have reasonably requested at least one Business Day prior to the Closing Date, all in form and substance satisfactory to the Administrative Agent or such Lender (as the case may be).

(b) The Administrative Agent and each Lender shall have received a Beneficial Ownership Certification in relation to the Borrower to the extent the Borrower qualifies as a "legal entity customer" under the Beneficial Ownership Regulation.

(c) The Borrower shall have paid all of the fees payable in accordance with the Fee Letters.

(d) Prior to or concurrently with the effectiveness of this Agreement and the making of Borrowings on the Closing Date, the aggregate Commitments (as defined in the FE Revolving Credit Agreement) under the FE Revolving Credit Agreement shall have been permanently reduced to an amount not exceeding $2,500,000,000.

(e) The Administrative Agent shall have received all documentation and information required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including, without limitation, the Patriot Act and the Beneficial Ownership Regulation, to the extent such documentation or information is requested by the Administrative Agent on behalf of the Lenders prior to the date hereof.

(f) The following statements shall be true (and the giving of the Notice of Borrowing and the acceptance by the Borrower of the proceeds of any such Borrowings shall constitute a representation and warranty by the Borrower that on the date of such Borrowings such statements are true):

(A) The representations and warranties of the Borrower contained in Section 4.01 hereof are true and correct on and as of the date of such Borrowings, before and after giving effect to such Borrowings and to the application of the proceeds therefrom, as though made on and as of such date (other than as to any such representation or warranty that by its terms refers to a specific date other than the date of such Borrowings, in which case, such representation and warranty is true and correct as of such specific date); and

(B) No event has occurred and is continuing, or would result from such Borrowings or from the application of the proceeds therefrom, that constitutes an Event of Default or an Unmatured Default.

ARTICLE IV
REPRESENTATIONS AND WARRANTIES

SECTION 4.01. Representations and Warranties of the Borrower.

The Borrower represents and warrants as follows:

(a) ***Existence and Power***. It is a corporation duly formed, validly existing and in good standing under the laws of the State of Ohio, is duly qualified to do business as a foreign corporation in and is in good standing under the laws of each state in which the ownership of its properties or the conduct of its business makes such qualification necessary, except where the failure to be so qualified would not reasonably be expected to have a Material Adverse Effect, and has all corporate powers and all governmental licenses, authorizations, consents and approvals required to carry on its business as now conducted except where the failure to do so, in each case, would not reasonably be expected to have a Material Adverse Effect.

(b) ***Due Authorization***. The execution, delivery and performance by it of each Loan Document to which it is, or is to become, a party, have been duly authorized by all necessary corporate action on its part and do not, and will not, require the consent or approval of its shareholders, other than such consents and approvals as have been duly obtained, given or accomplished.

(c) ***No Violation, Etc.*** Neither the execution, delivery or performance by it of this Agreement or any other Loan Document to which it is, or is to become, a party, nor the consummation by it of the transactions contemplated hereby or thereby, nor compliance by it with the provisions hereof or thereof, contravenes or will contravene, or results or will result in a breach of, any of the provisions of its Organizational Documents, any Applicable Law, or any indenture, mortgage, deed of trust, lease, license or any other agreement or instrument to which it or any of its Subsidiaries is party or by which its property or the property of any of its Subsidiaries is bound, or results or will result in the creation or imposition of any Lien upon any of its property or the property of any of its Subsidiaries except as provided herein, except to the extent such contravention or breach, or the creation or imposition of any such Lien, individually or in the aggregate, has not had and would not reasonably be expected to have a Material Adverse Effect. The Borrower and each of its Subsidiaries is in compliance with all laws (including, without limitation, ERISA and Environmental

Laws), regulations and orders of any Governmental Authority applicable to it or its property and all indentures, agreements and other instruments binding upon it or its property, except where the failure to do so, individually or in the aggregate, has not had and would not reasonably be expected to have a Material Adverse Effect.

(d) ***Governmental Actions***. No Governmental Action is or will be required in connection with the execution, delivery or performance by it, or the consummation by it of the transactions contemplated by this Agreement or any other Loan Document to which it is, or is to become, a party.

(e) ***Execution and Delivery***. This Agreement and the other Loan Documents to which it is, or is to become, a party have been or will be (as the case may be) duly executed and delivered by it, and this Agreement is, and upon execution and delivery thereof each other Loan Document will be, the legal, valid and binding obligation of it enforceable against it in accordance with its terms, *subject, however*, to the application by a court of general principles of equity and to the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally.

(f) ***Litigation***. Except as disclosed in the Disclosure Documents, there is no pending or, to the Borrower's knowledge, threatened action or proceeding (including, without limitation, any proceeding relating to or arising out of Environmental Laws) affecting the Borrower or any of its Subsidiaries before any court, governmental agency or arbitrator that would reasonably be expected to have a Material Adverse Effect.

(g) ***Financial Statements; Material Adverse Change***. The consolidated balance sheets of the Borrower and its Subsidiaries, as at December 31, 2017, and the related consolidated statements of income, retained earnings and cash flows of the Borrower and its Subsidiaries, certified by PricewaterhouseCoopers LLP, independent public accountants, and the unaudited consolidated balance sheet of the Borrower and its Subsidiaries, as at June 30, 2018, and the related consolidated statements of income, retained earnings and cash flows of the Borrower and its Subsidiaries, for the six months then ended, copies of which have been furnished to each Lender, in all cases as amended and restated to the date hereof, present fairly in all material respects the consolidated financial position of the Borrower and its Subsidiaries as at the indicated dates and the consolidated results of the operations of the Borrower and its Subsidiaries for the periods ended on the indicated dates, all in accordance with GAAP consistently applied (in the case of such statements that are unaudited, subject to year-end adjustments and the exclusion of detailed footnotes). Except as disclosed in the Disclosure Documents, there has been no change, event or occurrence since December 31, 2017 that has had a Material Adverse Effect.

(h) ***ERISA***. Except as would not reasonably be expected to have a Material Adverse Effect:

(i) No Termination Event has occurred or is reasonably expected to occur with respect to any Plan.

(ii) Schedule SB (Actuarial Information) to the most recent annual report (Form 5500 Series) with respect to each Plan, copies of which have been filed with the Department of Labor and furnished (or made available) to the Lenders, (A) is complete and accurate, (B) fairly presents the funding status of such Plan, and (C) since the date of such Schedule SB there has been no change in such funding status.

(iii) Neither the Borrower nor any member of the Controlled Group has incurred or reasonably expects to incur any withdrawal liability under ERISA to any Multiemployer Plan.

(i) ***Margin Stock***. After applying the proceeds of each Borrowing, not more than 25% of the value of the assets of the Borrower and its Subsidiaries subject to the restrictions of Section 5.03(a) or (b) will consist of or be represented by Margin Stock. The Borrower is not engaged in the business of extending credit for the purpose of purchasing or carrying Margin Stock, and no proceeds of any Borrowing will be used to purchase or carry any Margin Stock or to extend credit to others for the purpose of purchasing or carrying any Margin Stock.

(j) ***Investment Company***. The Borrower is not an "investment company" or a company "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

(k) ***No Event of Default***. No event has occurred and is continuing that constitutes an Event of Default or an Unmatured Default.

(l) ***Anti-Corruption Laws and Sanctions***. The Borrower has implemented and maintains in effect policies and procedures reasonably designed to ensure compliance with Anti-Corruption Laws and Sanctions in all material respects by the Covered Entities and their respective directors, officers, employees and, to the extent commercially reasonable, agents under the control and acting on behalf of the Covered Entities. The Covered Entities are in compliance in all material respects with (i) the Trading with the Enemy Act, as amended, and each of the regulations promulgated by OFAC (31 CFR, Subtitle B, Chapter V, as amended) and any other enabling legislation or executive order relating thereto, and (ii) the Patriot Act. The Covered Entities and their respective officers and employees and, to the knowledge of the Borrower, the Covered Entities' directors and agents, are in compliance with Anti-Corruption Laws and applicable Sanctions in all material respects. None of the Covered Entities or any of their respective directors, officers or employees or, to the knowledge of the Borrower, any agent of the Covered Entities (i) is a Sanctioned Person, (ii) has assets located in Sanctioned Countries in violation of applicable Sanctions, (iii) does business in or with, or derives its operating income from investments in, or transactions with, Sanctioned Persons or (iv) does unauthorized business in or with, or derives its operating income from unauthorized investments in, or transactions with, Sanctioned Countries. No Borrowing or use of proceeds thereof will violate Anti-Corruption Laws or applicable Sanctions.

(m) ***No Material Misstatements.*** The reports, financial statements and other written information furnished by or on behalf of the Borrower to the Administrative Agent or any Lender pursuant to or in connection with the Loan Documents and the transactions contemplated thereby, when taken together with the Disclosure Documents, do not contain and will not contain, when

taken as a whole, any untrue statement of a material fact and do not omit and will not omit, when taken as a whole, to state any fact necessary to make the statements therein, in the light of the circumstances under which they were or will be made, not misleading in any material respect.

(n) ***EEA Financial Institution***. The Borrower is not an EEA Financial Institution.

(o) ***Beneficial Ownership***. As of the Closing Date, the information included in the Beneficial Ownership Certification delivered by the Borrower to the Administrative Agent on or before the Closing Date is true and correct in all respects.

ARTICLE V
COVENANTS OF THE BORROWER

SECTION 5.01. Affirmative Covenants of the Borrower.

Unless the Majority Lenders shall otherwise consent in writing, so long as any amount payable by the Borrower hereunder shall remain unpaid or any Lender shall have any Commitment hereunder, the Borrower will:

(a) ***Preservation of Corporate Existence, Etc.*** (i) Without limiting the right of the Borrower to merge with or into or consolidate with or into any other corporation or entity in accordance with the provisions of Section 5.03(c) hereof, preserve and maintain its corporate existence under the laws of a State of the United States or the District of Columbia, (ii) qualify and remain qualified as a foreign corporation in each jurisdiction in which such qualification is reasonably necessary in view of its business and operations or the ownership of its properties and (iii) preserve, renew and keep in full force and effect the rights, privileges and franchises necessary or desirable in the normal conduct of its business, except, in the case of clauses (ii) and (iii) above, to the extent that failure to do so would not reasonably be expected to result in a Material Adverse Effect.

(b) ***Compliance with Laws, Etc.*** Comply, and cause each of its Subsidiaries to comply, in all material respects with all applicable laws, rules, regulations, and orders of any Governmental Authority, the noncompliance with which would not reasonably be expected to result in a Material Adverse Effect, such compliance to include, without limitation, compliance with the Patriot Act, regulations promulgated by OFAC, Environmental Laws and ERISA and paying before the same become delinquent all material taxes, assessments and governmental charges imposed upon it or upon its property, except to the extent compliance with any of the foregoing is then being contested in good faith by appropriate legal proceedings.

(c) ***Maintenance of Insurance, Etc.*** Maintain, and cause its Subsidiaries to maintain, insurance with responsible and reputable insurance companies or associations or through its own program of self-insurance in such amounts and covering such risks as is usually carried by companies engaged in similar businesses and owning similar properties in the same general areas in which the Borrower and its Subsidiaries operate.

(d) ***Inspection Rights***. At any reasonable time and from time to time as the Administrative Agent or any Lender may reasonably request (upon five Business Days' prior notice delivered to the Borrower and no more than once a year, unless an Event of Default has occurred and is continuing), permit the Administrative Agent or such Lender or any agents or representatives thereof to examine and make copies of and abstracts from the records and books of account of, and visit the properties of, the Borrower and any of its Subsidiaries, and to discuss the affairs, finances and accounts of the Borrower and any of its Subsidiaries with any of their respective senior executives or officers; *provided, however,* that (x) the Borrower reserves the right to restrict access to any of its Subsidiaries' facilities in accordance with reasonably adopted procedures relating to safety and security and (y) neither the Borrower nor any of its Subsidiaries shall be required to disclose to the Administrative Agent or any Lender or any agents or representatives thereof any information that is the subject of attorney-client privilege or attorney work-product privilege properly asserted by the applicable Person to prevent the loss of such privilege in connection with such information or that is prevented from disclosure pursuant to a confidentiality agreement with third parties (*provided* that the Borrower agrees to use commercially reasonable efforts to obtain any required third-party consent to such disclosure, subject to customary nondisclosure restrictions applicable to the Administrative Agent or the Lenders, as applicable). The Administrative Agent and each Lender agree to use reasonable efforts to ensure that any information concerning the Borrower or any of its Subsidiaries obtained by the Administrative Agent or such Lender pursuant to this subsection (d) or subsection (g) below that is not contained in a report or other document filed with the SEC, distributed by the Borrower to its security holders or otherwise generally available to the public, will, to the extent permitted by law and except as may be required by valid subpoena or in the normal course of the Administrative Agent's or such Lender's business operations be treated confidentially by the Administrative Agent or such Lender, as the case may be, and will not be distributed or otherwise made available by the Administrative Agent or such Lender, as the case may be, to any Person, other than the Administrative Agent's or such Lender's employees, authorized agents or representatives (including, without limitation, attorneys and accountants).

(e) ***Keeping of Books***. Keep, and cause each of its Subsidiaries to keep, proper books of record and account in which entries shall be made of all financial transactions and the assets and business of the Borrower and each of its Subsidiaries, in each case, in accordance with GAAP.

(f) ***Maintenance of Properties***. Maintain and preserve, and cause each of its Subsidiaries to maintain and preserve, all of its properties (except such properties the failure of which to maintain or preserve would not have, individually or in the aggregate, a Material Adverse Effect) that are used or that are useful in the conduct of its business in good working order and condition, ordinary wear and tear excepted, and in accordance with prudent industry practices applicable to the industry of the Borrower, in all material respects, and (subject to subsection (b) above) Applicable Law it being understood that this covenant relates only to the good working order and condition of such properties and shall not be construed as a covenant of the Borrower or any of its Subsidiaries not to dispose of such properties by sale, lease, transfer or otherwise.

(g) ***Reporting Requirements***. Furnish, or cause to be furnished, to the Administrative Agent, with sufficient copies for each Lender, the following:

(i) promptly after becoming aware of the occurrence of any Event of Default continuing on the date of such statement, the statement of an Authorized Officer of the Borrower setting forth details of such Event of Default and the action that the Borrower has taken or proposes to take with respect thereto;

(ii) as soon as available and in any event within 60 days after the close of each of the first three quarters in each fiscal year of the Borrower, consolidated balance sheets of the Borrower and its Subsidiaries as at the end of such quarter and consolidated statements of income of the Borrower and its Subsidiaries for the period commencing at the end of the previous fiscal year and ending with the end of such quarter, fairly presenting in all material respects the financial condition of the Borrower and its Subsidiaries as at such date and the results of operations of the Borrower and its Subsidiaries for such period and setting forth in each case in comparative form the corresponding figures for the corresponding period of the preceding fiscal year, all in reasonable detail and duly certified (subject to year-end audit adjustments) by the chief financial officer, treasurer, assistant treasurer or controller of the Borrower as having been prepared in accordance with GAAP consistently applied (in the case of such statements that are unaudited, subject to year-end adjustments and the exclusion of detailed footnotes);

(iii) as soon as available and in any event within 105 days after the end of each fiscal year of the Borrower, a copy of the annual report for such year for the Borrower and its Subsidiaries, containing consolidated and consolidating financial statements of the Borrower and its Subsidiaries for such year certified by PricewaterhouseCoopers LLP or other independent public accountants of recognized national standing as fairly presenting, in all material respects, the financial position of the Borrower and its Subsidiaries as at the end of such year and the results of their operations and their cash flows for the three-year period ending as at the end of such year in conformity with GAAP;

(iv) concurrently with the delivery of the financial statements specified in clauses (ii) and (iii) above a certificate of the chief financial officer, treasurer, assistant treasurer or controller of the Borrower (A) stating whether the Borrower has any knowledge of the occurrence and continuance at the date of such certificate of any Event of Default not theretofore reported pursuant to the provisions of clause (i) of this subsection (g), and, if so, stating the facts with respect thereto, and (B) setting forth in a true and correct manner, the calculation of the ratio contemplated by Section 5.02 hereof, as of the date of the most recent financial statements accompanying such certificate, to show the Borrower's compliance with or the status of the financial covenant contained in Section 5.02 hereof;

(v) promptly after the sending or filing thereof, copies of any reports that the Borrower sends to any of its securityholders, and copies of all reports on Form 10-K, Form 10-Q or Form 8-K, if any, that the Borrower or any of its Subsidiaries files with the SEC;

(vi) as soon as possible and in any event within 20 days after the Borrower or any member of the Controlled Group knows or has reason to know that any Termination Event with respect to any Plan has occurred or is reasonably likely to occur, that would reasonably be expected to result in liability exceeding $100,000,000 to the Borrower or such

member of the Controlled Group, a statement of the chief financial officer of the Borrower describing such Termination Event and the action, if any, that the Borrower or such member of the Controlled Group, as the case may be, proposes to take with respect thereto;

(vii) promptly upon reasonable request by the Administrative Agent or any Lender, after the filing thereof with the Department of Labor, copies of each Schedule SB (Actuarial Information) to the annual report (Form 5500 Series) with respect to each Plan;

(viii) promptly upon request and in any event within five Business Days after receipt thereof by the Borrower or any member of the Controlled Group from a Multiemployer Plan sponsor, a copy of each notice received by the Borrower or such member of the Controlled Group concerning the imposition of withdrawal liability pursuant to Section 4202 of ERISA;

(ix) promptly and in any event within five Business Days after Moody's or S&P has changed any relevant Reference Rating, notice of such change;

(x) promptly upon the occurrence of a Reportable Compliance Event, notice of such occurrence;

(xi) promptly after the Borrower becomes aware of any change in the information provided in a Beneficial Ownership Certification that would result in a change to the list of beneficial owners identified in parts (c) or (d) of such certification, a written notice specifying any such change; and

(xii) such other information respecting the condition or operations, financial or otherwise, of the Borrower or any of its Subsidiaries, including, without limitation, copies of all reports and registration statements that the Borrower or any Subsidiary files with the SEC or any national securities exchange, as the Administrative Agent or any Lender (through the Administrative Agent) may from time to time reasonably request.

The financial statements and reports described in paragraphs (ii), (iii) and (v) above will be deemed to have been delivered hereunder if publicly available on the SEC's EDGAR Database or on FE's website no later than the date specified for delivery of same under paragraph (ii), (iii) or (v), as applicable, above; *provided*, that the Borrower shall deliver paper copies of such documents to the Administrative Agent or any Lender upon its request to the Borrower to deliver such paper copies until a written request to cease delivering paper copies is given by the Administrative Agent or such Lender. The Administrative Agent shall have no obligation to request the delivery of or to maintain paper copies of the documents referred to above, and in any event shall have no responsibility to monitor compliance by the Borrower with any such request by a Lender for delivery, and each Lender shall be solely responsible for requesting delivery to it or maintaining its copies of such documents. If any financial statements or report described in paragraph (ii), (iii) or (v) above is due on a date that is not a Business Day, then such financial statements or report shall be delivered on the next succeeding Business Day.

The Borrower hereby acknowledges that (A) the Administrative Agent may, but shall not be obligated to, make available to the Lenders materials and/or information provided by or on behalf of the Borrower hereunder (collectively, "***Borrower Materials***") by posting the Borrower Materials on Debtdomain, IntraLinks, SyndTrak, ClearPar, or a substantially similar electronic transmission system (the "***Platform***") and (B) certain of the Lenders (each, a "***Public Lender***") may have personnel who do not wish to receive material non-public information with respect to the Borrower or its Affiliates, or the respective securities of any of the foregoing, and who may be engaged in investment and other market-related activities with respect to such Persons' securities. The Borrower hereby agrees that (w) all Borrower Materials that are to be made available to Public Lenders shall be clearly and conspicuously marked "PUBLIC" which, at a minimum, shall mean that the word "PUBLIC" shall appear prominently on the first page thereof; (x) by marking Borrower Materials "PUBLIC," the Borrower shall be deemed to have authorized the Administrative Agent and the Lenders to treat such Borrower Materials as not containing any material non-public information with respect to the Borrower or its securities for purposes of United States Federal and state securities laws; (y) all Borrower Materials marked "PUBLIC" are permitted to be made available through a portion of the Platform designated "Public Side Information;" and (z) the Administrative Agent shall be entitled to treat any Borrower Materials that are not marked "PUBLIC" as being suitable only for posting on a portion of the Platform not designated "Public Side Information.

(h) ***Compliance with Anti-Corruption Laws and Sanctions***. (i) Maintain in effect and enforce, and cause the other Covered Entities to maintain in effect and enforce, policies and procedures reasonably designed to ensure compliance with Anti-Corruption Laws and applicable Sanctions in all material respects by the Covered Entities and their respective directors, officers, employees and, to the extent commercially reasonable, agents under the control and acting on behalf of the Covered Entities, and (ii) comply, and cause the other Covered Entities to comply, in all material respects with Anti-Corruption Laws and Sanctions applicable to it or its property.

SECTION 5.02. Financial Covenant.

Unless the Majority Lenders shall otherwise consent in writing, so long as any amount payable by the Borrower hereunder shall remain unpaid or any Lender shall have any Commitment hereunder, the Borrower will maintain a Debt to Capitalization Ratio of no more than 0.65 to 1.00 (determined as of the last day of each fiscal quarter).

SECTION 5.03. Negative Covenants of the Borrower.

Unless the Majority Lenders shall otherwise consent in writing, so long as any amount payable by the Borrower hereunder shall remain unpaid or any Lender shall have any Commitment hereunder, the Borrower will not:

(a) ***Sales, Etc.*** (i) Sell, lease, transfer or otherwise dispose of any shares of common stock or other equity interests of any Significant Subsidiary of the Borrower, whether now owned or hereafter acquired by the Borrower, or permit any Significant Subsidiary of the Borrower to do so, or (ii) sell, lease, transfer or otherwise dispose of (whether in one transaction or a series of

transactions) or permit any of its Subsidiaries to sell, lease, transfer or dispose of (whether in one transaction or a series of transactions) assets located in the United States (other than any assets that are purported to be conveyed in connection with a Permitted Securitization but including assets purported to be conveyed pursuant to any sale leaseback transaction) having an aggregate book value (determined as of the date of such transaction for all such transactions since the date hereof) that is greater than 20% of the book value of all of the consolidated fixed assets of the Borrower, as reported on the most recent consolidated balance sheet of the Borrower prior to the date of such sale, lease transfer or disposition to any entity other than the Borrower or any of its wholly owned direct or indirect Subsidiaries; *provided*, *however*, that the limitation in this clause (ii) shall not in any way restrict, and shall not apply to, (A) the sale, transfer or other disposition of any equity interests in or assets of any Unregulated Subsidiary, (B) the sale, lease, transfer or other disposition of the Bath County hydroelectric generation facility located in Warm Springs, Virginia, or (C) the sale, lease, transfer or other disposition of the Borrower's assets to a Subsidiary of the Borrower or a newly-formed Person to which all or substantially all of the assets and liabilities of the Borrower and its Subsidiaries are being transferred, in each case under this clause (C), pursuant to a transaction permitted under subsection (c) below.

(b) ***Liens, Etc.*** Create or suffer to exist, or permit any Significant Subsidiary of the Borrower to create or suffer to exist, any Lien upon or with respect to any of its properties (including, without limitation, any shares of any class of equity security of any Significant Subsidiary of the Borrower), in each case to secure or provide for the payment of Indebtedness, other than (i) liens consisting of (A) pledges or deposits in the ordinary course of business to secure obligations under worker's compensation laws or similar legislation, (B) deposits in the ordinary course of business to secure, or in lieu of, surety, appeal, or customs bonds to which the Borrower or Significant Subsidiary is a party, (C) deposits, in an aggregate amount not to exceed $250,000,000 at any one time outstanding, made by the Borrower to secure, or in lieu of, surety, appeal, or customs bonds to which any Unregulated Subsidiary is a party, (D) pledges or deposits in the ordinary course of business to secure performance in connection with bids, tenders or contracts (other than contracts for the payment of money), or (E) materialmen's, mechanics', carriers', workers', repairmen's or other like Liens incurred in the ordinary course of business for sums not yet due or currently being contested in good faith by appropriate proceedings diligently conducted, or deposits to obtain in the release of such Liens; (ii) purchase money liens or purchase money security interests upon or in any property acquired or held by the Borrower or Significant Subsidiary in the ordinary course of business, which secure the purchase price of such property or secure indebtedness incurred solely for the purpose of financing the acquisition of such property; (iii) Liens existing on property acquired by the Borrower or Significant Subsidiary or on the property of any Person at the time that such Person becomes a direct or indirect Significant Subsidiary of the Borrower or Significant Subsidiary or is merged into or consolidated with the Borrower or Significant Subsidiary; *provided*, in each case, that such Liens were not created to secure the acquisition of such Person; (iv) Liens in existence on the date of this Agreement; (v) Liens created by any First Mortgage Indenture, so long as under the terms thereof no "event of default" (howsoever designated) in respect of any bonds issued thereunder will be triggered by reference to an Event of Default or Unmatured Default; (vi) Liens securing Attributable Securitization Obligations on the assets purported to be sold in connection with the applicable Permitted Securitization; (vii) Liens securing Nonrecourse Indebtedness; (viii) Liens on cash or cash equivalents deposited on behalf of or pledged to counterparties with respect

to Permitted Obligations of the Borrower or any of its Significant Subsidiaries; (ix) Liens on cash or cash equivalents to defease Indebtedness of the Borrower or any of its Subsidiaries; (x) Liens on cash or cash equivalents constituting proceeds from a disposition of assets otherwise not prohibited under subsection (a) above, which proceeds are deposited in escrow accounts for indemnification, adjustment of purchase price or similar obligations to the purchaser of such assets; (xi) Liens securing obligations in respect of pollution control or industrial revenue bonds or nuclear fuel leases, *provided* that such Liens extend to only the equipment, project, nuclear fuel or other assets financed with the proceeds of such financing; (xii) Liens arising in connection with leases that shall have been or should be, in accordance with GAAP, recorded as capital leases in respect of which the Borrower or Significant Subsidiary is liable as lessee; *provided*, that no such Lien shall extend to or cover any assets of the Borrower or Significant Subsidiary other than the assets of the Borrower or Significant Subsidiary subject to such lease and proceeds thereof; and (xiii) Liens created for the sole purpose of refinancing, extending, renewing or replacing in whole or in part Indebtedness secured by any Lien referred to in the foregoing clauses (i) through (xii); *provided*, *however*, that the principal amount of Indebtedness (or, if greater, the aggregate lending commitment) secured thereby shall not exceed the principal amount of Indebtedness (or, if greater, the aggregate lending commitment) so secured at the time of such refinancing, extension, renewal or replacement, and that such refinancing, extension, renewal or replacement, as the case may be, shall be limited to all or a part of the property or Indebtedness that secured the Lien so extended, renewed or replaced (and any improvements on such property).

(c) ***Mergers, Etc.*** Merge with or into or consolidate with or into any other Person, or permit any of its Subsidiaries to do so, unless (i) immediately after giving effect thereto, no event shall have occurred and be continuing that constitutes an Event of Default, (ii) the consolidation or merger shall not materially and adversely affect the ability of the Borrower (or its successor by merger or consolidation as contemplated by clause (A) of this subsection (c)) to perform its obligations hereunder or under any other Loan Document, and (iii) in the case of any merger or consolidation to which the Borrower is a party, the Person formed by such consolidation or into which the Borrower shall be merged shall (1) assume the Borrower's obligations under this Agreement and the other Loan Documents to which it is a party in a writing reasonably satisfactory in form and substance to the Administrative Agent and (2) be organized under the laws of a State of the United States or the District of Columbia. Without limiting the foregoing, (A) the Borrower may merge with or into or consolidate with or into a Significant Subsidiary or into a newly-formed Person into which one or more Significant Subsidiaries are being merged or consolidated (which Person will become the Borrower hereunder), and (B) the Borrower may transfer all or substantially all of its assets and liabilities to a Significant Subsidiary or to a newly-formed Person to which all or substantially all of the assets and liabilities of one or more Significant Subsidiaries are being transferred (which Person will become the Borrower hereunder), in each case of clauses (A) and (B), if (1) the surviving Person, transferee or Person otherwise specified above to become the Borrower hereunder, as applicable, assumes the Borrower's obligations under this Agreement and the other Loan Documents pursuant to an instrument in form and substance reasonably satisfactory to the Administrative Agent, (2) the Reference Ratings of the surviving or resulting Borrower are not, after giving effect to such transactions, any lower than the Reference Ratings of the Borrower immediately prior to the consummation of such transactions, unless the Reference Ratings of such surviving or resulting Borrower are at least BBB- by S&P and Baa3 by Moody's, and (3) the parties

to such transaction deliver to the Administrative Agent certified copies of all corporate or limited liability, equity holder and Governmental Authority approvals required in connection with such transactions and legal opinions of counsel to such parties relating to such transactions and the assumption agreement described in clause (1) above; *provided, however*, that notwithstanding anything herein to the contrary, in no event shall (x) the Borrower or any Significant Subsidiary merge with or into or consolidate with or into any Unregulated Subsidiary or (y) the Borrower or any Significant Subsidiary transfer all or substantially all of its assets to an Unregulated Subsidiary. Notwithstanding the foregoing, nothing in this Section 5.03(c) shall restrict any merger or consolidation of any Unregulated Subsidiary in connection with any sale, transfer or other disposition of any equity interests in or assets of such Unregulated Subsidiary to any Person that is not an Affiliate of the Borrower in a transaction permitted under Section 5.03(a).

(d) ***Compliance with ERISA***. (i) Enter into any nonexempt "prohibited transaction" (within the meaning of Section 4975 of the Code or Section 406 of ERISA) involving any Plan that may result in any liability of the Borrower to any Person that (in the opinion of the Majority Lenders) would reasonably be expected to have a Material Adverse Effect or (ii) allow or suffer to exist any event or condition known to the Borrower that results in any liability of the Borrower to the PBGC that would reasonably be expected to have a Material Adverse Effect. For purposes of this subsection (d), "liability" shall not include termination insurance premiums payable under Section 4007 of ERISA.

(e) ***Use of Proceeds.*** Use the proceeds of any Borrowing for any purpose other than working capital and other general corporate purposes of the Borrower and its Subsidiaries (which, for the avoidance of doubt, shall include intercompany loans and advances by the Borrower to any of its Subsidiaries, including any Unregulated Subsidiary); *provided, however*, that the Borrower may not use such proceeds in connection with any Hostile Acquisition.

(f) ***Limitation on Cross-Default Provisions.*** Incur or permit any Significant Subsidiary to incur (which for purposes of this subsection (f), shall not include the drawdown by the Borrower or any Significant Subsidiary of any revolving credit facility or any letter of credit facility of the Borrower or any Significant Subsidiary in existence on June 17, 2011 or any other incurrence of Indebtedness or other obligation under agreements in existence on such date pursuant to the terms thereof as in effect on such date) after the date hereof any Indebtedness, Commodity Trading Obligations or Hedging Obligations that shall or may become subject to acceleration, redemption or mandatory purchase prior to the stated maturity date of such Indebtedness or the stated or otherwise applicable date for performance of such Commodity Trading Obligations or Hedging Obligations, as the case may be, upon the occurrence of one or more events of default or credit events or similar events (howsoever designated) under any document or instrument evidencing any Indebtedness, Commodity Trading Obligations or Hedging Obligations of FES, AESC or any of their respective Subsidiaries.

(g) ***Compliance with Anti-Corruption Laws and Sanctions.*** Request any Borrowing, or use, or permit any of the other Covered Entities and its or their respective directors, officers, employees and agents to use, the proceeds of any Borrowing (i) in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to

any Person in violation of any Anti-Corruption Laws, (ii) for the purpose of funding, financing or facilitating any activities, business or transaction of or with any Sanctioned Person, (iii) for the purpose of unauthorized funding, financing or facilitating any activities, business or transaction of or with any Sanctioned Country, or (iv) in any manner that would result in the violation of any Sanctions applicable to, or the imposition of any Sanctions on, any Covered Entity or, to the knowledge of the Borrower, any other party hereto.

(h) ***Equity Contributions.*** Make, or permit any Significant Subsidiary to make, any equity contributions to any Unregulated Subsidiary; *provided*, *however*, that this Section 5.03(h) shall not restrict or otherwise apply to (i) any such equity contributions that are required by Applicable Law or court order or (ii) any intercompany advances made to any Unregulated Subsidiary (including, without limitation, pursuant to the Unregulated Money Pool Agreement) that are recharacterized by a court or other Governmental Authority as equity contributions.

ARTICLE VI
EVENTS OF DEFAULT

SECTION 6.01. Events of Default.

If any of the following events shall occur and be continuing (an "***Event of Default***"):

(a) (i) Any principal of any Advance shall not be paid by the Borrower when the same becomes due and payable, or (ii) any interest on any Advance or any fees or other amounts payable hereunder shall not be paid by the Borrower within three Business Days after the same becomes due and payable; or

(b) Any representation or warranty made by the Borrower (or any of its officers) in any Loan Document or in connection with any Loan Document shall prove to have been incorrect or misleading in any material respect when made; or

(c) (i) The Borrower shall fail to perform or observe any covenant set forth in Section 5.01(a)(i), Section 5.01(g)(i), Section 5.01(h), Section 5.02 or Section 5.03, or (ii) the Borrower shall fail to perform or observe any other term, covenant or agreement (other than those covenants otherwise covered in clause (a) or (c)(i) of this Section 6.01) contained in this Agreement or any other Loan Document and such failure shall remain unremedied for 30 days after written notice thereof shall have been given to the Borrower by the Administrative Agent or any Lender; or

(d) Any material provision of this Agreement or any other Loan Document shall at any time and for any reason cease to be valid and binding upon the Borrower, except pursuant to the terms thereof, or shall be declared to be null and void, or the validity or enforceability thereof shall be contested in any manner by the Borrower or any Governmental Authority, or the Borrower shall deny in any manner that it has any or further liability or obligation under this Agreement or any other Loan Document; or

(e) The Borrower or any Significant Subsidiary shall fail to pay any principal of or premium or interest on any Indebtedness (other than Indebtedness of the Borrower under this Agreement) that is outstanding in a principal amount in excess of $100,000,000 in the aggregate when the same becomes due and payable (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise), and such failure shall continue after the applicable grace period, if any, specified in the agreement or instrument relating to such Indebtedness; or any other event shall occur or condition shall exist under any agreement or instrument relating to any such Indebtedness and shall continue after the applicable grace period, if any, specified in such agreement or instrument, if the effect of such event or condition is to accelerate, or to permit the acceleration of, the maturity of such Indebtedness; or any such Indebtedness shall be declared to be due and payable, or required to be prepaid (other than by a regularly scheduled required prepayment), prior to the stated maturity thereof; or

(f) The Borrower or any Significant Subsidiary shall generally not pay its debts as such debts become due, or shall admit in writing its inability to pay its debts generally, or shall make a general assignment for the benefit of creditors; or any proceeding shall be instituted by or against the Borrower or any Significant Subsidiary seeking to adjudicate it a bankrupt or insolvent, or seeking liquidation, winding up, reorganization, arrangement, adjustment, protection, relief, or composition or arrangement with creditors, a readjustment of its debts, in each case under any law relating to bankruptcy, insolvency or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian or other similar official for it or for any substantial part of its property and, in the case of any such proceeding instituted against it (but not instituted or acquiesced in by it), either such proceeding shall remain undismissed or unstayed for a period of 60 consecutive days, or any of the actions sought in such proceeding (including, without limitation, the entry of an order for relief against, or the appointment of a receiver, trustee, custodian or other similar official for, it or for any substantial part of its property) shall occur; or the Borrower or any Significant Subsidiary shall take any corporate action to authorize or to consent to any of the actions set forth above in this subsection (f); or

(g) Any judgment or order for the payment of money exceeding any applicable insurance coverage by more than $100,000,000 shall be rendered by a court of final adjudication against the Borrower or any Significant Subsidiary and either (i) valid enforcement proceedings shall have been commenced by any creditor upon such judgment or order or (ii) there shall be any period of 30 consecutive days during which a stay of enforcement of such judgment or order, by reason of a pending appeal or otherwise, shall not be in effect; or

(h) Any Termination Event with respect to a Plan shall have occurred or the Borrower or any member of the Controlled Group as employer under a Multiemployer Plan shall have made a complete or partial withdrawal from such Multiemployer Plan, and, 30 days after notice thereof shall have been given to the Borrower by the Administrative Agent or any Lender, such Termination Event (if correctable) shall not have been corrected, and, as applicable, (1) the actual liability in respect of such Termination Event to the Borrower

would reasonably be expected to exceed $100,000,000, or (2) as a result of such complete or partial withdrawal from a Multiemployer Plan, the Borrower would reasonably be expected to incur withdrawal liability in an amount exceeding $100,000,000; or

(i) (i) The Borrower shall fail to own directly or indirectly 100% of the issued and outstanding shares of common stock of each Significant Subsidiary, (ii) any Person or two or more Persons acting in concert shall have acquired beneficial ownership (within the meaning of Rule 13d-3 of the SEC under the Exchange Act), directly or indirectly, of securities of the Borrower (or other securities convertible into such securities) representing 30% or more of the combined voting power of all securities of the Borrower entitled to vote in the election of directors; or (iii) commencing after the date of this Agreement, individuals who as of the date of this Agreement were directors shall have ceased for any reason to constitute a majority of the Board of Directors of the Borrower unless the Persons replacing such individuals were nominated by the stockholders or the Board of Directors of the Borrower in accordance with the Borrower's Organizational Documents (each a "***Change of Control***"); or

(j) An "Event of Default" (as defined in the FE Revolving Credit Agreement) shall have occurred and be continuing;

then, and in any such event, the Administrative Agent shall at the request, or may with the consent, of the Majority Lenders, (i) by notice to the Borrower, declare the obligation of each Lender to make Advances to be terminated, whereupon the same shall forthwith terminate, and (ii) by notice to the Borrower, declare the Advances and all other amounts payable under this Agreement and the other Loan Documents by the Borrower to be forthwith due and payable, whereupon such Advances and all such amounts shall become and be forthwith due and payable, without presentment, demand, protest or further notice of any kind, all of which are hereby expressly waived by the Borrower; *provided*, *however*, that in the event of an actual or deemed entry of an order for relief with respect to the Borrower or any Significant Subsidiary under the Bankruptcy Code, (A) the obligation of each Lender to make Advances shall automatically be terminated and (B) all Advances and all other amounts payable under this Agreement by the Borrower shall automatically become and be due and payable, without presentment, demand, protest or any notice of any kind, all of which are hereby expressly waived by the Borrower.

ARTICLE VII
THE ADMINISTRATIVE AGENT

SECTION 7.01. Appointment and Authority.

Each of the Lenders hereby irrevocably appoints JPMorgan to act on its behalf as the Administrative Agent hereunder and under the other Loan Documents and authorizes the Administrative Agent to take such actions on its behalf and to exercise such powers as are delegated to the Administrative Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto. The provisions of this Article are solely for the benefit of the Administrative Agent and the Lenders, and the Borrower shall not have rights as a third party

beneficiary of any of such provisions. It is understood and agreed that the use of the term "agent" herein or in any other Loan Documents (or any other similar term) with reference to the Administrative Agent is not intended to connote any fiduciary or other implied (or express) obligations arising under agency doctrine of any Applicable Law. Instead such term is used as a matter of market custom, and is intended to create or reflect only an administrative relationship between contracting parties.

SECTION 7.02. Rights as a Lender.

The Person serving as the Administrative Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not the Administrative Agent and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated or unless the context otherwise requires, include the Person serving as the Administrative Agent hereunder in its individual capacity. Such Person and its Affiliates may accept deposits from, lend money to, own securities of, act as the financial advisor or in any other advisory capacity for and generally engage in any kind of business with the Borrower or any Subsidiary or other Affiliate thereof as if such Person were not the Administrative Agent hereunder and without any duty to account therefor to the Lenders.

SECTION 7.03. Exculpatory Provisions.

The Administrative Agent shall not have any duties or obligations except those expressly set forth herein and in the other Loan Documents, and its duties hereunder shall be administrative in nature. Without limiting the generality of the foregoing, the Administrative Agent:

(a) shall not be subject to any fiduciary or other implied duties, regardless of whether an Unmatured Default or an Event of Default has occurred and is continuing;

(b) shall not have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that the Administrative Agent is required to exercise as directed in writing by the Majority Lenders (or such other number or percentage of the Lenders as shall be expressly provided for herein or in the other Loan Documents), *provided* that the Administrative Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose the Administrative Agent to liability or that is contrary to any Loan Document or Applicable Law, including for the avoidance of doubt any action that may be in violation of the automatic stay under the Bankruptcy Code or any other law relating to bankruptcy, insolvency or reorganization or relief of debtors or that may effect a forfeiture, modification or termination of property of a Defaulting Lender in violation of the Bankruptcy Code or such other law; and

(c) shall not, except as expressly set forth herein and in the other Loan Documents, have any duty to disclose, and shall not be liable for the failure to disclose, any information relating to the Borrower or any of its Affiliates that is communicated to or

obtained by the Person serving as the Administrative Agent or any of its Affiliates in any capacity.

The Administrative Agent shall not be liable for any action taken or not taken by it (i) with the consent or at the request of the Majority Lenders (or such other number or percentage of the Lenders as shall be necessary, or as the Administrative Agent shall believe in good faith shall be necessary, under the circumstances as provided in Sections 8.01 and 6.01) or (ii) in the absence of its own gross negligence or willful misconduct as determined by a court of competent jurisdiction by final and non-appealable judgment. The Administrative Agent shall be deemed not to have knowledge of any Unmatured Default or Event of Default unless and until notice describing such Unmatured Default or Event of Default is given in writing to the Administrative Agent by the Borrower or a Lender.

The Administrative Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (ii) the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, (iii) the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or therein or the occurrence of any Unmatured Default or Event of Default, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or (v) the satisfaction of any condition set forth in Article III or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to the Administrative Agent.

The Administrative Agent does not assume and shall not be deemed to have assumed any obligation or duty or any other relationship as the agent, fiduciary or trustee of or for any Lender other than as expressly set forth herein and in the other Loan Documents, regardless of whether an Unmatured Default or an Event of Default has occurred and is continuing. Each Lender agrees that it will not assert any claim against the Administrative Agent based on an alleged breach of fiduciary duty by the Administrative Agent in connection with this Agreement and/or the transactions contemplated hereby.

Nothing in this Agreement or any other Loan Document shall require the Administrative Agent to account to any Lender for any sum or the profit element of any sum received by the Administrative Agent for its own account.

SECTION 7.04. Reliance by Administrative Agent.

The Administrative Agent shall be entitled to rely upon, and shall not incur any liability for relying upon, any notice, request, certificate, consent, statement, instrument, document or other writing (including any electronic message, Internet or intranet website posting or other distribution) believed by it in good faith to be genuine and to have been signed, sent or otherwise authenticated by the proper Person. The Administrative Agent also may rely upon any statement made to it orally or by telephone and believed by it in good faith to have been made by the proper Person, and shall not incur any liability for relying thereon. In determining compliance with any condition hereunder

to the making of an Advance that by its terms must be fulfilled to the satisfaction of a Lender, the Administrative Agent may presume that such condition is satisfactory to such Lender unless the Administrative Agent shall have received notice to the contrary from such Lender prior to the making of such Advance. The Administrative Agent may consult with legal counsel (who may be counsel for the Borrower), independent accountants and other experts selected by it, and shall not be liable for any action taken or not taken by it in accordance with the advice of any such counsel, accountants or experts.

SECTION 7.05. Delegation of Duties.

The Administrative Agent may perform any and all of its duties and exercise its rights and powers hereunder or under any other Loan Document by or through any one or more sub-agents appointed by the Administrative Agent. The Administrative Agent and any such sub-agent may perform any and all of its duties and exercise its rights and powers by or through their respective Related Parties. The exculpatory provisions of this Article shall apply to any such sub-agent and to the Related Parties of the Administrative Agent and any such sub-agent, and shall apply to their respective activities in connection with the syndication of the credit facilities provided for herein as well as activities as Administrative Agent. The Administrative Agent shall not be responsible for the negligence or misconduct of any sub-agents except to the extent that a court of competent jurisdiction determines in a final and non-appealable judgment that the Administrative Agent acted with gross negligence or willful misconduct in the selection of such sub-agents.

SECTION 7.06. Indemnification.

Each Lender agrees to indemnify the Administrative Agent and its Affiliates and their respective officers, directors, employees and professional advisors (to the extent not reimbursed by the Borrower) from and against such Lender's ratable share (determined as provided below) of any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever that may be imposed on, incurred by, or asserted against the Administrative Agent or any such other Indemnified Person in any way relating to or arising out of this Agreement or any action taken or omitted by the Administrative Agent (in its capacity as such), or by such other Indemnified Person acting for the Administrative Agent in connection with such capacity, under this Agreement; *provided* that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements resulting from the Administrative Agent's or such other Indemnified Person's (as the case may be) gross negligence or willful misconduct as determined by the final, non-appealable judgment of a court of competent jurisdiction. Without limitation of the foregoing, each Lender agrees to reimburse the Administrative Agent promptly upon demand for its ratable share of any out-of-pocket expenses (including reasonable counsel fees) incurred by the Administrative Agent in connection with the preparation, execution, delivery, administration, modification, amendment or enforcement (whether through negotiations, legal proceedings or otherwise) of, or legal advice in respect of rights or responsibilities under, this Agreement, to the extent that such expenses are reimbursable by the Borrower but for which the Administrative Agent is not reimbursed by the Borrower. For purposes of this Section 7.06, the Lenders' respective ratable

shares of any amount shall be determined, at any time, according to the sum of (i) the aggregate principal amount of the Advances outstanding at such time and owing to the respective Lenders or (ii) the aggregate amounts of their respective unused Commitments at such time. In the event that any Lender shall have failed to make any Advance as required hereunder, such Lender's Commitment shall be considered to be unused for purposes of this Section 7.06 to the extent of the amount of such Advance. The obligations of the Lenders under this Section 7.06 are subject to the provisions of Section 2.02(d).

SECTION 7.07. Resignation of Administrative Agent.

(a) The Administrative Agent may at any time give notice of its resignation to the Lenders and the Borrower. Upon receipt of any such notice of resignation, the Majority Lenders shall have the right, with the prior written consent of the Borrower (which consent shall not be unreasonably withheld or delayed, but which consent shall not be required if an Event of Default shall have occurred and be continuing), to appoint a successor, which shall be a bank with an office in the United States, or an Affiliate of any such bank with an office in the United States. If no such successor shall have been so appointed by the Majority Lenders and shall have accepted such appointment within 30 days after the retiring Administrative Agent gives notice of its resignation (or such earlier day as shall be agreed by the Majority Lenders) (the "***Resignation Effective Date***"), then the retiring Administrative Agent may (but shall not be obligated to) on behalf of the Lenders, appoint a successor Administrative Agent meeting the qualifications set forth above, *provided* that in no event shall any such successor Administrative Agent be a Defaulting Lender. Whether or not a successor has been appointed, such resignation shall become effective in accordance with such notice on the Resignation Effective Date.

(b) If the Person serving as Administrative Agent is a Defaulting Lender pursuant to clause (iv) of the definition thereof, the Majority Lenders may, to the extent permitted by Applicable Law, by notice in writing to the Borrower and such Person remove such Person as Administrative Agent and, with the prior written consent of the Borrower (which consent shall not be unreasonably withheld or delayed, but which consent shall not be required if an Event of Default shall have occurred and be continuing), appoint a successor, which successor shall be a Lender or an Affiliate of a Lender (the effective date of such removal and appointment of a successor being referred to herein as the "***Removal Effective Date***").

(c) With effect from the Resignation Effective Date or the Removal Effective Date (as applicable) (1) the retiring or removed Administrative Agent shall be discharged from its duties and obligations hereunder and under the other Loan Documents and (2) except for any indemnity payments or other amounts then owed to the retiring or removed Administrative Agent, all payments, communications and determinations provided to be made by, to or through the Administrative Agent shall instead be made by or to each Lender directly, until such time, if any, as the Majority Lenders appoint a successor Administrative Agent as provided for above. Upon the acceptance of a successor's appointment as Administrative Agent hereunder, such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring (or removed) Administrative Agent (other than as provided in Section 2.13(i) and other than any rights to indemnity payments or other amounts owed to the retiring or removed Administrative Agent as of

the Resignation Effective Date or the Removal Effective Date, as applicable), and the retiring or removed Administrative Agent shall be discharged from all of its duties and obligations hereunder or under the other Loan Documents (if not already discharged therefrom as provided above in this Section). The fees payable by the Borrower to a successor Administrative Agent shall be the same as those payable to its predecessor unless otherwise agreed between the Borrower and such successor. After the retiring or removed Administrative Agent's resignation or removal hereunder and under the other Loan Documents, the provisions of this Article and Section 8.05 shall continue in effect for the benefit of such retiring or removed Administrative Agent, its sub-agents and their respective Related Parties in respect of any actions taken or omitted to be taken by any of them (i) while the retiring or removed Administrative Agent was acting as Administrative Agent and (ii) after such resignation or removal for as long as any of them continues to act in any capacity hereunder or under the other Loan Documents, including in respect of any actions taken in connection with transferring the agency to any successor Administrative Agent.

SECTION 7.08. Non-Reliance on Administrative Agent and Other Lenders.

Each Lender acknowledges that it has, independently and without reliance upon the Administrative Agent or any other Lender or any of their Related Parties (or any such Person or any Affiliate thereof acting in the capacity of "Joint Lead Arranger", "Syndication Agent" or "Documentation Agent") and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Agreement. Each Lender also acknowledges that it will, independently and without reliance upon the Administrative Agent or any other Lender or any of their Related Parties (or any such Person or any Affiliate thereof acting in the capacity of "Joint Lead Arranger", "Syndication Agent" or "Documentation Agent") and based on such documents and information as it shall from time to time deem appropriate, continue to make its own decisions in taking or not taking action under or based upon this Agreement, any other Loan Document or any related agreement or any document furnished hereunder or thereunder.

SECTION 7.09. No Other Duties, Etc.

Anything herein to the contrary notwithstanding, none of the Persons listed on the cover page hereof as a "Joint Lead Arranger", "Documentation Agent" or "Syndication Agent" shall have any powers, duties or responsibilities under this Agreement or any of the other Loan Documents, except in its capacity, as applicable, as the Administrative Agent or a Lender hereunder. All references to Merrill Lynch, Pierce, Fenner & Smith Incorporated in its capacity as a "Joint Lead Arranger" shall include any other registered broker-dealer wholly-owned by Bank of America Corporation to which all of Bank of America Corporation's or any of its Subsidiaries' investment banking, commercial lending services or related businesses may be transferred following the date of this Agreement.

SECTION 7.10. Administrative Agent May File Proofs of Claim.

In case of the pendency of any proceeding under the Bankruptcy Code or any other law relating to bankruptcy, insolvency or reorganization or relief of debtors or any other judicial proceeding relative to the Borrower, the Administrative Agent (irrespective of whether the principal of any Advance shall then be due and payable as herein expressed or by declaration or otherwise and irrespective of whether the Administrative Agent shall have made any demand on the Borrower) shall be entitled and empowered, by intervention in such proceeding or otherwise:

(a) to file and prove a claim for the whole amount of the principal and interest owing and unpaid in respect of the Advances and all other amounts that are owing and unpaid and to file such other documents as may be necessary or advisable in order to have the claims of the Lenders and the Administrative Agent (including any claim for the reasonable compensation, expenses, disbursements and advances of the Lenders and the Administrative Agent and their respective agents and counsel, and all other amounts due the Lenders and the Administrative Agent under Sections 2.03 and 8.05) allowed in such judicial proceeding; and

(b) to collect and receive any monies or other property payable or deliverable on any such claims and to distribute the same;

and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Lender to make such payments to the Administrative Agent and, in the event that the Administrative Agent shall consent to the making of such payments directly to the Lenders, to pay to the Administrative Agent any amount due for the reasonable compensation, expenses, disbursements and advances of the Administrative Agent and its agents and counsel, and any other amounts due the Administrative Agent, under Sections 2.03 and 8.05.

Nothing contained herein shall be deemed to authorize the Administrative Agent to authorize or consent to or accept or adopt on behalf of any Lender any plan of reorganization, arrangement, adjustment or composition affecting the Advances or other amounts payable by the Borrower under this Agreement and the other Loan Documents or the rights of any Lender to authorize the Administrative Agent to vote in respect of the claim of any Lender in any such proceeding.

SECTION 7.11. Certain ERISA Matters.

%3. Each Lender (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and not, for the avoidance of doubt, to or for the benefit of the Borrower, that at least one of the following is and will be true:

(i) such Lender is not using “plan assets” (within the meaning of Section 3(42) of ERISA or otherwise) of one or more Benefit Plans with respect to such Lender’s entrance into, participation in, administration of and performance of the Advances or this Agreement;

(ii) the transaction exemption set forth in one or more PTEs, such as PTE 84-14 (a class exemption for certain transactions determined by independent qualified professional asset managers), PTE 95-60 (a class exemption for certain transactions involving insurance company general accounts), PTE 90-1 (a class exemption for certain transactions involving insurance company pooled separate accounts), PTE 91-38 (a class exemption for certain transactions involving bank collective investment funds) or PTE 96-23 (a class exemption for certain transactions determined by in-house asset managers), is applicable with respect to such Lender's entrance into, participation in, administration of and performance of the Advances, the Commitments and this Agreement;

(iii) (A) such Lender is an investment fund managed by a "Qualified Professional Asset Manager" (within the meaning of Part VI of PTE 84-14), (B) such Qualified Professional Asset Manager made the investment decision on behalf of such Lender to enter into, participate in, administer and perform the Loans, the Commitments and this Agreement, (C) the entrance into, participation in, administration of and performance of the Advances, the Commitments and this Agreement satisfies the requirements of sub-sections (b) through (g) of Part I of PTE 84-14 and (D) to the best knowledge of such Lender, the requirements of subsection (a) of Part I of PTE 84-14 are satisfied with respect to such Lender's entrance into, participation in, administration of and performance of the Advances, the Commitments and this Agreement; or

(iv) such other representation, warranty and covenant as may be agreed in writing between the Administrative Agent, in its sole discretion, and such Lender.

(b) In addition, unless either (1) sub-clause (i) in the immediately preceding paragraph (a) is true with respect to a Lender or (2) a Lender has provided another representation, warranty and covenant in accordance with sub-clause (iv) in the immediately preceding paragraph (a), such Lender further (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and not, for the avoidance of doubt, to or for the benefit of the Borrower, that the Administrative Agent is not a fiduciary with respect to the assets of such Lender involved in such Lender's entrance into, participation in, administration of and performance of the Advances, the Commitments and this Agreement (including in connection with the reservation or exercise of any rights by the Administrative Agent under this Agreement, any Loan Document or any documents related hereto or thereto).

(c) The Administrative Agent hereby informs the Lenders that the Administrative Agent is not undertaking to provide investment advice or to give advice in a fiduciary capacity, in connection with the transactions contemplated hereby, and that the Administrative Agent has a financial interest in the transactions contemplated hereby in that the Administrative Agent or an Affiliate thereof (i) may receive interest or other payments with respect to the Advances, the Commitments, this Agreement and any other Loan Documents, (ii) may recognize a gain if it extended the Advances or the Commitments for an amount less than the amount being paid for an interest in the Advances or the Commitments by such Lender or (iii) may receive fees or other

payments in connection with the transactions contemplated hereby, the Loan Documents or otherwise, including structuring fees, commitment fees, arrangement fees, facility fees, upfront fees, underwriting fees, ticking fees, agency fees, administrative agent fees, utilization fees, minimum usage fees, deal-away or alternate transaction fees, amendment fees, processing fees, term out premiums, banker's acceptance fees, breakage or other early termination fees or fees similar to the foregoing.

ARTICLE VIII
MISCELLANEOUS

SECTION 8.01. Amendments, Etc.

Subject to Section 2.16(a)(i) and except as otherwise expressly provided in the definition of "Eurodollar Rate" set forth in Section 1.01, no amendment or waiver of any provision of this Agreement or any Note, nor consent to any departure by the Borrower therefrom, shall in any event be effective unless the same shall be in writing and signed by the Majority Lenders and the Borrower (and acknowledged by the Administrative Agent), and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given; *provided, however,* that no amendment, waiver or consent shall, unless in writing and signed by all the Lenders affected thereby (other than, in the case of clause (a), (f) or (g)(ii) below, any Defaulting Lender), do any of the following: (a) waive any of the conditions specified in Section 3.01, (b) increase or extend the Commitments of the Lenders or subject the Lenders to any additional obligations, (c) change any provision hereof in a manner that would alter the pro rata sharing of payments or the pro rata reduction of Commitments among the Lenders, (d) reduce the principal of, or interest (or rate of interest) on, the Advances or any fees or other amounts payable hereunder, (e) postpone any date fixed for any payment of principal of, or interest on, the Advances or any fees or other amounts payable hereunder, (f) change the percentage of the Commitments or of the aggregate unpaid principal amount of the Advances or the number of Lenders, that shall be required for the Lenders or any of them to take any action hereunder or (g) waive or amend (i) this Section 8.01, (ii) the definition of "Majority Lenders" or (iii) the proviso contained in Section 8.07; and *provided, further,* that (i) no amendment, waiver or consent shall, unless in writing and signed by the Administrative Agent in addition to the Lenders required above to take such action, affect the rights or duties of the Administrative Agent under this Agreement or Section 2.16; (ii) Section 8.08(g) may not be amended, waived or otherwise modified without the consent of each Granting Lender all or any part of whose Advances are being funded by an SPC at the time of such amendment, waiver or other modification; and (iii) this Agreement may be amended and restated without the consent of any Lender or the Administrative Agent if, upon giving effect to such amendment and restatement, such Lender or the Administrative Agent, as the case may be, shall no longer be a party to this Agreement (as so amended and restated) or have any Commitment or other obligation hereunder and shall have been paid in full all amounts payable hereunder to such Lender or the Administrative Agent, as the case may be. Notwithstanding the foregoing, the Borrower and the Administrative Agent may amend this Agreement and the other Loan Documents without the consent of any Lender to the extent necessary (1) to cure any ambiguity, omission, mistake, error, defect or inconsistency (as reasonably determined by the Administrative Agent) or (2) to make administrative changes of a

technical or immaterial nature; provided, that, in each case, (x) such amendment does not adversely affect the rights of any Lender and (y) the Lenders shall have received at least five (5) Business Days' prior written notice thereof and the Administrative Agent shall not have received, within five (5) Business Days of the date of such notice to the Lenders, a written notice from the Majority Lenders stating that the Majority Lenders object to such amendment.

SECTION 8.02. Notices, Etc.

Unless specifically provided otherwise in this Agreement, all notices and other communications provided for hereunder shall be in writing (including facsimile) and delivered by hand or overnight courier service, mailed or sent by facsimile, if to the Borrower, to it at its address at 76 South Main Street, Akron, Ohio 44308, Attention: Treasurer, Facsimile: _____; if to any Bank, at its Domestic Lending Office specified opposite its name on Schedule I hereto; if to any other Lender, at its Domestic Lending Office specified in the Assignment and Assumption pursuant to which it became a Lender; if to the Administrative Agent, at its applicable address set forth in Schedule II hereto; or, as to each party, at such other address as shall be designated by such party in a written notice to the other parties. Subject to the other notice requirements of this Agreement, all notices and communications given to any party hereto in accordance with the provisions of this Agreement shall be deemed to have been given on the date of receipt if delivered by hand or overnight courier service, mailed or sent by facsimile to such party and received during the normal business hours of such party as provided in this Section or in accordance with the latest unrevoked direction from such party given in accordance with this Section. If such notices and communications are received after the normal business hours of such party, receipt shall be deemed to have been given upon the opening of the recipient's next Business Day.

SECTION 8.03. Electronic Communications.

(a) The Borrower hereby agrees that it will provide to the Administrative Agent all information, documents and other materials that it is obligated to furnish to the Administrative Agent pursuant to the Loan Documents, including, without limitation, all notices, requests, financial statements, financial and other reports, certificates and other information materials, but excluding any such communication that (i) relates to a request for a new, or a conversion of an existing, Borrowing (including any election of an interest rate or Interest Period relating thereto), (ii) relates to the payment of any principal or other amount due under this Agreement prior to the scheduled date therefor, (iii) provides notice of any Unmatured Default or Event of Default under this Agreement or (iv) is required to be delivered to satisfy any condition precedent to the effectiveness of this Agreement and/or any Borrowing thereunder (all such non-excluded communications being referred to herein collectively as "***Communications***"), by transmitting the Communications in an electronic/soft medium in a format acceptable to the Administrative Agent to_____ or faxing the Communications to _____. In addition, the Borrower agrees to continue to provide the Communications to the Administrative Agent in the manner otherwise specified in this Agreement, but only to the extent requested by the Administrative Agent.

(b) The Borrower further agrees that the Administrative Agent may make the Communications available to the Lenders by posting the Communications on the Platform. The Borrower acknowledges that the distribution of material through an electronic medium is not necessarily secure and that there are confidentiality and other risks associated with such distribution.

(c) THE PLATFORM IS PROVIDED "AS IS" AND "AS AVAILABLE". THE AGENT PARTIES (AS DEFINED BELOW) DO NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE COMMUNICATIONS, OR THE ADEQUACY OF THE PLATFORM AND EXPRESSLY DISCLAIM LIABILITY FOR ERRORS OR OMISSIONS IN THE COMMUNICATIONS. NO WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF THIRD PARTY RIGHTS OR FREEDOM FROM VIRUSES OR OTHER CODE DEFECTS, IS MADE BY THE AGENT PARTIES IN CONNECTION WITH THE COMMUNICATIONS OR THE PLATFORM. IN NO EVENT SHALL THE ADMINISTRATIVE AGENT OR ANY OF ITS RELATED PARTIES (COLLECTIVELY, "***AGENT PARTIES***") HAVE ANY LIABILITY TO THE BORROWER, ANY LENDER OR ANY OTHER PERSON OR ENTITY FOR DAMAGES OF ANY KIND, INCLUDING, WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES OR EXPENSES (WHETHER IN TORT, CONTRACT OR OTHERWISE) ARISING OUT OF THE BORROWER'S OR THE ADMINISTRATIVE AGENT'S TRANSMISSION OF THE COMMUNICATIONS THROUGH THE PLATFORM, EXCEPT TO THE EXTENT THE LIABILITY OF ANY AGENT PARTY IS FOUND IN A FINAL NON-APPEALABLE JUDGMENT BY A COURT OF COMPETENT JURISDICTION TO HAVE RESULTED PRIMARILY FROM SUCH AGENT PARTY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

(d) The Administrative Agent agrees that the receipt of the Communications by the Administrative Agent at its e-mail address set forth above shall constitute effective delivery of the Communications to the Administrative Agent for purposes of the Loan Documents. Each Lender agrees that notice to it (as provided in the next sentence) specifying that the Communications have been posted to the Platform shall constitute effective delivery of the Communications to such Lender for purposes of the Loan Documents. Each Lender agrees to notify the Administrative Agent in writing (including by electronic communication) from time to time of such Lender's e-mail address to which the foregoing notice may be sent by electronic transmission and that the foregoing notice may be sent to such e-mail address. Subject to the other notice requirements of this Agreement, all such notices and Communications given to the Administrative Agent or such Lender in accordance with the provisions of this Agreement shall be deemed to have been given on the date of receipt if delivered by electronic/soft medium to such party and received during the normal business hours of such party as provided in this Section or in accordance with the latest unrevoked direction from such party given in accordance with this Section. If such notices and communications are received after the normal business hours of such party, receipt shall be deemed to have been given upon the opening of the recipient's next Business Day.

(e) Nothing herein shall prejudice the right of the Administrative Agent or any Lender to give any notice or other communication pursuant to any Loan Document in any other manner specified in such Loan Document.

SECTION 8.04. No Waiver; Remedies.

No failure on the part of any Lender or the Administrative Agent to exercise, and no delay in exercising, any right hereunder or under any Note shall operate as a waiver thereof; nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided are cumulative and not exclusive of any remedies provided by law.

Notwithstanding anything to the contrary contained herein or in any other Loan Document, the authority to enforce rights and remedies hereunder and under the other Loan Documents against the Borrower shall be vested exclusively in, and all actions and proceedings at law in connection with such enforcement shall be instituted and maintained exclusively by, the Administrative Agent in accordance with Section 6.01 for the benefit of all the Lenders; *provided*, *however*, that the foregoing shall not prohibit (a) the Administrative Agent from exercising on its own behalf the rights and remedies that inure to its benefit (solely in its capacity as Administrative Agent) hereunder and under the other Loan Documents, (b) any Lender from exercising setoff rights in accordance with Section 8.06 (subject to the terms of Section 2.14), or (c) any Lender from filing proofs of claim or appearing and filing pleadings on its own behalf during the pendency of a proceeding relative to the Borrower under the Bankruptcy Code; and *provided*, *further*, that if at any time there is no Person acting as Administrative Agent hereunder and under the other Loan Documents, then the Majority Lenders shall have the rights otherwise ascribed to the Administrative Agent pursuant to Section 6.01.

SECTION 8.05. Costs and Expenses; Indemnification.

(a) The Borrower agrees to pay on demand all reasonable out-of-pocket costs and expenses incurred by the Administrative Agent in connection with the preparation, execution, delivery, syndication, administration, modification and amendment of this Agreement, any Note and the other documents to be delivered hereunder, including, without limitation, the reasonable fees and out-of-pocket expenses of counsel for the Administrative Agent with respect thereto and with respect to advising the Administrative Agent as to its rights and responsibilities under this Agreement. The Borrower further agrees to pay on demand all reasonable out-of-pocket costs and expenses, if any (including, without limitation, reasonable counsel fees and expenses of counsel), incurred by the Administrative Agent and the Lenders in connection with the enforcement (whether through negotiations, legal proceedings or otherwise) of this Agreement, any Note and the other documents to be delivered hereunder, including, without limitation, counsel fees and expenses in connection with the enforcement of rights under this Section 8.05(a). The Borrower's obligations under this Section 8.05(a) shall survive (x) the repayment of all amounts owing to the Lenders and the Administrative Agent under this Agreement and any Note and (y) the termination of this Agreement.

(b) Except as otherwise expressly provided to the contrary herein, if any payment of principal of, or Conversion of, any Eurodollar Rate Advance is made other than on the last day of the Interest Period for such Advance, as a result of a payment or Conversion pursuant to Section 2.08 or 2.11 or a prepayment pursuant to Section 2.09 or acceleration of the maturity of any amounts owing hereunder pursuant to Section 6.01 or upon an assignment made upon demand of the Borrower pursuant to Section 2.17(b) or for any other reason, the Borrower shall, upon demand by any Lender (with a copy of such demand to the Administrative Agent), pay to the Administrative Agent for the account of such Lender any amounts required to compensate such Lender for any additional losses, costs or expenses that it may reasonably incur as a result of such payment or Conversion, including, without limitation, any loss, cost or expense incurred by reason of the liquidation or redeployment of deposits or other funds acquired by any Lender to fund or maintain such Advance. The Borrower's obligations under this Section 8.05(b) shall survive the repayment of all other amounts owing to the Lenders and the Administrative Agent under this Agreement and any Note and the termination of this Agreement.

(c) The Borrower hereby agrees to indemnify and hold each Lender, the Administrative Agent and their respective Affiliates and their respective officers, directors, partners, employees and professional advisors (each, an "***Indemnified Person***") harmless from and against any and all claims, damages, liabilities, obligations, losses, penalties, costs or expenses (including reasonable attorney's fees and expenses, whether or not such Indemnified Person is named as a party to any proceeding or is otherwise subjected to judicial or legal process arising from any such proceeding) that any of them may incur or that may be claimed against any of them by any Person (including the Borrower) by reason of or in connection with or arising out of any investigation, litigation or proceeding related to this Agreement, any of the transactions contemplated herein and any use or proposed use by the Borrower of the proceeds of any Advance, except to the extent such claim, damage, liability, obligation, loss, penalty, cost or expense is found in a final, non-appealable judgment by a court of competent jurisdiction to have resulted from such Indemnified Person's gross negligence or willful misconduct. The Borrower's obligations under this Section 8.05(c) shall survive (x) the repayment of all amounts owing to the Lenders and the Administrative Agent under this Agreement and any Note and (y) the termination of this Agreement. If and to the extent that the obligations of the Borrower under this Section 8.05 (c) are unenforceable for any reason, the Borrower agrees to make the maximum payment in satisfaction of such obligations that are not unenforceable that is permissible under Applicable Law or, if less, such amount that may be ordered by a court of competent jurisdiction.

(d) To the extent permitted by law, the Borrower also agrees not to assert any claim against any Indemnified Person on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to actual or direct damages) in connection with, arising out of, or otherwise relating to this Agreement, any of the transactions contemplated herein or the actual or proposed use of the proceeds of the Advances.

SECTION 8.06. Right of Set-off.

Upon the occurrence and during the continuance of any Event of Default each Lender is hereby authorized at any time and from time to time, to the fullest extent permitted by law, to set

off and apply any and all deposits (general or special, time or demand, provisional or final, *excluding, however*, any payroll accounts maintained by the Borrower with such Lender if and to the extent that such Lender shall have expressly waived its set-off rights in writing in respect of such payroll account) at any time held and other indebtedness at any time owing by such Lender to or for the credit or the account of the Borrower against any and all of the obligations of the Borrower now or hereafter existing under this Agreement and any Note held by such Lender, whether or not such Lender shall have made any demand under this Agreement or such Note and although such obligations may be unmatured. Each Lender agrees promptly to notify the Borrower and the Administrative Agent after any such set-off and application made by such Lender, *provided* that the failure to give such notice shall not affect the validity of such set-off and application. The rights of each Lender under this Section 8.06 are in addition to other rights and remedies (including, without limitation, other rights of set-off) that such Lender may have.

SECTION 8.07. Binding Effect.

This Agreement shall become effective when it shall have been executed by the Borrower and the Administrative Agent and when the Administrative Agent shall have been notified by each Bank that such Bank has executed it and thereafter shall be binding upon and inure to the benefit of the Borrower, the Administrative Agent and each Lender and their respective successors and permitted assigns; *provided*, that the Borrower shall not have the right to assign its rights or obligations hereunder or any interest herein except (x) with the prior written consent of each Lender (and any such assignment (other than any assignment pursuant to the following clause (y)) without such consent shall be null and void *ab initio*) or (y) pursuant to Section 5.03(c).

SECTION 8.08. Assignments and Participations.

(a) ***Successors and Assigns Generally***. No Lender may assign or otherwise transfer any of its rights or obligations hereunder except (i) to an assignee in accordance with the provisions of subsection (b) of this Section 8.08, (ii) by way of participation in accordance with the provisions of subsection (d) of this Section 8.08, (iii) by way of pledge or assignment of a security interest subject to the restrictions of subsection (f) of this Section 8.08, or (iv) to an SPC in accordance with the provisions of subsection (g) of this Section 8.08 (and any other attempted assignment or transfer by any party hereto shall be null and void). Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto, their respective successors and assigns permitted hereby, Participants to the extent provided in subsection (d) of this Section 8.08 and, to the extent expressly contemplated hereby, the Related Parties of each of the Administrative Agent and the Lenders) any legal or equitable right, remedy or claim under or by reason of this Agreement.

(b) ***Assignments by Lenders***. Any Lender may at any time assign to one or more assignees all or a portion of its rights and obligations under this Agreement (including all or a portion of its Commitment and the Advances at the time owing to it); provided that any such assignment shall be subject to the following conditions:

(i) ***Minimum Amounts***.

(A) in the case of an assignment of the entire remaining amount of the assigning Lender's Commitment and/or the Advances at the time owing to it or contemporaneous assignments to related Approved Funds that equal at least the amount specified in subsection (b)(i)(B) of this Section 8.08 in the aggregate or in the case of an assignment to a Lender, an Affiliate of a Lender or an Approved Fund, no minimum amount need be assigned; and

(B) in any case not described in subsection (b)(i)(A) of this Section 8.08, the aggregate amount of the Commitment (which for this purpose includes Advances outstanding thereunder) or, if the applicable Commitment is not then in effect, the principal outstanding balance of the Advances of the assigning Lender subject to each such assignment (determined as of the date the Assignment and Assumption with respect to such assignment is delivered to the Administrative Agent or, if the "Trade Date" is specified in the Assignment and Assumption, as of the Trade Date) shall not be less than $5,000,000, or an integral multiple of $1,000,000 in excess thereof, unless each of the Administrative Agent and, so long as no Event of Default has occurred and is continuing, the Borrower otherwise consents (such consent not to be unreasonably withheld or delayed); *provided* that the Borrower shall be deemed to have consented to any such assignment unless it shall object thereto by giving written notice to the Administrative Agent within five Business Days after having received notice thereof.

(ii) ***Proportionate Amounts***. Each partial assignment shall be made as an assignment of a proportionate part of all the assigning Lender's rights and obligations under this Agreement with respect to the Advance or the Commitment assigned.

(iii) ***Required Consents***. No consent shall be required for any assignment except to the extent required by subsection (b)(i)(B) of this Section 8.08 and, in addition:

(A) the consent of the Borrower (such consent not to be unreasonably withheld or delayed) shall be required unless (x) an Event of Default has occurred and is continuing at the time of such assignment, or (y) such assignment is to a Lender, an Affiliate of a Lender or an Approved Fund; *provided* that the Borrower shall be deemed to have consented to any such assignment unless it shall object thereto by giving written notice to the Administrative Agent within five Business Days after having received notice thereof, and *provided, further*, that the Borrower's consent shall not be required during the primary syndication hereof; and

(B) the consent of the Administrative Agent (such consent not to be unreasonably withheld or delayed) shall be required for assignments if such assignment is to a Person that is not a Lender, an Affiliate of such Lender or an Approved Fund with respect to such Lender.

(iv) ***Assignment and Assumption***. The parties to each assignment shall execute and deliver to the Administrative Agent an Assignment and Assumption, together with a processing and recordation fee of $3,500 (to be paid by the assigning Lender, or, in the case of an assignment pursuant to Section 2.17(b), the Borrower); *provided* that the Administrative Agent may, in its sole discretion, elect to waive such processing and recordation fee in the case of any assignment. The assignee, if it is not a Lender, shall deliver to the Administrative Agent an Administrative Questionnaire.

(v) ***No Assignment to Certain Persons***. No such assignment shall be made to (A) the Borrower or any of the Borrower's Affiliates or Subsidiaries or (B) to any Defaulting Lender or any of its Subsidiaries, or any Person who, upon becoming a Lender hereunder, would constitute any of the foregoing Persons described in this clause (B).

(vi) ***No Assignment to Natural Persons***. No such assignment shall be made to a natural Person (or to a holding company, investment vehicle or trust for, or owned and operated for the primary benefit of, a natural Person).

(vii) ***Certain Additional Payments***. In connection with any assignment of rights and obligations of any Defaulting Lender hereunder, no such assignment shall be effective unless and until, in addition to the other conditions thereto set forth herein, the parties to the assignment shall make such additional payments to the Administrative Agent in an aggregate amount sufficient, upon distribution thereof as appropriate (which may be outright payment, purchases by the assignee of participations or subparticipations, or other compensating actions, including funding, with the consent of the Borrower and the Administrative Agent, the applicable pro rata share of Advances previously requested but not funded by the Defaulting Lender, to each of which the applicable assignee and assignor hereby irrevocably consent), to (x) pay and satisfy in full all payment liabilities then owed by such Defaulting Lender to the Administrative Agent and each other Lender hereunder (and interest accrued thereon), and (y) acquire (and fund as appropriate) its full pro rata share of all Advances in accordance with its Percentage. Notwithstanding the foregoing, in the event that any assignment of rights and obligations of any Defaulting Lender hereunder shall become effective under Applicable Law without compliance with the provisions of this subsection, then the assignee of such interest shall be deemed to be a Defaulting Lender for all purposes of this Agreement until such compliance occurs.

Subject to acceptance and recording thereof by the Administrative Agent pursuant to subsection (c) of this Section 8.08, from and after the effective date specified in each Assignment and Assumption, the assignee thereunder shall be a party to this Agreement and, to the extent of the interest assigned by such Assignment and Assumption, have the rights and obligations of a Lender under this Agreement, and the assigning Lender thereunder shall, to the extent of the interest assigned by such Assignment and Assumption, be released from its obligations under this Agreement (and, in the case of an Assignment and Assumption covering all of the assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto) but shall continue to be entitled to the benefits of Sections 2.10, 2.13 and 8.05 with respect to facts and circumstances occurring prior to the effective date of such assignment; provided, that except to the extent otherwise expressly

agreed by the affected parties, no assignment by a Defaulting Lender will constitute a waiver or release of any claim of any party hereunder arising from that Lender's having been a Defaulting Lender. Any assignment or transfer by a Lender of rights or obligations under this Agreement that does not comply with this subsection shall be treated for purposes of this Agreement as a sale by such Lender of a participation in such rights and obligations in accordance with subsection (d) of this Section 8.08.

(c) ***Register***. The Administrative Agent, acting solely for this purpose as an agent of the Borrower, shall maintain at its address referred to in Section 8.02, a copy of each Assignment and Assumption delivered to it and a register for the recordation of the names and addresses of the Lenders, and the Commitments of, and principal amounts (and stated interest) of the Advances owing to, each Lender pursuant to the terms hereof from time to time (the "***Register***"). The entries in the Register shall be conclusive absent manifest error, and the Borrower, the Administrative Agent and the Lenders shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender hereunder for all purposes of this Agreement. The Register shall be available for inspection by the Borrower and any Lender, at any reasonable time and from time to time upon reasonable prior notice.

(d) ***Participations***. Any Lender may at any time, without the consent of, or notice to, the Borrower or the Administrative Agent, sell participations to any Person (other than a Person described in Section 8.08(b)(v) or (vi)) (each, a "***Participant***") in all or a portion of such Lender's rights and/or obligations under this Agreement (including all or a portion of its Commitment and/or the Advances owing to it); *provided* that (i) such Lender's obligations under this Agreement shall remain unchanged, (ii) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations, and (iii) the Borrower, the Administrative Agent and the Lenders shall continue to deal solely and directly with such Lender in connection with such Lender's rights and obligations under this Agreement. For the avoidance of doubt, each Lender shall be responsible for the indemnity under Section 7.06 with respect to any payments made by such Lender to its Participant(s).

Any agreement or instrument pursuant to which a Lender sells such a participation shall provide that such Lender shall retain the sole right to enforce this Agreement and to approve any amendment, modification or waiver of any provision of this Agreement; *provided* that such agreement or instrument may provide that such Lender will not, without the consent of the Participant, agree to any amendment, modification or waiver described in clauses (a) through (g) of Section 8.01 that affects such Participant. The Borrower agrees that each Participant shall be entitled to the benefits of Sections 2.10, 2.13 and 8.05(b) (subject to the requirements and limitations therein, including the requirements under Section 2.13(g) (it being understood that the documentation required under Section 2.13(g) shall be delivered to the participating Lender)) to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to subsection (b) of this Section; *provided* that such Participant (A) agrees to be subject to the provisions of Section 2.17 as if it were an assignee under subsection (b) of this Section; and (B) shall not be entitled to receive any greater payment under Section 2.10 or 2.13, with respect to any participation, than its participating Lender would have been entitled to receive, except to the extent (x) such entitlement to receive a greater payment results from a Change in Law that occurs after the Participant

acquired the applicable participation and (y) the sale to such Participant is made with the Borrower's prior written consent. Each Lender that sells a participation to any Participant agrees, at the Borrower's request and expense, to use reasonable efforts to cooperate with the Borrower to effectuate the provisions of Section 2.17(b) with respect to such Participant. To the extent permitted by law, each Participant also shall be entitled to the benefits of Section 8.06 as though it were a Lender; *provided* that such Participant agrees to be subject to Section 2.14 as though it were a Lender. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Borrower, maintain a register on which it enters the name and address of each Participant and the principal amounts (and stated interest) of each Participant's interest in the Commitments, Advances or other obligations under the Loan Documents (the "***Participant Register***"); *provided* that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any Participant or any information relating to a Participant's interest in any Commitments, Advances or its other obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such Commitment, Advance or other obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, the Administrative Agent (in its capacity as Administrative Agent) shall have no responsibility for maintaining a Participant Register. A Participant that would be a Foreign Lender if it were a Lender shall not be entitled to the benefits of Section 2.13 unless the Borrower is notified of the participation sold to such Participant and such Participant agrees, for the benefit of the Borrower, to comply with Section 2.13(g) as though it were a Lender.

(e) ***Certain Pledges***. Any Lender may at any time pledge or assign a security interest in all or any portion of its rights under this Agreement to secure obligations of such Lender, including any pledge or assignment to secure obligations to a Federal Reserve Bank or other central banking authority; *provided* that no such pledge or assignment shall release such Lender from any of its obligations hereunder or substitute any such pledgee or assignee for such Lender as a party hereto.

(f) ***Disclosure of Certain Information***. Any Lender may, in connection with any assignment or participation or proposed assignment or participation pursuant to this Section 8.08, disclose to the assignee or participant or proposed assignee or participant, any information relating to the Borrower furnished to such Lender by or on behalf of the Borrower; *provided*, that prior to any such disclosure, the assignee or participant or proposed assignee or participant shall agree to preserve the confidentiality of any confidential information relating to the Borrower received by it from such Lender.

(g) ***Special Purpose Funding Vehicles***. Notwithstanding anything to the contrary contained herein, any Lender (a "***Granting Lender***") may grant to a special purpose funding vehicle identified as such in writing from time to time by the Granting Lender to the Administrative Agent and the Borrower (an "***SPC***") the option to provide all or any part of any Advance that such Granting Lender would otherwise be obligated to make pursuant to this Agreement; *provided* that (i) nothing herein shall constitute a commitment by any SPC to fund any Advance, and (ii) if an SPC elects not to exercise such option or otherwise fails to make all or any part of such Advance, the Granting

Lender shall be obligated to make such Advance pursuant to the terms hereof or, if it fails to do so, to make such payment to the Administrative Agent as is required under Section 2.12(e). Each party hereto hereby agrees that (A) neither the grant to any SPC nor the exercise by any SPC of such option shall increase the costs or expenses or otherwise increase or change the obligations of the Borrower under this Agreement (including its obligations under Section 2.10), (B) no SPC shall be liable for any indemnity or similar payment obligation under this Agreement for which a Lender would be liable, and (C) the Granting Lender shall for all purposes, including the approval of any amendment, waiver or other modification of any provision of any Loan Document, remain the lender of record hereunder. The making of an Advance by an SPC hereunder shall utilize the Commitment of the Granting Lender to the same extent, and as if, such Advance were made by such Granting Lender. In furtherance of the foregoing, each party hereto hereby agrees (which agreement shall survive the termination of this Agreement) that, prior to the date that is one year and one day after the payment in full of all outstanding commercial paper or other senior debt of any SPC, it will not institute against, or join any other Person in instituting against, such SPC any bankruptcy, reorganization, arrangement, insolvency, or liquidation proceeding under the laws of the United States or any State thereof. Notwithstanding anything to the contrary contained herein, any SPC may (1) with notice to, but without prior consent of, the Borrower and the Administrative Agent and with the payment of a processing fee in the amount of $3,500 (which processing fee may be waived by the Administrative Agent in its sole discretion), assign all or any portion of its right to receive payment with respect to any Advance to the Granting Lender and (2) disclose on a confidential basis any non-public information relating to its funding of Advances to any rating agency, commercial paper dealer or provider of any surety or guarantee or credit or liquidity enhancement to such SPC.

SECTION 8.09. Governing Law.

THIS AGREEMENT AND EACH OTHER LOAN DOCUMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

SECTION 8.10. Consent to Jurisdictions; Waiver of Jury Trial.

(a) To the fullest extent permitted by law, the Borrower hereby irrevocably (i) submits to the exclusive jurisdiction of any New York State or Federal court sitting in the Borough of Manhattan, New York City and any appellate court from any thereof in any action or proceeding arising out of or relating to this Agreement or any other Loan Document and (ii) agrees that all claims in respect of such action or proceeding may be heard and determined in such New York State court or in such Federal court. The Borrower hereby irrevocably waives, to the fullest extent permitted by law, the defense of an inconvenient forum to the maintenance of such action or proceeding. The Borrower also irrevocably consents, to the fullest extent permitted by law, to the service of any and all process in any such action or proceeding by the mailing by certified mail of copies of such process to the Borrower at its address specified in Section 8.02. The Borrower agrees, to the fullest extent permitted by law, that a final judgment in any such action or proceeding shall

be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

(b) **THE BORROWER, THE ADMINISTRATIVE AGENT AND THE LENDERS HEREBY WAIVE ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR RELATING TO THIS AGREEMENT, ANY OTHER LOAN DOCUMENT OR ANY OTHER INSTRUMENT OR DOCUMENT DELIVERED HEREUNDER OR THEREUNDER.**

SECTION 8.11. Severability.

Any provision of this Agreement that is prohibited, unenforceable or not authorized in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition, unenforceability or non-authorization without invalidating the remaining provisions hereof or affecting the validity, enforceability or legality of such provision in any other jurisdiction.

SECTION 8.12. Entire Agreement.

This Agreement and the Notes issued hereunder constitute the entire contract among the parties relative to the subject matter hereof. Any previous agreement among the parties with respect to the subject matter hereof is superseded by this Agreement, except (i) as expressly agreed in any such previous agreement and (ii) for the Fee Letters. Except as is expressly provided for herein, nothing in this Agreement, expressed or implied, is intended to confer upon any party other than the parties hereto any rights, remedies, obligations or liabilities under or by reason of this Agreement.

SECTION 8.13. Execution in Counterparts; Electronic Execution of Assignments and Certain Other Documents.

(a) This Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

(b) The words “execute”, “execution”, “signed”, “signature” and words of like import in or related to any document to be signed in connection with this Agreement and the transactions contemplated hereby (including, without limitation, Assignment and Assumptions, amendments or other modifications, Notices of Borrowing, Notices of Conversion, Notices of Prepayment, waivers and consents) shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Administrative Agent or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any Applicable Law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act; *provided* that, notwithstanding anything contained herein to the contrary, the

Administrative Agent is under no obligation to agree to accept electronic signatures in any form or in any format (other than, for the avoidance of doubt, manually signed documents sent by facsimile pursuant to Section 8.02 and other manually signed Communications sent pursuant to Section 8.03) unless expressly agreed to by the Administrative Agent pursuant to procedures approved by it.

SECTION 8.14. USA PATRIOT Act Notice.

Each Lender that is subject to the Patriot Act and the Administrative Agent (for itself and not on behalf of any Lender) hereby notifies the Borrower pursuant to the requirements of the Patriot Act that it is required to obtain, verify and record information that identifies the Borrower, which information includes the name and address of the Borrower and other information that will allow such Lender or the Administrative Agent, as applicable, to identify the Borrower in accordance with the Patriot Act.

SECTION 8.15. No Fiduciary Duty.

The Administrative Agent, each Lender and their respective Affiliates (collectively, the "***Credit Parties***"), may have economic interests that conflict with those of the Borrower, their stockholders and/or their affiliates. The Borrower agrees that nothing in the Loan Documents or otherwise will be deemed to create an advisory, fiduciary or agency relationship or fiduciary or other implied duty between any Credit Party, on the one hand, and the Borrower, its stockholders or its affiliates, on the other. The Borrower acknowledges and agrees that (i) the transactions contemplated by the Loan Documents (including the exercise of rights and remedies hereunder and thereunder) are arm's-length commercial transactions between the Credit Parties, on the one hand, and the Borrower, on the other, and (ii) in connection therewith and with the process leading thereto, (x) no Credit Party has assumed an advisory or fiduciary responsibility in favor of the Borrower, its stockholders or its affiliates with respect to the transactions contemplated hereby (or the exercise of rights or remedies with respect thereto) or the process leading thereto (irrespective of whether any Credit Party has advised, is currently advising or will advise the Borrower, its stockholders or its Affiliates on other matters) or any other obligation to the Borrower except the obligations expressly set forth in the Loan Documents and (y) each Credit Party is acting solely as principal and not as the agent or fiduciary of the Borrower, its management, stockholders, creditors or any other Person. The Borrower acknowledges and agrees that it has consulted its own legal and financial advisors to the extent it deemed appropriate and that it is responsible for making its own independent judgment with respect to such transactions and the process leading thereto. The Borrower agrees that it will not claim that any Credit Party has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Borrower, in connection with such transaction or the process leading thereto.

SECTION 8.16. Acknowledgment and Consent to Bail-In of EEA Financial Institutions.

Solely to the extent any Lender that is an EEA Financial Institution is a party to this Agreement and notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges

that any liability of any Lender that is an EEA Financial Institution arising under any Loan Document, to the extent such liability is unsecured, may be subject to the Write-Down and Conversion Powers of an EEA Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by an EEA Resolution Authority to any such liabilities arising hereunder which may be payable to it by any Lender hereto that is an EEA Financial Institution; and

(b) the effects of any Bail-in Action on any such liability, including, if applicable:

(i) a reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such EEA Financial Institution, its parent undertaking, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the Write-Down and Conversion Powers of any EEA Resolution Authority.

SECTION 8.17. Treatment of Certain Information; Confidentiality.

Each of the Administrative Agent and the Lenders agrees to maintain the confidentiality of the Information (as defined below), except that Information may be disclosed (a) to its Affiliates, its auditors and its Related Parties, including, without limitation, their respective accountants, legal counsel and other advisors (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such Information and instructed to keep such Information confidential), (b) to the extent required or requested by any regulatory authority purporting to have jurisdiction over such Person or its Related Parties (including any self-regulatory authority, such as the National Association of Insurance Commissioners), (c) to the extent required by Applicable Laws or by any subpoena or similar legal process, (d) to any other party hereto, (e) in connection with the exercise of any remedies hereunder or under any other Loan Document or any action or proceeding relating to this Agreement or any other Loan Document or the enforcement of rights hereunder or thereunder, (f) subject to an agreement containing provisions substantially the same as those of this Section, to (i) any assignee of or Participant in, or any prospective assignee of or Participant in, any of its rights and obligations under this Agreement or (ii) any actual or prospective party (or its Related Parties) to any swap, derivative or other transaction under which payments are to be made by reference to the Borrower and its obligations, this Agreement or payments hereunder, (g) on a confidential basis to (i) any rating agency in connection with rating the Borrower or its Subsidiaries or the credit facilities provided hereunder or (ii) the CUSIP Service Bureau or any similar agency in connection with the issuance and monitoring of CUSIP numbers or other market identifiers with respect to the credit facilities provided hereunder, (h) with the consent of the Borrower or (i) to the extent such Information (x) becomes publicly available other

than as a result of a breach of this Section or (y) becomes available to the Administrative Agent, any Lender or any of their respective Affiliates on a non-confidential basis from a source other than the Borrower; in the event of any required disclosure by the Administrative Agent or any Lender under clause (c) above, the Administrative Agent or such Lender, as applicable, agrees to use reasonable efforts to inform the Borrower as promptly as practicable to the extent legally permitted to do so. In addition, the Administrative Agent and the Lenders may disclose the existence of this Agreement and information about this Agreement to market data collectors and similar service providers to the lending industry, such information to consist of deal terms and other information customarily found in Gold Sheets and similar industry publications.

For purposes of this Section, "***Information***" means all information received from the Borrower or any of its Subsidiaries relating to the Borrower or any of its Subsidiaries or any of their respective businesses, other than any such information that is available to the Administrative Agent or any Lender on a non-confidential basis prior to disclosure by the Borrower or such Subsidiary, *provided* that, in the case of information received from the Borrower or any of its Subsidiaries after the date hereof, such information is clearly identified at the time of delivery as confidential. Any Person required to maintain the confidentiality of Information as provided in this Section shall be considered to have complied with its obligation to do so if such Person has exercised the same degree of care to maintain the confidentiality of such Information as such Person would accord to its own confidential information.

EACH LENDER ACKNOWLEDGES THAT INFORMATION (AS DEFINED IN THE IMMEDIATELY PRECEDING PARAGRAPH) FURNISHED TO IT BY THE BORROWER OR THE ADMINISTRATIVE AGENT PURSUANT TO, OR IN THE COURSE OF ADMINISTERING, THIS AGREEMENT (INCLUDING, WITHOUT LIMITATION, REQUESTS FOR WAIVERS AND AMENDMENTS) MAY INCLUDE MATERIAL NON-PUBLIC INFORMATION CONCERNING THE BORROWER AND ITS AFFILIATES OR THEIR RESPECTIVE SECURITIES, AND CONFIRMS THAT IT HAS DEVELOPED COMPLIANCE PROCEDURES REGARDING THE USE OF MATERIAL NON-PUBLIC INFORMATION AND THAT IT WILL HANDLE SUCH MATERIAL NON-PUBLIC INFORMATION IN ACCORDANCE WITH THOSE PROCEDURES AND APPLICABLE LAW, INCLUDING FEDERAL AND STATE SECURITIES LAWS.

[Signatures to Follow]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized, as of the date first above written.

FIRSTENERGY CORP.

By */s/ Steven R. Staub*
Name: Steven R. Staub
Title: Vice President and Treasurer

JPMORGAN CHASE BANK, N.A., as Administrative Agent and a Bank

By */s/ Juan Javellana*
Name: Juan Javellana
Title: Executive Director

BANK OF AMERICA, N.A., as a Bank

By */s/ JB Meanor*
Name: JB Meanor
Title: Managing Director

MIZUHO BANK, LTD., as a Bank

By */s/ Donna DeMagistris*
Name: Donna DeMagistris
Title: Authorized Signatory

THE BANK OF NOVA SCOTIA, as a Bank

By */s/ Nick Giarratano*
Name: Nick Giarratano
Title: Director

PNC BANK, NATIONAL ASSOCIATION, as a Bank

By */s/ Thomas E. Redmond*
Name: Thomas E. Redmond
Title: Managing Director

MUFG BANK, LTD. (formerly known as The Bank of Tokyo-Mitsubishi UFJ, Ltd.), as a Bank

By */s/ Jeffrey Flagg*
Name: Jeffrey Flagg
Title: Director

CITIBANK, N.A., as a Bank

By */s/ Richard D. Rivera*
Name: Richard Rivera
Title: Vice President

BARCLAYS BANK PLC, as a Bank

By */s/ Sydney G. Dennis*
Name: Sydney G. Dennis
Title: Director

COBANK, ACB, as a Bank

By */s/ Josh Batchelder*
Name: Josh Batchelder
Title: Managing Director

CANADIAN IMPERIAL BANK OF COMMERCE, NEW YORK BRANCH, as a Bank

By */s/ Gordon R. Eadon*
Name: Gordon R. Eadon
Title: Authorized Signatory

By */s/ Joshua Hogarth*
Name: Joshua Hogarth
Title: Authorized Signatory
MORGAN STANLEY BANK, N.A., as a Bank

By */s/ Michael King*
Name: Michael King
Title: Authorized Signatory
SUMITOMO MITSUI BANKING CORPORATION, as a Bank

By */s/ James Weinstein*
Name: James Weinstein
Title: Managing Director
TD BANK, N.A., as a Bank

By */s/ Shannon Batachman*
Name: Shannon Batchman
Title: Senior Vice President

U.S. BANK NATIONAL ASSOCIATION, as a Bank

By */s/ Eric J. Cosgrove*
Name: Eric J. Cosgrove
Title: Senior Vice President

KEYBANK NATIONAL ASSOCIATION, as a Bank

By */s/ Renee M. Bonnell*
Name: Renee M. Bonnell
Title: Vice President

SANTANDER BANK, N.A., as a Bank

By */s/ Andres Barbosa*
Andres Barbosa
Executive Director

By */s/ Daniel Kostman*
Daniel Kostman
Executive Director

FIFTH THIRD BANK, as a Bank

By */s/ William Merritt*
Name: William Merritt
Title: Director II

INDUSTRIAL AND COMMERCIAL BANK OF CHINA LIMITED, NEW YORK BRANCH, as a Bank

By */s/ C. McKay*
Name: Christopher McKay
Title: Director

By */s/ Pinyen Shih*
Name: Pinyen Shih
Title: Executive Director

THE BANK OF NEW YORK MELLON, as a Bank

By */s/ Richard K. Fronapfel, Jr.*
Name: Richard K. Fronapfel, Jr.
Title: Director

CITIZENS BANK, N.A., as a Bank

By */s/ Stephen A. Maenhout*
Name: Stephen A. Maenhout
Title: Senior Vice President

THE HUNTINGTON NATIONAL BANK, as a Bank

By: */s/ Brian H. Gallagher*
Name: Brian H. Gallagher
Title: Managing Director

FIRST NATIONAL BANK OF PENNSYLVANIA, as a Bank

By: */s/ Robert E. Henler*
Name: Robert E. Henler
Title: Vice Pres.

SCHEDULE I

List of Commitments and Lending Offices

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
Bank of America, N.A.	$35,156,250.00	100 North Tryon Street NC1-007-17-18 Charlotte, NC 28255-0001 Contact: Jerry Wells Phone: Email:	Same as Domestic Lending Office
Mizuho Bank, Ltd.	$15,156,250.00	1251 Avenue of the Americas New York, NY 10020 Contact: Adam Cohen Phone: Fax: Email:	Same as Domestic Lending Office
JPMorgan Chase Bank, N.A.	$25,156,250.00	500 Stanton Christiana Road, Ops 2, Floor 3 Newark, DE 19713-2107 Contact: Jiabei Han Phone: Email:	Same as Domestic Lending Office
PNC Bank, National Association	$25,156,250.00	249 First Avenue Pittsburgh, PA 15222 Contact: Maja Kuljic Phone: Fax: Email:	Same as Domestic Lending Office
MUFG Bank, Ltd.	$25,156,250.00	1251 Avenue of the Americas New York, NY 10020-1104 Contact: Nadia Sleiman Phone: Email:	Same as Domestic Lending Office
The Bank of Nova Scotia	$25,156,250.00	40 King Street West, 55th Floor Toronto, ON Canada M5H 1H1 Contact: Nick Giarratano Phone: Fax: Email:	Same as Domestic Lending Office

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
Citibank, N.A.	$25,156,250.00	388 Greenwich St. New York, NY 10013 Contact: Amit Vasani Phone: Email:	Same as Domestic Lending Office
Barclays Bank PLC	$25,156,250.00	745 7th Avenue New York, NY 10019 Contact: Leah Kaniampuram Phone: Fax: Email:	Same as Domestic Lending Office
CoBank, ACB	$75,000,000.00	6340 S. Fiddlers Green Circle Greenwood Village CO 80111 Contact: Yolanda Fitzpatrick Phone: Email:	Same as Domestic Lending Office
Canadian Imperial Bank of Commerce, New York Branch	$25,000,000.00	30 Madison Avenue, 5th Floor New York, NY 10017 Contact: Gordon Eadon Phone: Fax: Email:	Same as Domestic Lending Office
Morgan Stanley Bank, N.A.	$18,750,000.00	1300 Thames Street Wharf, 4th Floor Baltimore, MD 21231 Contact: Morgan Stanley Loan Servicing Phone: Fax: Email:	Same as Domestic Lending Office
Sumitomo Mitsui Banking Corporation	$25,000,000.00	277 Park Avenue New York, NY 10172 Contact: Emily Estevez Phone: Fax: Email:	Same as Domestic Lending Office

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
TD Bank, N.A.	$25,000,000.00	444 Madison Avenue, 2nd Floor New York, NY 10022 Contact: Shannon Batchman Phone: Email:	Same as Domestic Lending Office
U.S. Bank National Association	$25,000,000.00	425 Walnut Street Cincinnati, Ohio 45202 Contact: Eric Cosgrove Phone: Fax: Email:	Same as Domestic Lending Office
KeyBank National Association	$25,000,000.00	127 Public Square Cleveland, OH 44114 Contact: Renee Bonnell Phone: Email:	Same as Domestic Lending Office
Santander Bank, N.A.	$20,000,000.00	45 E. 53rd Street New York, NY 10022 Contact: Kyle Hoffman Phone: Email:	Same as Domestic Lending Office
Fifth Third Bank	$ 12,500,000.00	38 Fountain Square Plaza Cincinnati, Ohio 45263 Contact: Mark Stapleton Phone: Email:	Same as Domestic Lending Office
Industrial and Commercial Bank of China Limited, New York Branch	$ 12,500,000.00	1633 Broadway, 28th Floor New York, NY 10019 Contact: Yung Tuen Lee Phone: Fax:	Same as Domestic Lending Office
The Bank of New York Mellon	$ 12,500,000.00	225 Liberty Street, 17th Floor New York, NY 10286 Contact: Richard Fronapfel Phone: Fax: Email:	Same as Domestic Lending Office

Lender		**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
Citizens Bank, N.A.	$	10,000,000.00	71 S. Wacker Drive, 29th Floor Chicago, IL 60606 Contact: Steve Maenhout Phone: Email:	Fax: 855-724-2361
The Huntington National Bank	$	5,000,000.00	41 S. High Street Columbus, OH 43215 Contact: Martin McGinty Phone: Email:	Same as Domestic Lending Office
First National Bank of Pennsylvania	$	7,500,000.00	4140 East State Street Hermitage, PA 15148 Contact: Robert E Heuler Phone: Fax: Email:	Same as Domestic Lending Office
TOTAL	**$500,000,000.00**			

SCHEDULE II

Administrative Agent's Addresses for Notices

Administrative Agent's Office
(for payments and Notices of Borrowing, Notices of Conversion and
Notices of Prepayment):

JPMorgan Chase Bank, N.A.
500 Stanton Christiana Rd, NCC5, Floor 01
Newark, DE, 19713-2107
Attention: Mary Crews
Telephone:
Facsimile:
Electronic Mail:

Please consult JPMorgan Chase Bank, N.A. for its wiring instructions.

Other Notices as Administrative Agent:

JPMorgan Chase Bank, N.A.
383 Madison Avenue, 24th floor
New York, NY 10179
Attention: Gisela Brant and Juan Javellana
Telephone:
Electronic Mail:

EXHIBIT A
Form of Assignment and Assumption

ASSIGNMENT AND ASSUMPTION

This Assignment and Assumption (this "***Assignment and Assumption***") is dated as of the Effective Date set forth below and is entered into by and between [the][each] Assignor identified in item 1 below ([the][each, an] "***Assignor***") and [the][each] Assignee identified in item 2 below ([the][each, an] "***Assignee***"). [It is understood and agreed that the rights and obligations of [the Assignors][the Assignees] hereunder are several and not joint.] Capitalized terms used but not defined herein shall have the meanings given to them in the Term Loan Credit Agreement identified below (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), receipt of a copy of which is hereby acknowledged by [the][each] Assignee. The Standard Terms and Conditions set forth in Annex 1 attached hereto are hereby agreed to and incorporated herein by reference and made a part of this Assignment and Assumption as if set forth herein in full.

For an agreed consideration, [the][each] Assignor hereby irrevocably sells and assigns to [the Assignee][the respective Assignees], and [the][each] Assignee hereby irrevocably purchases and assumes from [the Assignor][the respective Assignors], subject to and in accordance with the Standard Terms and Conditions and the Credit Agreement, as of the Effective Date inserted by the Administrative Agent as contemplated below (i) all of [the Assignor's][the respective Assignors'] rights and obligations in [its capacity as a Lender][their respective capacities as Lenders] under the Credit Agreement and any other documents or instruments delivered pursuant thereto to the extent related to the amount and percentage interest identified below of all of such outstanding rights and obligations of [the Assignor][the respective Assignors] under the Credit Agreement, and (ii) to the extent permitted to be assigned under Applicable Law, all claims, suits, causes of action and any other right of [the Assignor (in its capacity as a Lender)][the respective Assignors (in their respective capacities as Lenders)] against any Person, whether known or unknown, arising under or in connection with the Credit Agreement, any other documents or instruments delivered pursuant thereto or the loan transactions governed thereby or in any way based on or related to any of the foregoing, including, but not limited to, contract claims, tort claims, malpractice claims, statutory claims and all other claims at law or in equity related to the rights and obligations sold and assigned pursuant to clause (i) above (the rights and obligations sold and assigned by [the][any] Assignor to [the][any] Assignee pursuant to clauses (i) and (ii) above being referred to herein collectively as [the][an] "***Assigned Interest***"). Each such sale and assignment is without recourse to [the][any] Assignor and, except as expressly provided in this Assignment and Assumption, without representation or warranty by [the][any] Assignor.

1. Assignor[s]: _____

_____

[Assignor [is] [is not] a Defaulting Lender]

2.Assignee[s]: _____

_____

[for each Assignee, indicate [Affiliate][Approved Fund] of [*identify Lender*]

3. Borrower: FirstEnergy Corp.

4.Administrative Agent: JPMorgan Chase Bank, N.A., as the administrative agent under the Credit Agreement

5.Credit Agreement: The $500,000,000 Term Loan Credit Agreement, dated as of October 19, 2018, among FirstEnergy Corp., as Borrower, the Lenders parties thereto and JPMorgan Chase Bank, N.A., as Administrative Agent

6.Assigned Interest[s]:

Assignor[s]	Assignee[s]	Aggregate Amount of Commitment/Advances for all Lenders	Amount of Commitment/Advances Assigned[8]	Percentage Assigned of Commitment/ Advances	CUSIP Number
		$	$	%	
		$	$	%	
		$	$	%	

[7. Trade Date: _____]

Effective Date: _____ ___, 201__ [TO BE INSERTED BY ADMINISTRATIVE AGENT AND WHICH SHALL BE THE EFFECTIVE DATE OF RECORDATION OF TRANSFER IN THE REGISTER THEREFOR.]

The terms set forth in this Assignment and Assumption are hereby agreed to:

ASSIGNOR[S]

[NAME OF ASSIGNOR]

By_____
Name:
Title:

[NAME OF ASSIGNOR]

By_____
Name:
Title:

ASSIGNEE[S]

[NAME OF ASSIGNEE]

By:_____
Name:
Title:

[NAME OF ASSIGNEE]

By:_____
Name:
Title:

[Consented to and] Accepted:

JPMORGAN CHASE BANK, N.A., as
Administrative Agent

By: _____
Name:
Title:

Consented to:

[FIRSTENERGY CORP.

By_____
Name:
Title:]

ANNEX 1

$500,000,000 Term Loan Credit Agreement, dated as of October 19, 2018, among FirstEnergy Corp., as Borrower, the Lenders parties thereto and JPMorgan Chase Bank, N.A., as Administrative Agent

STANDARD TERMS AND CONDITIONS FOR
ASSIGNMENT AND ASSUMPTION

1. ***Representations and Warranties***.

1.1 ***Assignor[s]***. [The][Each] Assignor (a) represents and warrants that (i) it is the legal and beneficial owner of [the][the relevant] Assigned Interest, (ii) [the][such] Assigned Interest is free and clear of any lien, encumbrance or other adverse claim, (iii) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and (iv) it is [not] a Defaulting Lender; and (b) assumes no responsibility with respect to (i) any statements, warranties or representations made in or in connection with the Credit Agreement or any other Loan Document, (ii) the execution, legality, validity, enforceability, genuineness, sufficiency or value of the Loan Documents or any collateral thereunder, (iii) the financial condition of the Borrower, any of its Subsidiaries or Affiliates or any other Person obligated in respect of any Loan Document, or (iv) the performance or observance by the Borrower, any of its Subsidiaries or Affiliates or any other Person of any of their respective obligations under any Loan Document.

1.2. ***Assignee[s]***. [The][Each] Assignee (a) represents and warrants that (i) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and to become a Lender under the Credit Agreement, (ii) it meets all the requirements to be an assignee under Section 8.08(b)(iii), (v) and (vi) of the Credit Agreement (subject to such consents, if any, as may be required under Section 8.08(b)(iii) of the Credit Agreement), (iii) from and after the Effective Date, it shall be bound by the provisions of the Credit Agreement as a Lender thereunder and, to the extent of [the][the relevant] Assigned Interest, shall have the obligations of a Lender thereunder, (iv) it is sophisticated with respect to decisions to acquire assets of the type represented by the Assigned Interest and either it, or the Person exercising discretion in making its decision to acquire the Assigned Interest, is experienced in acquiring assets of such type, (v) it has received a copy of the Credit Agreement, and has received or has been accorded the opportunity to receive copies of the most recent financial statements delivered pursuant to Section 5.01(g) thereof, as applicable, and such other documents and information as it deems appropriate to make its own credit analysis and decision to enter into this Assignment and Assumption and to purchase [the][such] Assigned Interest, (vi) it has, independently and without reliance upon the Administrative Agent or any other Lender and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Assignment and Assumption and to purchase [the][such] Assigned Interest, and (vii) if it is not a U.S. Person, attached to the Assignment and Assumption is any documentation required to be delivered by it pursuant to the terms of the Credit Agreement (including pursuant to Section 2.13(g) of the Credit Agreement), duly completed and executed by [the][such] Assignee; (b) appoints and authorizes the Administrative Agent to take such action as agent on its behalf and to exercise such powers under the Loan Documents as are delegated to the Administrative Agent by the terms thereof, together with such powers as are reasonably incidental thereto; and (c) agrees that (i) it will, independently and without reliance on the

Administrative Agent, [the][any] Assignor or any other Lender, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Loan Documents, and (ii) it will perform in accordance with their terms all of the obligations which by the terms of the Loan Documents are required to be performed by it as a Lender.

2. ***Payments***. From and after the Effective Date, the Administrative Agent shall make all payments in respect of [the][each] Assigned Interest (including payments of principal, interest, fees and other amounts) to [the][the relevant] Assignor for amounts which have accrued to but excluding the Effective Date and to [the][the relevant] Assignee for amounts which have accrued from and after the Effective Date. Notwithstanding the foregoing, the Administrative Agent shall make all payments of interest, fees or other amounts paid or payable in kind from and after the Effective Date to [the][the relevant] Assignee.

3. ***General Provisions***. This Assignment and Assumption shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and assigns. This Assignment and Assumption may be executed in any number of counterparts, which together shall constitute one instrument. Delivery of an executed counterpart of a signature page of this Assignment and Assumption by facsimile shall be effective as delivery of a manually executed counterpart of this Assignment and Assumption. This Assignment and Assumption shall be governed by, and construed in accordance with, the law of the State of New York.

EXHIBIT B
Form of Note

PROMISSORY NOTE

U.S.$[_____] _____ __, 20__

FOR VALUE RECEIVED, the undersigned, FIRSTENERGY CORP., an Ohio corporation (the "***Borrower***"), HEREBY PROMISES TO PAY to [_____] (the "***Lender***") for the account of its Applicable Lending Office (such term and other capitalized terms herein being used as defined in the Credit Agreement referred to below), or its registered assigns, the principal sum of U.S.$[_____] or, if less, the aggregate principal amount of the Advances made by the Lender to the Borrower pursuant to the Credit Agreement outstanding on the Maturity Date, payable on the Maturity Date.

The Borrower promises to pay interest on the unpaid principal amount of each Advance from the date of such Advance until such principal amount is paid in full, at such interest rates, and payable at such times, as are specified in the Credit Agreement.

Both principal and interest are payable in lawful money of the United States of America to JPMorgan Case Bank, N.A., as Administrative Agent, at **[INSERT PAYMENT ADDRESS]**, in same day funds. Each Advance made by the Lender to the Borrower pursuant to the Credit Agreement, and all payments made on account of principal thereof, shall be recorded by the Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Promissory Note.

This Promissory Note is one of the Notes referred to in, and is entitled to the benefits of, the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among the Borrower, the Lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent for the Lenders thereunder. The Credit Agreement, among other things, (i) provides for the making of Advances by the Lender to the Borrower from time to time in an aggregate amount not to exceed at any time outstanding the Dollar amount first above mentioned, the indebtedness of the Borrower resulting from each such Advance being evidenced by this Promissory Note, and (ii) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events and also for prepayments on account of principal hereof prior to the maturity hereof upon the terms and conditions therein specified.

The Borrower hereby waives presentment, demand, protest and notice of any kind. No failure to exercise, and no delay in exercising, any rights hereunder on the part of the holder hereof shall operate as a waiver of such rights.

THIS PROMISSORY NOTE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

FIRSTENERGY CORP.

By__
Name:
Title:

EXHIBIT C-1
Form of Notice of Borrowing

JPMorgan Chase Bank, N.A., as Administrative Agent
for the Lenders party to the Credit Agreement
referred to below

[DATE]

Ladies and Gentlemen:

The undersigned refers to the Term Loan Credit Agreement, dated as of October 19, 2018 (the "***Credit Agreement***", the terms defined therein being used herein as therein defined), among the undersigned, the Lenders party thereto and JPMorgan Chase Bank, N.A., as Administrative Agent for the Lenders thereunder, and hereby gives you notice, irrevocably, pursuant to Section 2.02 of the Credit Agreement that the undersigned hereby requests [a] Borrowing[s] under the Credit Agreement, and in that connection sets forth below the information relating to such Borrowing[s] (the "***Proposed Borrowing[s]***") as required by Section 2.02(a) of the Credit Agreement:

(i) The Business Day of the Proposed Borrowing[s] is October 19, 2018.

(ii) The Type of Advance to be made in connection with the [First] Proposed Borrowing is [an Alternate Base Rate Advance] [a Eurodollar Rate Advance]. The aggregate amount of such Proposed Borrowing is $_____. [The Interest Period for each Eurodollar Rate Advance made as part of such Proposed Borrowing is ____ [week][month[s]].]

[(iii) The Type of Advance to be made in connection with the [Second] Proposed Borrowing is [an Alternate Base Rate Advance] [a Eurodollar Rate Advance]. The aggregate amount of such Proposed Borrowing is $_____. [The Interest Period for each Eurodollar Rate Advance made as part of such Proposed Borrowing is ____ [week][month[s]].]

The undersigned hereby certifies that the following statements are true on the date hereof, and will be true on the date of the Proposed Borrowing[s]:

(A) the representations and warranties contained in Section 4.01 of the Credit Agreement are true and correct, before and after giving effect to the Proposed Borrowing[s] and to the application of the proceeds therefrom, as though made on and as of such date (other than as to any such representation or warranty that by its terms refers to a specific date other than the date of the Proposed Borrowing[s], in which case, such representation and warranty is true and correct as of such specific date); and

(B) no event has occurred and is continuing, or would result from such Proposed Borrowing[s] or from the application of the proceeds therefrom, that constitutes an Event of Default or an Unmatured Default.

Please transfer or credit the funds to the following account:

Bank: _____

Address: _____

ABA #: _____

Account #: _____

Beneficiary: _____

[remainder of page intentionally left blank]

Very truly yours,

FIRSTENERGY CORP.

By__
Name:

Title:

EXHIBIT C-2
Form of Notice of Conversion

JPMorgan Chase Bank, N.A., as Administrative Agent
for the Lenders party to the Credit Agreement
referred to below

[DATE]

Ladies and Gentlemen:

The undersigned refers to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***", the terms defined therein being used herein as therein defined), among the undersigned, the Lenders named therein and party thereto from time to time and JPMorgan Chase Bank, N.A., as Administrative Agent for the Lenders thereunder, and hereby gives you notice, irrevocably, pursuant to Section 2.08 of the Credit Agreement that the undersigned hereby requests a Conversion of Advances:

1. On _____ (a Business Day).
2. The Advances to be Converted are comprised of [Alternate Base Rate Advances] [Eurodollar Rate Advances].
3. In the amount of $_____.
4. Such Advances to be Converted to [Alternate Base Rate Advances] [Eurodollar Rate Advances]. (Type of Advances requested)
5. For Eurodollar Rate Advances: with an Interest Period of _____ [week] [month[s]]. (Interest Period requested)

Very truly yours,

FIRSTENERGY CORP.

By__
Name:
Title:

EXHIBIT C-3
Form of Notice of Prepayment

JPMorgan Chase Bank, N.A., as Administrative Agent
for the Lenders party to the Credit Agreement
referred to below

[DATE]

Ladies and Gentlemen:

The undersigned refers to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented

or otherwise modified from time to time, the "***Credit Agreement***", the terms defined therein being used herein as therein defined), among the undersigned, the Lenders named therein and party thereto from time to time and JPMorgan Chase Bank, N.A., as Administrative Agent for the Lenders thereunder, and hereby gives you notice, irrevocably, pursuant to Section 2.09 of the Credit Agreement that the undersigned will prepay Advances:

1. On _____ (a Business Day).
2. In the amount of $_____.
3. Such Advances to be prepaid are [Alternate Base Rate Advances] [Eurodollar Rate Advances].
4. If Eurodollar Rate Advances are to be prepaid: such Advances to be prepaid have an Interest Period of _____ [week] [month[s]].

Such prepayment complies with the proviso in Section 2.09 of the Credit Agreement.

Very truly yours,

FIRSTENERGY CORP.

By__
Name:
Title:

EXHIBIT D-1
Form of U.S. Tax Compliance Certificate
(For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)

U.S. TAX COMPLIANCE CERTIFICATE
(For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among FirstEnergy Corp. (the "***Borrower***"), the Lenders party thereto from time to time and JPMorgan Chase Bank, N.A., as Administrative Agent.

Pursuant to the provisions of Section 2.13 of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the Advance(s) (as well as any Note(s) evidencing such Advance(s)) in respect of which it is providing this certificate, (ii) it is not a bank within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a ten percent shareholder of the Borrower within the meaning of Section 871(h)(3)(B) of the Code and (iv) it is not a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished the Administrative Agent and the Borrower with a certificate of its non-U.S. Person status on IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform the Borrower and the Administrative Agent, and (2) the undersigned shall have at all times furnished the Borrower and the Administrative Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF LENDER]

By:__
Name:
Title:

Date: _____ __, 20[ ]

EXHIBIT D-2
Form of U.S. Tax Compliance Certificate
(For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)

U.S. TAX COMPLIANCE CERTIFICATE
(For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among FirstEnergy Corp. (the "***Borrower***"), the Lenders party thereto from time to time and JPMorgan Chase Bank, N.A., as Administrative Agent.

Pursuant to the provisions of Section 2.13 of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the participation in respect of which it is providing this certificate, (ii) it is not a bank within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a ten percent shareholder of the Borrower within the meaning of Section 871(h)(3)(B) of the Code, and (iv) it is not a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with a certificate of its non-U.S. Person status on IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform such Lender in writing, and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF PARTICIPANT]

By:_
Name:
Title:

Date: _____ __, 20[ ]

EXHIBIT D-3
Form of U.S. Tax Compliance Certificate
(For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)

U.S. TAX COMPLIANCE CERTIFICATE
(For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among FirstEnergy Corp. (the "***Borrower***"), the Lenders party thereto from time to time and JPMorgan Chase Bank, N.A., as Administrative Agent.

Pursuant to the provisions of Section 2.13 of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the participation in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such participation, (iii) with respect such participation, neither the undersigned nor any of its direct or indirect partners/members is a bank extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a ten percent shareholder of the Borrower within the meaning of Section 871(h)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, from each of such partner's/member's beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform such Lender and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF PARTICIPANT]

By:_

Name:

Title:

Date: _____ __, 20[ ]

EXHIBIT D-4
Form of U.S. Tax Compliance Certificate
(For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)

U.S. TAX COMPLIANCE CERTIFICATE
(For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among FirstEnergy Corp. (the "***Borrower***"), the Lenders party thereto from time to time and JPMorgan Chase Bank, N.A., as Administrative Agent.

Pursuant to the provisions of Section 2.13 of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the Advance(s) (as well as any Note(s) evidencing such Advance(s)) in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such Advance(s) (as well as any Note(s) evidencing such Advance(s)), (iii) with respect to each extension of credit pursuant to the Credit Agreement or any other Loan Document, neither the undersigned nor any of its direct or indirect partners/members is a bank extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a ten percent shareholder of the Borrower within the meaning of Section 871(h)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished the Administrative Agent and the Borrower with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, from each of such partner's/member's beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform the Borrower and the Administrative Agent, and (2) the undersigned shall have at all times furnished the Borrower and the Administrative Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF LENDER]

By:__
Name:
Title:

Date: _____ __, 20[ ]

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Section 8: EX-10.64 (EXHIBIT 10.64)

Exhibit 10.64

EXECUTION VERSION

Deal CUSIP Number: 33763UAM3
Term Loan CUSIP Number: 33763UANI

U.S. $1,250,000,000

TERM LOAN CREDIT AGREEMENT

Dated as of October 19, 2018,

Among

FIRSTENERGY CORP.,
as Borrower,

THE BANKS NAMED HEREIN,
as Banks,

and

THE BANK OF NOVA SCOTIA,
as Administrative Agent

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED
MIZUHO BANK, LTD.
JPMORGAN CHASE BANK, N.A.
PNC CAPITAL MARKETS LLC
MUFG BANK, LTD.
THE BANK OF NOVA SCOTIA
CITIGROUP GLOBAL MARKETS INC.
BARCLAYS BANK PLC

Joint Lead Arrangers

JPMORGAN CHASE BANK, N.A.
MIZUHO BANK, LTD.
MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED
Syndication Agents

MUFG BANK, LTD.
PNC CAPITAL MARKETS LLC
BARCLAYS BANK PLC
CITIBANK, N.A.
Documentation Agents

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SCHEDULES AND EXHIBITS

TERM LOAN CREDIT AGREEMENT

TERM LOAN CREDIT AGREEMENT, dated as of October 19, 2018, among FIRSTENERGY CORP. ("***FE***" or the "***Borrower***"), the banks and other financial institutions (the "***Banks***") listed on the signature pages hereof and THE BANK OF NOVA SCOTIA ("***Scotiabank***"), as administrative agent (the "***Administrative Agent***") for the Lenders hereunder.

PRELIMINARY STATEMENTS

(1) The Borrower has requested that the Lenders provide the Borrower a term loan credit facility in the amount of $1,250,000,000, to be used for working capital and other general corporate purposes.

(2) Subject to the terms and conditions of this Agreement, the Lenders severally, to the extent of their respective Commitments (as defined herein), are willing to establish the requested term loan credit facility in favor of the Borrower.

NOW, **THEREFORE**, in consideration of the premises, the parties hereto agree as follows:

ARTICLE I
DEFINITIONS AND ACCOUNTING TERMS

SECTION 1.01. Certain Defined Terms.

As used in this Agreement, the following terms shall have the following meanings (such meanings to be equally applicable to both the singular and plural forms of the terms defined):

"***Administrative Agent***" has the meaning set forth in the preamble hereto.

"***Administrative Questionnaire***" means an administrative questionnaire in a form supplied by the Administrative Agent.

"***Advance***" means an advance by a Lender to the Borrower as part of a Borrowing pursuant to Section 2.01 and refers to an Alternate Base Rate Advance or a Eurodollar Rate Advance, subject to Conversion pursuant to Section 2.07 or 2.08.

"***AESC***" means Allegheny Energy Supply Company, LLC, a Delaware limited liability company, and any successor thereto.

"***Affiliate***" means, as to any Person, any other Person that, directly or indirectly, controls, is controlled by or is under common control with such Person or is a director or officer of such Person.

"***Agent Parties***" has the meaning set forth in Section 8.03(c).

"***Agreement***" means this Term Loan Credit Agreement, as amended, modified and supplemented from time to time.

"***Alternate Base Rate***" means, for any period, a fluctuating interest rate *per annum* as shall be in effect from time to time, which rate *per annum* shall at all times be equal to the highest of (i) the prime rate as most recently published by *The Wall Street Journal* from time to time, (ii) the sum of 1/2 of 1% *per annum* plus the Federal Funds Rate in effect from time to time and (iii) the rate of interest *per annum* (rounded upwards, if necessary, to the nearest 1/100 of 1%) appearing on the Service equal to the one-month London interbank offered rate for deposits in Dollars as determined at approximately 11:00 a.m. (London time) on such day (or if such day is not a Business Day, on the next preceding Business Day), plus 1%.

"***Alternate Base Rate Advance***" means an Advance that bears interest as provided in Section 2.05(a).

"***Anti-Corruption Laws***" means all laws, rules, and regulations of any jurisdiction applicable to the Covered Entities or their respective activities from time to time concerning or relating to terrorism, money-laundering, bribery or corruption, including, without limitation, (i) the United States Foreign Corrupt Practices Act of 1977, as amended from time to time, and the applicable regulations thereunder, and (ii) the United Kingdom's Anti-Bribery Act 2010, as amended from time to time.

"***Applicable Law***" means all applicable laws, statutes, treaties, rules, codes, ordinances, regulations, permits, certificates, orders, interpretations, licenses and permits of any Governmental Authority and judgments, decrees, injunctions, writs, orders or like action of any court, arbitrator or other judicial or quasi-judicial tribunal of competent jurisdiction (including those pertaining to health, safety or the environment or otherwise).

"***Applicable Lending Office***" means, with respect to each Lender, such Lender's Domestic Lending Office in the case of an Alternate Base Rate Advance, and such Lender's Eurodollar Lending Office in the case of a Eurodollar Rate Advance.

"***Applicable Margin***" means, for any Alternate Base Rate Advance or any Eurodollar Rate Advance, the interest rate *per annum* set forth in the relevant row of the table immediately below, determined by reference to the Reference Ratings from time to time in effect:

BASIS FOR PRICING	LEVEL 1 Reference Ratings at least BBB by S&P *or* Baa2 by Moody's.	LEVEL 2 Reference Ratings lower than Level 1 but at least BBB- by S&P *or* Baa3 by Moody's.	LEVEL 3 Reference Ratings lower than BBB- by S&P *and* Baa3 by Moody's, or no Reference Ratings.
Applicable Margin for Eurodollar Rate Advances	0.60%	0.65%	0.75%
Applicable Margin for Alternate Base Rate Advances	0.00%	0.00%	0.00%

For purposes of the foregoing, (i) if there is a difference of one level in Reference Ratings of S&P and Moody's and the higher of such Reference Ratings falls in Level 1 or Level 2, then the higher Reference Rating will be used to determine the pricing level and (ii) if there is a difference of more than one level in Reference Ratings of S&P and Moody's, the Reference Rating that is one level above the lower of such Reference Ratings will be used to determine the pricing level, unless the lower of such Reference Ratings falls in Level 3, in which case the lower of such Reference Ratings will be used to determine the pricing level. If there exists only one Reference Rating, such Reference Rating will be used to determine the pricing level.

"***Approved Fund***" means any Fund that is administered or managed by (i) a Lender, (ii) an Affiliate of a Lender or (iii) an entity or an Affiliate of an entity that administers or manages a Lender.

"***Assignment and Assumption***" means an assignment and assumption entered into by a Lender and an Eligible Assignee (with the consent of any party whose consent is required by Section 8.08(b)), and accepted by the Administrative Agent, in substantially the form of Exhibit A hereto or any other form (including electronic documentation generated by use of an electronic platform) approved by the Administrative Agent (so long as such other form is not disadvantageous to the Borrower in any respect).

"***Attributable Securitization Obligations***" has the meaning set forth in the definition of "Permitted Securitization".

"***Authorized Officer***" means, with respect to any notice, certificate or other communication to be delivered by the Borrower hereunder, the chief executive officer, president, chief financial officer, treasurer, assistant treasurer, vice president or controller of the Borrower (which officer shall have all necessary corporate authorization to deliver such notice, certificate or other communication) or, solely with respect to any Notice of Borrowing, Notice of Conversion or Notice of Prepayment, any other officer or employee of the Borrower designated by any of the foregoing officers in a written notice to the Administrative Agent or any other officer or employee of the Borrower designated in or pursuant to an agreement between the Borrower and the Administrative Agent.

"***Bail-In Action***" means the exercise of any Write-Down and Conversion Powers by the applicable EEA Resolution Authority in respect of any liability of an EEA Financial Institution.

"***Bail-In Legislation***" means, with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule.

"***Bankruptcy Code***" means the Bankruptcy Reform Act of 1978, as amended from time to time, and any Federal law with respect to bankruptcy, insolvency, reorganization, liquidation, moratorium or similar laws affecting creditors' rights generally.

"***Bankruptcy Event***" means, with respect to any Person, such Person has become the subject of a bankruptcy or insolvency proceeding, or has had a receiver, conservator, trustee, administrator, custodian, assignee for the benefit of creditors or similar Person charged with the reorganization or liquidation of its business appointed for it, or, in the good faith determination of the Administrative Agent, has taken any action in furtherance of, or indicating its consent to, approval of, or acquiescence in, any such proceeding or appointment, provided that a Bankruptcy Event shall not result solely by virtue of any ownership interest, or the acquisition of any ownership interest, in such Person by a Governmental Authority or instrumentality thereof, provided, further, that such ownership interest does not result in or provide such Person with immunity from the jurisdiction of courts within the United States or from the enforcement of judgments or writs of attachment on its assets or permit such Person (or such Governmental Authority or instrumentality) to reject, repudiate, disavow or disaffirm any contracts or agreements made by such Person.

"***Banks***" has the meaning set forth in the preamble hereto.

"***Beneficial Ownership Certification***" shall mean a certification regarding beneficial ownership as required by the Beneficial Ownership Regulation.

"***Beneficial Ownership Regulation***" shall mean 31 C.F.R. § 1010.230, as amended, or any successor thereto.

"***Benefit Plan***" shall mean any of (a) an "employee benefit plan" (as defined in ERISA) that is subject to Title I of ERISA, (b) a "plan" as defined in and subject to Section 4975 of the Code or (c) any Person whose assets include (for purposes of Section 3(42) of ERISA or otherwise for purposes of Title I of ERISA or Section 4975 of the Code) the assets of any such "employee benefit plan" or "plan".

"***Borrower***" has the meaning set forth in the preamble hereto.

"***Borrower Materials***" has the meaning set forth in Section 5.01(g).

"***Borrowing***" means a borrowing consisting of simultaneous Advances of the same Type made by each of the Lenders pursuant to Section 2.01 or Converted pursuant to Section 2.07, 2.08 or 2.11.

"***Business Day***" means a day of the year on which banks are not required or authorized to close in New York City or Akron, Ohio and, if the applicable Business Day relates to any Eurodollar Rate Advances, a day on which dealings are carried on in the London interbank market.

"***Change in Law***" means the occurrence, after the date of this Agreement, of any of the following: (i) the adoption or taking effect of any law, rule, regulation or treaty, (ii) any change (other than any change by way of imposition or increase of reserve requirements included in the Eurodollar Rate Reserve Percentage) in any law, rule, regulation or treaty or in the administration, interpretation or application thereof by any Governmental Authority or (iii) the making or issuance of any request, guideline or directive (whether or not having the force of law) by any Governmental Authority; *provided, however*, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and all requests, rules, guidelines and directives promulgated thereunder, and all requests, rules, guidelines or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or foreign regulatory authorities, in each case pursuant to Basel III, shall in each case be deemed to have been introduced or adopted after the date of this Agreement, regardless of the date enacted or adopted.

"***Change of Control***" has the meaning set forth in Section 6.01(i).

"***Closing Date***" means October 19, 2018.

"***Code***" means the United States Internal Revenue Code of 1986, as amended from time to time, and the applicable regulations thereunder.

"***Commitment***" means, as to any Lender, the amount set forth opposite such Lender's name on Schedule I hereto or, if such Lender has entered into any Assignment and Assumption, set forth for such Lender in the Register maintained by the Administrative Agent pursuant to Section 8.08(c).

"***Commodity Trading Obligations***" means the obligations of any Person under any commodity swap agreement, commodity future agreement, commodity option agreement, commodity cap agreement, commodity floor agreement, commodity collar agreement, commodity hedge agreement, commodity forward contract or derivative transaction and any put, call or other agreement, arrangement or transaction, including natural gas, power, emissions forward contracts, renewable energy credits, or any combination of any such arrangements, agreements and/or transactions, employed in the ordinary course of such Person's business, including such Person's energy marketing, trading and asset optimization business. The term "commodity" shall include electric energy and/or capacity, transmission rights, coal, petroleum, natural gas, fuel transportation rights, emissions allowances, weather derivatives and related products and by-products and ancillary services.

"***Communications***" has the meaning set forth in Section 8.03(a).

"***Consolidated Debt***" means at any date of determination the aggregate Indebtedness of the Borrower and its Consolidated Subsidiaries determined on a consolidated basis in accordance with GAAP, but shall not include (i) Nonrecourse Indebtedness of the Borrower or any of its Subsidiaries, (ii) obligations under leases that shall have been or should be, in accordance with GAAP, recorded as operating leases in respect of which the Borrower or any of its Consolidated Subsidiaries is liable as a lessee, (iii) the aggregate principal and/or face amount of Attributable Securitization Obligations of the Borrower and its Consolidated Subsidiaries and (iv) the aggregate principal amount of Trust Preferred Securities and Junior Subordinated Deferred Interest Obligations not exceeding 15% of the Total Capitalization of the Borrower and its Consolidated Subsidiaries (determined, for purposes of such calculation, without regard to the amount of Trust Preferred Securities and Junior Subordinated Deferred Interest Debt Obligations outstanding); *provided* that the amount of any mandatory principal amortization or defeasance of Trust Preferred Securities or Junior Subordinated Deferred Interest Debt Obligations prior to the Maturity Date shall be included in this definition of Consolidated Debt.

"***Consolidated Subsidiary***" means, as to any Person, any Subsidiary of such Person the accounts of which are or are required to be consolidated with the accounts of such Person in accordance with GAAP.

"***Controlled Group***" means all members of a controlled group of corporations and all trades or businesses (whether or not incorporated) under common control that, together with the Borrower, are treated as a single employer under Section 414(b), (c), (m) or (o) of the Code.

"***Convert***", "***Conversion***" and "***Converted***" each refers to a conversion of Advances of one Type into Advances of another Type or the selection of a new, or the renewal of the same, Interest Period for Eurodollar Rate Advances pursuant to Section 2.07, 2.08 or 2.11.

"***Covered Entity***" means (i) the Borrower and each of its Subsidiaries and (ii) each Person that, directly or indirectly, is in control of a Person described in clause (i) above. For purposes of this definition, control of a Person shall mean the direct or indirect (x) ownership of, or power to vote, 25% or more of the issued and outstanding equity interests having ordinary voting power for the election of directors of such Person or other Persons performing similar functions for such Person, or (y) power to direct or cause the direction of the management and policies of such Person whether by ownership of equity interests, contract or otherwise.

"***Credit Parties***" has the meaning set forth in Section 8.15 hereto.

"***Debt to Capitalization Ratio***" means the ratio of Consolidated Debt to Total Capitalization.

"***Defaulting Lender***" means any Lender that (i) has failed, within three Business Days of the date required to be funded or paid, to (A) fund any portion of its Advances or (B) pay over to the Administrative Agent any other amount required to be paid by it hereunder, unless, in the case of clause (A) or (B) above, such Lender notifies the Administrative Agent in writing that such failure is the result of such Lender's good faith determination that a condition precedent to funding (specifically identified and including the particular default, if any) has not been satisfied, (ii) has notified the Borrower or the Administrative Agent in writing, or has made a public statement to the effect, that it does not intend or expect to comply with any of its funding obligations under this Agreement (unless such writing or public statement indicates that such position is based on such Lender's good faith determination that a condition precedent (specifically identified and including the particular default, if any) to funding a loan under this Agreement cannot be satisfied) or generally under other agreements in which it commits to extend credit, (iii) has failed, within three Business Days after written request by the Administrative Agent, acting in good faith, to provide a certification in writing from an authorized officer of such Lender that it will comply with its obligations to fund prospective Advances, *provided* that such Lender shall cease to be a Defaulting Lender pursuant to this clause (iii) upon the Administrative Agent's receipt of such certification in form and substance reasonably satisfactory to it and the Administrative Agent, (iv) has become the subject of a Bankruptcy Event or (v) has, or has a direct or indirect parent company that has, become the subject of a Bail-in Action.

"***Disclosure Documents***" means FE's Annual Report on Form 10-K for the year ended December 31, 2017, Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2018 and June 30, 2018, and Current Reports on Form 8-K filed in 2018 and prior to the date hereof.

"***Dollars***" and "***$***" each means lawful currency of the United States of America.

"***Domestic Lending Office***" means, with respect to any Lender, the office of such Lender specified as its "Domestic Lending Office" opposite its name on Schedule I hereto or in the Assignment and Assumption pursuant to which it became a Lender, or such other office of such Lender as such Lender may from time to time specify to the Administrative Agent.

"***EEA Financial Institution***" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a Subsidiary of an institution described in clause (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"***EEA Member Country***" means any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

"***EEA Resolution Authority***" means any public administrative authority or any Person entrusted with public administrative authority of any EEA Member Country

(including any delegee) having responsibility for the resolution of any EEA Financial Institution.

"***Eligible Assignee***" means any Person that meets the requirements to be an assignee under Section 8.08(b)(iii), (v) and (vi) (subject to such consents, if any, as may be required under Section 8.08(b)(iii)).

"***Environmental Laws***" means any federal, state or local laws, ordinances or codes, rules, orders, or regulations relating to pollution or protection of the environment, including, without limitation, laws relating to hazardous substances, laws relating to reclamation of land and waterways and laws relating to emissions, discharges, releases or threatened releases of pollutants, contaminants, chemicals, or industrial, toxic or hazardous substances or wastes into the environment (including, without limitation, ambient air, surface water, ground water, land surface or subsurface strata) or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of pollution, contaminants, chemicals, or industrial, toxic or hazardous substances or wastes.

"***ERISA***" means the Employee Retirement Income Security Act of 1974, and the regulations promulgated and rulings issued thereunder, each as amended, modified and in effect from time to time.

"***EU Bail-In Legislation Schedule***" means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor thereto), as in effect from time to time.

"***Eurocurrency Liabilities***" has the meaning assigned to that term in Regulation D of the Board of Governors of the Federal Reserve System, as in effect from time to time.

"***Eurodollar Lending Office***" means, with respect to any Lender, the office of such Lender specified as its "Eurodollar Lending Office" opposite its name on Schedule I hereto or in the Assignment and Assumption pursuant to which it became a Lender (or, if no such office is specified, its Domestic Lending Office), or such other office of such Lender as such Lender may from time to time specify to the Administrative Agent.

"Eurodollar Rate" means, for the Interest Period for any Eurodollar Rate Advance made in connection with any Borrowing, the greater of (a) 0.00% and (b) the rate of interest *per annum* (rounded upward to the nearest 1/100 of 1%) as calculated by ICE Benchmark Administration Limited (or any other Person which takes over the administration of that rate) and obtained through a nationally recognized service such as the Dow Jones Market Service (Telerate), Reuters or other such service then being used by the Administrative Agent to ascertain such rates of interest (in each case, the "*Service*") as the London interbank offered rate for deposits in Dollars at approximately 11:00 a.m. (London time) two Business Days before the first day of such Interest Period for a period equal to such Interest Period; *provided*, *however*, that if the Administrative Agent in its reasonable discretion determines that such rate is no longer capable of being determined or that such circumstance has not arisen but that the supervisor for the administrator of such rate or a Governmental Authority

having jurisdiction over the Administrative Agent has made a public statement identifying a specific date after which such rate shall no longer be used for determining interest rates for loans, then the Administrative Agent and the Borrower shall endeavor to establish an alternate rate of interest to the rate described in clause (b) above that gives due consideration to any evolving or then-prevailing market convention for determining a rate of interest for syndicated loans in the United States at such time and adequately and fairly reflects the costs to the Lenders of funding Eurodollar Rate Advances (any such proposed alternate rate, a "***LIBOR Successor Rate***"). Upon the Administrative Agent and the Borrower reaching agreement on a LIBOR Successor Rate, the Administrative Agent and the Borrower shall enter into an amendment to this Agreement to reflect such LIBOR Successor Rate and such other related changes to this Agreement as may be applicable (a copy of which shall be promptly provided by the Administrative Agent to the Lenders), and notwithstanding anything to the contrary contained in Section 8.01, such amendment shall become effective without any further action or consent of any other party to this Agreement so long as the Administrative Agent shall not have received, within five (5) Business Days after the date a copy of such amendment is provided to the Lenders by the Administrative Agent, a written notice from the Majority Lenders stating that the Majority Lenders object to such amendment; *provided*, *however*, that if the Administrative Agent has notified the Lenders and the Borrower that the rate described in clause (b) above is no longer capable of being determined or is no longer used for determining interest rates for loans, then unless and until an amendment implementing a LIBOR Successor Rate is effective, (i) the obligation of the Lenders to make or maintain Eurodollar Rate Advances will be suspended and (ii) the rate of interest set forth in clause (iii) of the definition of "Alternate Base Rate" contained in this Section 1.01 (the "***LIBOR Component***") will no longer be utilized in determining the Alternate Base Rate. Upon receipt of any such notice pursuant to the immediately preceding *proviso*, the Borrower may revoke any pending request for a Borrowing of, or Conversion to, Eurodollar Rate Advances (to the extent of the impacted Eurodollar Rate Advances or Interest Periods) or, failing that, shall be deemed to have converted such request into a request for a Borrowing of Alternate Base Rate Advances (except that the LIBOR Component will no longer be utilized in determining the Alternate Base Rate for any such Advances) in the amount specified therein.

"***Eurodollar Rate Advance***" means an Advance that bears interest as provided in Section 2.05(b).

"***Eurodollar Rate Reserve Percentage***" of any Lender for the Interest Period for any Eurodollar Rate Advance means the reserve percentage applicable during such Interest Period (or if more than one such percentage shall be so applicable, the daily average of such percentages for those days in such Interest Period during which any such percentage shall be so applicable) under regulations issued from time to time by the Board of Governors of the Federal Reserve System (or any successor) for determining the maximum reserve requirement (including, without limitation, any emergency, supplemental or other marginal reserve requirement) for such Lender with respect to liabilities or assets consisting of or including Eurocurrency Liabilities having a term equal to such Interest Period.

"***Event of Default***" has the meaning set forth in Section 6.01.

"***Exchange Act***" means the Securities Exchange Act of 1934, and the regulations promulgated thereunder, in each case as amended and in effect from time to time.

"***Excluded Taxes***" means any of the following Taxes imposed on or with respect to a Recipient or required to be withheld or deducted from a payment to a Recipient: (i) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (A) imposed as a result of such Recipient being organized under the laws of, or having its principal office or, in the case of any Lender, its Applicable Lending Office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (B) that are Other Connection Taxes; (ii) in the case of a Lender, U.S. federal withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in an Advance or Commitment pursuant to a law in effect on the date on which (A) such Lender acquires such interest in the Advance or Commitment (other than pursuant to an assignment request by the Borrower under Section 2.17(b)) or (B) such Lender changes its Applicable Lending Office, except in each case to the extent that, pursuant to Section 2.13, amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its Applicable Lending Office; (iii) Taxes attributable to such Recipient's failure to comply with Section 2.13(g) and (iv) any U.S. federal withholding Taxes imposed under FATCA.

"***FATCA***" means Sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof and any agreements entered into pursuant to Section 1471(b)(1) of the Code.

"***FE***" has the meaning set forth in the preamble hereto.

"***FE Revolving Credit Agreement***" means the Credit Agreement, dated as of December 6, 2016, as amended by Amendment No. 1 thereto, dated as of October 19, 2018, among FE, The Cleveland Electric Illuminating Company, Met-Ed, Ohio Edison Company, Pennsylvania Power Company, The Toledo Edison Company, Jersey Central Power & Light Company, MP, Penelec, The Potomac Edison Company and West Penn Power Company, as the borrowers, the financial institutions from time to time party thereto as lenders, Mizuho Bank, Ltd., as administrative agent, the fronting banks party thereto from time to time and the swing line lenders party thereto from time to time, as further amended, restated, amended and restated, supplemented or otherwise modified from time to time.

"***Federal Funds Rate***" means, for any period, the greater of (a) 0.00% and (b) a fluctuating interest rate *per annum* (rounded upward, if necessary, to the nearest whole multiple of 1/100 of 1% *per annum*) equal for each day during such period to the weighted average of the rates on overnight Federal funds transactions with members of the Federal Reserve System, as published for such day (or, if such day is not a Business Day, for the

next preceding Business Day) by the Federal Reserve Bank of New York, or, if such rate is not so published for any day that is a Business Day, the average rate (rounded upward to the nearest whole multiple of 1/100 of 1% *per annum*, if such average is not such a multiple) charged to Scotiabank on such day on such transactions as determined by the Administrative Agent.

"***Fee Letters***" means (i) the fee letter agreement, dated September 28, 2018, among the Borrower, The Cleveland Electric Illuminating Company, Met-Ed, Ohio Edison Company, Pennsylvania Power Company, The Toledo Edison Company, Jersey Central Power & Light Company, MP, Penelec, The Potomac Edison Company, West Penn Power Company, FirstEnergy Transmission, LLC, American Transmission Systems, Incorporated, Mid-Atlantic Interstate Transmission Systems, LLC, Trans-Allegheny Interstate Line Company, Mizuho Bank, Ltd., JPMorgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated and Bank of America, N.A., (ii) the fee letter agreement, dated September 28, 2018, among the Borrower, PNC Capital Markets LLC, PNC Bank, National Association, Barclays Bank PLC, Scotiabank, MUFG Bank, Ltd. and Citigroup Global Markets Inc., and (iii) the fee letter agreement, dated September 28, 2018, between the Borrower and Scotiabank, in each case, as amended, amended and restated, modified or supplemented from time to time.

"***FES***" means FirstEnergy Solutions Corp., an Ohio corporation, and any successor thereto.

"***First Mortgage Indenture***" means a first mortgage indenture pursuant to which the Borrower or any Subsidiary of the Borrower may issue bonds, notes or similar instruments secured by a lien on all or substantially all of the Borrower's or such Subsidiary's fixed assets, as the case may be.

"***Foreign Lender***" means any Lender that is organized under the laws of a jurisdiction other than that in which the Borrower is resident for tax purposes. For purposes of this definition, the United States of America, each State thereof and the District of Columbia shall be deemed to constitute a single jurisdiction.

"***Fund***" means any Person (other than a natural person) that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business.

"***GAAP***" means generally accepted accounting principles in the United States in effect from time to time.

"***Governmental Action***" means all authorizations, consents, approvals, waivers, exceptions, variances, orders, licenses, exemptions, publications, filings, notices to and declarations of or with any Governmental Authority (other than requirements the failure to comply with which will not affect the validity or enforceability of any Loan Document or have a material adverse effect on the transactions contemplated by any Loan Document or

any material rights, power or remedy of any Person thereunder or any other action in respect of any Governmental Authority).

"***Governmental Authority***" means the government of the United States of America or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra-national bodies such as the European Union or the European Central Bank) and any group or body charged with setting financial accounting or regulatory capital rules or standards (including, without limitation, the Financial Accounting Standards Board, the Bank for International Settlements or the Basel Committee on Banking Supervision or any successor or similar authority to any of the foregoing).

"***Granting Lender***" has the meaning set forth in Section 8.08(g).

"***Hedging Obligations***" mean, with respect to any Person, the obligations of such Person under any interest rate or currency swap agreement, interest rate or currency future agreement, interest rate collar agreement, interest rate or currency hedge agreement, and any put, call or other agreement or arrangement designed to protect such Person against fluctuations in interest rates or currency exchange rates.

"***Hostile Acquisition***" means any Target Acquisition (as defined below) involving a tender offer or proxy contest that has not been recommended or approved by the board of directors (or similar governing body) of the Person that is the subject of such Target Acquisition. As used in this definition, the term "Target Acquisition" means any transaction, or any series of related transactions, by which any Person directly or indirectly (i) acquires all or substantially all of the assets or ongoing business of any other Person, whether through purchase of assets, merger or otherwise, (ii) acquires (in one transaction or as the most recent transaction in a series of transactions) control of at least a majority in ordinary voting power of the securities of any such Person that have ordinary voting power for the election of directors or (iii) otherwise acquires control of more than a 50% ownership interest in any such Person.

"***Indebtedness***" of any Person means at any date, without duplication, (i) all obligations of such Person for borrowed money, or with respect to deposits or advances of any kind, or for the deferred purchase price of property or services other than trade accounts payable, (ii) all obligations of such Person evidenced by bonds, debentures, notes or similar instruments, (iii) all obligations of such Person upon which interest charges are customarily paid, (iv) all obligations under leases that shall have been or should be, in accordance with GAAP, recorded as capital leases in respect of which such Person is liable as lessee, (v) withdrawal liability incurred under ERISA by such Person or any of its affiliates to any Multiemployer Plan, (vi) reimbursement obligations of such Person (whether contingent or otherwise) in respect of letters of credit, bankers acceptances, surety or other bonds and similar instruments, (vii) all Indebtedness of others secured by a Lien on any asset of such Person, whether or not such Indebtedness is assumed by such Person and (viii) obligations

of such Person under direct or indirect guaranties in respect of, and obligations (contingent or otherwise) to purchase or otherwise acquire, or otherwise to assure a creditor against loss in respect of, indebtedness or obligations of others of the kinds referred to above.

"***Indemnified Person***" has the meaning set forth in Section 8.05(c) hereto.

"***Indemnified Taxes***" means (i) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of the Borrower under any Loan Document and (ii) to the extent not otherwise described in clause (i), Other Taxes.

"***Information***" has the meaning set forth in Section 8.17.

"***Interest Period***" means, for each Eurodollar Rate Advance made as part of the same Borrowing, the period commencing on the date of such Eurodollar Rate Advance or the date of the Conversion of any Advance into such Eurodollar Rate Advance and ending on the last day of the period selected by the Borrower pursuant to the provisions below and, thereafter in the case of Advances, each subsequent period commencing on the last day of the immediately preceding Interest Period and ending on the last day of the period selected by the Borrower pursuant to the provisions below. The duration of each such Interest Period shall be, in the case of any Eurodollar Rate Advance, one week or one, two, three or six months, in each case, as the Borrower may select by notice to the Administrative Agent pursuant to Section 2.02(a) or Section 2.08(a); *provided, however,* that:

(i) the Borrower may not select any Interest Period that ends after the Maturity Date;

(ii) Interest Periods commencing on the same date for Advances made as part of the same Borrowing shall be of the same duration;

(iii) no more than five different Interest Periods shall apply to outstanding Eurodollar Rate Advances on any date of determination; and

(iv) whenever the last day of any Interest Period would otherwise occur on a day other than a Business Day, the last day of such Interest Period shall be extended to occur on the next succeeding Business Day, *provided*, that if such extension would cause the last day of such Interest Period to occur in the next following calendar month, the last day of such Interest Period shall occur on the next preceding Business Day.

"***IRS***" means the United States Internal Revenue Service.

"***Junior Subordinated Deferred Interest Debt Obligations***" means subordinated deferrable interest debt obligations of the Borrower or any of its Subsidiaries (i) for which the maturity date is subsequent to the Maturity Date and (ii) that are fully subordinated in right of payment to the Indebtedness hereunder.

"***Lenders***" means the Banks listed on the signature pages hereof and each assignee of a Bank or another Lender that shall become a party hereto pursuant to Section 8.08.

"***Lien***" means, with respect to any asset, any mortgage, deed of trust, lien, pledge, charge, security interest or encumbrance of any kind in respect of such asset. For the purposes of this Agreement, a Person or any of its Subsidiaries shall be deemed to own, subject to a Lien, any asset that it has acquired or holds subject to the interest of a vendor or lessor under any conditional sale agreement, capital lease or other title retention agreement relating to such asset.

"***Loan Documents***" means this Agreement, any Note and the Fee Letters.

"***Majority Lenders***" means, at any time, Lenders having in excess of 50% in interest of the Commitments in effect at such time, or, if all Commitments have terminated, Lenders owed in excess of 50% of the then aggregate unpaid principal amount of the Advances owing to Lenders at such time. The Commitments and outstanding Advances of any Defaulting Lender shall be disregarded in determining Majority Lenders at any time.

"***Margin Stock***" has the meaning assigned to that term in Regulation U issued by the Board of Governors of the Federal Reserve System, and as amended and in effect from time to time.

"***Material Adverse Effect***" means (i) any material adverse effect on the business, property, operations or financial condition of the Borrower and its Consolidated Subsidiaries, taken as a whole, or (ii) any material adverse effect on the validity or enforceability against the Borrower of this Agreement or any Note.

"***Maturity Date***" means October 17, 2019 or the earlier date of termination of the Commitments or acceleration of the maturity of the Advances pursuant to Section 6.01 hereof.

"***Met-Ed***" means Metropolitan Edison Company, a Pennsylvania corporation, and any successor thereto.

"***Moody's***" means Moody's Investors Service, Inc.

"***MP***" means Monongahela Power Company, an Ohio corporation, and any successor thereto.

"***Multiemployer Plan***" means a "multiemployer plan" as defined in Section 4001(a)(3) of ERISA to which the Borrower or any member of the Controlled Group has, or may reasonably be expected to have, an obligation to make contributions, or with respect to which the Borrower has, or may reasonably be expected to incur, liability.

"***Non-Consenting Lender***" means any Lender that does not approve any consent, waiver or amendment that (i) requires the approval of all affected Lenders in accordance with the terms of Section 8.01 and (ii) has been approved by the Majority Lenders.

"***Nonrecourse Indebtedness***" means, with respect to the Borrower and its Subsidiaries, (i) any Indebtedness that finances the acquisition, development, construction or improvement of an asset in respect of which the Person to which such Indebtedness is owed has no recourse whatsoever to the Borrower or any of its Affiliates and (ii) any Indebtedness existing on the date of this Agreement that finances the ownership or operation of an asset in respect of which the Person to which such Indebtedness is owed has no recourse whatsoever to the Borrower or any of its Affiliates, in each case of clauses (i) and (ii), other than:

(A) recourse to the named obligor with respect to such Indebtedness (the "***Debtor***") for amounts limited to the cash flow or net cash flow (other than historic cash flow) from the asset; and

(B) recourse to the Debtor for the purpose only of enabling amounts to be claimed in respect of such Indebtedness in an enforcement of any security interest or lien given by the Debtor over the asset or the income, cash flow or other proceeds deriving from the asset (or given by any shareholder or the like in the Debtor over its shares or like interest in the capital of the Debtor) to secure the Indebtedness, but only if the extent of the recourse to the Debtor is limited solely to the amount of any recoveries made on any such enforcement; and

(C) recourse to the Debtor generally or indirectly to any Affiliate of the Debtor, under any form of assurance, undertaking or support, which recourse is limited to a claim for damages (other than liquidated damages and damages required to be calculated in a specified way) for a breach of an obligation (other than a payment obligation or an obligation to comply or to procure compliance by another with any financial ratios or other tests of financial condition) by the Person against which such recourse is available.

"***Note***" means any promissory note issued at the request of a Lender pursuant to Section 2.15 in the form of Exhibit B hereto.

"***Notice of Borrowing***" means a notice of a Borrowing pursuant to Section 2.02(a), which shall be substantially in the form of Exhibit C-1 or such other form as may be approved by the Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approved by the Administrative Agent), appropriately completed and signed by an Authorized Officer.

"***Notice of Conversion***" means a notice of a Conversion of Advances pursuant to Section 2.08 or 2.11, which shall be substantially in the form of Exhibit C-2 or such other form as may be approved by the Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approved by the Administrative Agent), appropriately completed and signed by an Authorized Officer.

"***Notice of Prepayment***" means a notice of prepayment of Advances, which shall be substantially in the form of Exhibit C-3 or such other form as may be approved by the

Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approved by the Administrative Agent), appropriately completed and signed by an Authorized Officer.

"***OECD***" means the Organization for Economic Cooperation and Development.

"***OFAC***" means The Office of Foreign Assets Control of the U.S. Department of the Treasury.

"***Organizational Documents***" means, as applicable to any Person, the charter, code of regulations, articles of incorporation, by-laws, certificate of formation, operating agreement, certificate of partnership, limited liability company agreement, operating agreement, partnership agreement, certificate of limited partnership, limited partnership agreement or other constitutive documents of such Person.

"***Other Connection Taxes***" means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Advance or Loan Document).

"***Other Taxes***" means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment (other than an assignment made pursuant to Section 2.17(b)).

"***Participant***" has the meaning set forth in Section 8.08(d).

"***Participant Register***" has the meaning set forth in Section 8.08(d).

"***Patriot Act***" means the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001), as in effect from time to time.

"***PBGC***" means the Pension Benefit Guaranty Corporation and any entity succeeding to any or all of its functions under ERISA.

"***Penelec***" means Pennsylvania Electric Company, a Pennsylvania corporation, and any successor thereto.

"***Percentage***" means, in respect of any Lender on any date of determination, the quotient (expressed as a percentage carried out to the ninth decimal place) obtained by (i) dividing such Lender's Commitment on such day by the total of the Commitments on such

day, or (ii) if the Commitments have terminated or expired, dividing the aggregate unpaid principal amount of the Advances owing to such Lender on such day by the aggregate unpaid principal amount of all Advances owing to the Lenders on such day.

"***Permitted Obligations***" mean (i) nonspeculative Hedging Obligations of any Person and its Subsidiaries arising in the ordinary course of business and in accordance with such Person's established risk management policies that are designed to protect such Person against, among other things, fluctuations in interest rates or currency exchange rates and which in the case of agreements relating to interest rates shall have a notional amount no greater than the payments due with respect to the applicable obligations being hedged and (ii) Commodity Trading Obligations. For the avoidance of doubt, such transactions shall be considered nonspeculative if undertaken in conformance with FE's Corporate Risk Management Policy then in effect, as approved by FE's Audit Committee, together with the Approved Business Unit Risk Management Policies referenced thereunder.

"***Permitted Securitization***" means, for the Borrower and its Subsidiaries, any sale, assignment, conveyance, grant and/or contribution, or series of related sales, assignments, conveyances, grants and/or contributions, by the Borrower or any of its Subsidiaries of Receivables (or purported sale, assignment, conveyance, grant and/or contribution) to a trust, corporation or other entity, where the purchase of such Receivables may be funded or exchanged in whole or in part by the incurrence or issuance by the applicable Securitization SPV, if any, of Indebtedness or securities (such Indebtedness and securities being "***Attributable Securitization Obligations***") that are to be secured by or otherwise satisfied by payments from, or that represent interests in, the cash flow derived primarily from such Receivables (*provided*, *however*, that "Indebtedness" as used in this definition shall not include Indebtedness incurred by a Securitization SPV owed to the Borrower or any of its Subsidiaries, which Indebtedness represents all or a portion of the purchase price or other consideration paid by such Securitization SPV for such receivables or interests therein), where (i) any representation, warranty, covenant, recourse, repurchase, hold harmless, indemnity or similar obligations of the Borrower or any of its Subsidiaries, as applicable, in respect of Receivables sold, assigned, conveyed, granted or contributed, or payments made in respect thereof, are customary for transactions of this type, and do not prevent the characterization of the transaction as a true sale under Applicable Laws (including debtor relief laws) and (ii) any representation, warranty, covenant, recourse, repurchase, hold harmless, indemnity or similar obligations of any Securitization SPV in respect of Receivables sold, assigned, conveyed, granted or contributed or payments made in respect thereof, are customary for transactions of this type.

"***Person***" means an individual, partnership, corporation (including a business trust), limited liability company, joint stock company, trust, unincorporated association, joint venture or other entity, or a government or any political subdivision or agency thereof.

"***Plan***" means, at any time, an "employee pension benefit plan" (as defined in Section 3(2) of ERISA), other than a Multiemployer Plan, that is covered by Title IV of ERISA or subject to the minimum funding standards under Section 412 or 430 of the Code and (i) is

(A) maintained by or contributed to by (or to which there is or may be an obligation to contribute to by) the Borrower or any member of the Controlled Group, or (B) maintained pursuant to a collective bargaining agreement or any other arrangement under which more than one employer makes contributions, or (ii) as to which the Borrower or a member of the Controlled Group has within the preceding five plan years maintained, contributed to or had an obligation to contribute to.

"***Platform***" has the meaning set forth in Section 5.01(g).

"***PPUC Order***" means the Pennsylvania Public Utility Commission opinion and order *Pennsylvania Public Utility Commission v. Pennsylvania Electric Company* and *Pennsylvania Public Utility Commission v. Metropolitan Edison Company* [consolidated], 210 WL 2911737 (Pa.P.U.C.) (March 3, 2010), as subsequently affirmed by an opinion and order of the Commonwealth Court of Pennsylvania on June 14, 2011, *Metropolitan Edison Company v. Pennsylvania Public Utility Commission*, 22 A.3d 353 (Pa.Commw. 2011), and left undisturbed by the United States District Court for the Eastern District of Pennsylvania in its order issued on September 30, 2013 (Civil Action No. 11-cv-04474), which order was affirmed by the United States Court of Appeals for the Third Circuit on September 16, 2014, and the petition for rehearing was denied on October 15, 2014. A petition for writ of certiorari was filed with the United States Supreme Court on February 12, 2015, which was denied on May 26, 2015.

"***PTE***" shall mean a prohibited transaction class exemption issued by the U.S. Department of Labor, as any such exemption may be amended from time to time.

"***Public Lender***" has the meaning set forth in Section 5.01(g).

"***Receivables***" means any accounts receivable, payment intangibles, notes receivable, rights to receive future payments and related rights (whether now existing or arising or acquired in the future, whether constituting accounts, chattel paper, instruments, general intangibles or otherwise, and including the right to payment of any interest or finance charges), including (i) financial transmission rights ("***FTRs***") or any other rights to payment from PJM Interconnection LLC or another regional transmission authority of the Borrower or any of its Subsidiaries or (ii) the right to impose, charge, collect and receive special, irrevocable, nonbypassable charges based upon the consumption of electricity imposed pursuant to Applicable Law on the Borrower's or any of its Subsidiaries' ratepayers, and any supporting obligations and other financial assets related thereto (including all collateral securing such accounts receivables, FTRs or other assets, contracts and contract rights, all guarantees with respect thereto, and all proceeds thereof) that are transferred, or in respect of which security interests are granted in one or more transactions that are customary for asset securitizations of such Receivables.

"***Recipient***" means, as applicable, (i) the Administrative Agent and (ii) any Lender.

"***Reference Ratings***" means the ratings assigned by S&P and Moody's to the senior unsecured non-credit enhanced debt of the Borrower; *provided* that, if there is no such rating,

"Reference Ratings" shall mean the ratings that are one level below the respective ratings assigned by S&P and Moody's to the senior secured debt of the Borrower.

"***Register***" has the meaning set forth in Section 8.08(c).

"***Related Parties***" means, with respect to any Person, such Person's Affiliates and the partners, directors, officers, employees, agents, trustees, administrators, managers, advisors and representatives of such Person and of such Person's Affiliates.

"***Reportable Compliance Event***" means that any Covered Entity becomes a Sanctioned Person, or is charged by indictment, criminal complaint or similar charging instrument, arraigned, or custodially detained in connection with any Anti-Corruption Law or any predicate crime to any Anti-Corruption Law, or has knowledge of facts or circumstances to the effect that it is reasonably likely that any aspect of its operations is in actual or probable violation of any Anti-Corruption Law.

"***Resignation Effective Date***" has the meaning set forth in Section 7.07(a).

"***S&P***" means S&P Global Ratings, a business unit of Standard & Poor's Financial Services LLC, a subsidiary of S&P Global Inc.

"***Sanctioned Country***" means, at any time, a region, country or territory which is, or whose government is, the subject or target of any Sanctions (at the date of this Agreement, the Crimea region of Ukraine, Cuba, Iran, North Korea and Syria).

"***Sanctioned Person***" means (a) any Person named on the list of Specially Designated Nationals maintained by OFAC, or any other Sanctions-related list of designated Persons maintained by the U.S. Department of State, the U.S. Department of Commerce, the U.S. Department of the Treasury or any other U.S. Governmental Authority, or maintained by the United Nations Security Council, Her Majesty's Treasury of the United Kingdom, the European Union or any member state thereof, as may be amended, supplemented or substituted from time to time, (b) any Person that is (i) operating, located, organized or resident in a Sanctioned Country, to the extent such presence in the Sanctioned Country means that such Person is the target of Sanctions, or (ii) the subject or target of any Sanctions, or (c) any Person controlled by any such Person described in the foregoing clause (a) or clause (b). For purposes of the foregoing clause (c), "control" shall have the meaning ascribed to such term in the definition of "Covered Entity".

"***Sanctions***" means economic or financial sanctions or trade embargoes imposed, administered or enforced from time to time by (a) the U.S. government, including those administered by OFAC, the U.S. Department of State or the U.S. Department of Treasury, or (b) the United Nations Security Council, the European Union or Her Majesty's Treasury of the United Kingdom.

"***Scotiabank***" has the meaning set forth in the preamble hereto.

"***SEC***" means the United States Securities and Exchange Commission.

"***Securitization SPV***" means any trust, partnership or other Person established by the Borrower or a Subsidiary of the Borrower to implement a Permitted Securitization.

"***Service***" has the meaning set forth in the definition of "Eurodollar Rate".

"***Significant Subsidiaries***" means (i) The Cleveland Electric Illuminating Company, Met-Ed, Ohio Edison Company, Pennsylvania Power Company, The Toledo Edison Company, Jersey Central Power & Light Company, MP, Penelec, The Potomac Edison Company, West Penn Power Company, FirstEnergy Transmission, LLC, American Transmission Systems, Incorporated, Trans-Allegheny Interstate Line Company and Mid-Atlantic Interstate Transmission, LLC, and any successor to any of them, and (ii) any significant subsidiary (as such term is defined in Regulation S-X of the SEC (17 C.F.R. §210.1-02(w)), or any successor provision) of the Borrower (excluding Securitization SPVs); *provided*, *however*, that the Unregulated Subsidiaries shall be specifically excluded from the definition of Significant Subsidiaries.

"***SPC***" has the meaning set forth in Section 8.08(g).

"***Subsidiary***" means, with respect to any Person, any corporation or other entity of which securities or other ownership interests having ordinary voting power to elect a majority of the Board of Directors or other persons performing similar functions are at the time directly or indirectly owned by such a Person, or one or more Subsidiaries, or by such Person and one or more of its Subsidiaries.

"***Taxes***" means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"***Termination Event***" means (i) a Reportable Event described in Section 4043(c) of ERISA and the regulations issued thereunder (other than a Reportable Event not subject to the provision for 30-day notice to the PBGC under such regulations), or (ii) the withdrawal of the Borrower or any member of the Controlled Group from a Plan during a plan year in which it was a "substantial employer" as defined in Section 4001(a)(2) of ERISA, or (iii) a cessation of operations with respect to which the Borrower or any member of the Controlled Group has incurred liability under Section 4062(e) of ERISA, or (iv) the filing of a notice of intent to terminate a Plan or the treatment of a Plan amendment as a termination under Section 4041 or 4042 of ERISA, or (v) the institution of proceedings to terminate a Plan by the PBGC, or (vi) any other event or condition that might constitute grounds under Section 4042 of ERISA for the termination of, or the appointment by a court of competent jurisdiction of a trustee to administer, any Plan.

"***Total Capitalization***" means, at any date of determination, the sum, without duplication, of (i) Consolidated Debt, (ii) the capital stock (but excluding treasury stock and

capital stock subscribed and unissued) and other equity accounts (including retained earnings and paid in capital but excluding accumulated other comprehensive income and loss) of the Borrower and its Consolidated Subsidiaries, (iii) consolidated equity of the preference stockholders of the Borrower and its Consolidated Subsidiaries, and (iv) the aggregate principal amount of Trust Preferred Securities and Junior Subordinated Deferred Interest Debt Obligations of the Borrower and its Consolidated Subsidiaries; *provided*, *however*, that, commencing with the fiscal quarter ending December 31, 2018 and for each fiscal quarter ending thereafter, "***Total Capitalization***" shall be determined subject to the following adjustments:

(A) there shall be excluded in such determination the following after-tax effects resulting from non-cash write-downs and non-cash charges occurring and recognized for the periods indicated below as reflected in the consolidated financial statements of the Borrower for such periods:

(1) in respect of pension and other postemployment benefits occurring and recognized in fiscal years 2011 and 2012, which shall not exceed in the aggregate $691,600,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation);

(2) in respect of asset impairments attributable to the Albright, Rivesville and Willow Island Plants owned by MP, the Armstrong and R. Paul Plants owned by AESC, and the Bay Shore (Units 2-4 only), Eastlake (Units 4-5 only), Fremont and Richland Plants owned by FirstEnergy Generation, LLC occurring and recognized in fiscal year 2011, which shall not exceed in the aggregate $255,400,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation);

(3) in respect of asset impairments attributable to the Hatfield's Ferry Power Station and the Mitchell Power Station owned by AESC occurring and recognized in fiscal year 2013 through September 30, 2013, which shall not exceed in the aggregate $317,300,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation); and

(4) in respect of asset impairments attributable to the power generation assets owned by the Unregulated Subsidiaries occurring and recognized during the fiscal quarter ending December 31, 2016 and from time to time thereafter, which shall not exceed in the aggregate $5,500,000,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation); and

(B) in addition to the adjustments described in clause (A) above, there shall be excluded in such determination the after-tax effects resulting from non-cash write-downs and non-cash charges attributable or relating to the following: (1)(i) pension and other postemployment benefits, (ii) impairment of regulatory and other long-lived assets, (iii) disallowance of regulatory assets, and (iv) goodwill impairment, in each case, occurring

and recognized during the fiscal quarter ended December 31, 2013 and in any fiscal quarter ended or ending thereafter as reflected in the consolidated financial statements of the Borrower for such periods, and (2) disallowance of regulatory assets consisting of marginal transmission line losses of Met-Ed and Penelec occurring during the period from January 11, 2007 through December 31, 2010 as described in the PPUC Order, in each case, occurring and recognized during the fiscal quarter ended September 30, 2013 as reflected in the consolidated financial statements of the Borrower for such period, but such adjustments shall not exceed in the aggregate $1,500,000,000 for the Borrower and its Consolidated Subsidiaries (without duplication but allowing for, as applicable, consolidation).

"***Trust Preferred Securities***" means any securities, however denominated, (i) issued by the Borrower or any Consolidated Subsidiary of the Borrower, (ii) that are not subject to mandatory redemption or the underlying securities, if any, of which are not subject to mandatory redemption, (iii) that are perpetual or mature no less than 30 years from the date of issuance, (iv) the indebtedness issued in connection with which, including any guaranty, is subordinate in right of payment to the unsecured and unsubordinated indebtedness of the issuer of such indebtedness or guaranty, and (v) the terms of which permit the deferral of the payment of interest or distributions thereon to a date occurring after the Maturity Date.

"***Type***" means the designation of a Borrowing or an Advance as a Eurodollar Rate Borrowing or Advance or as an Alternate Base Rate Borrowing or Advance.

"***United States***" and "***U.S.***" each means the United States of America.

"***Unmatured Default***" means any event that, with the giving of notice or the passage of time, or both, would constitute an Event of Default.

"***Unregulated Money Pool Agreement***" means the FirstEnergy Substitute Non-Utility Money Pool Agreement, dated as of January 1, 2018, among the Borrower, FirstEnergy Service Company and certain non-utility Subsidiaries of the Borrower, as amended, modified, restated or replaced from time to time.

"***Unregulated Subsidiaries***" means FES, AESC, FirstEnergy Nuclear Operating Company, Bay Shore Power Company and, as applicable, their respective Subsidiaries.

"***U.S. Person***" means any Person that is a "United States person" as defined in Section 7701(a)(30) of the Code.

"***U.S. Tax Compliance Certificate***" has the meaning set forth in Section 2.13(g)(ii)(B)(iii).

"***Withholding Agent***" means the Borrower and the Administrative Agent.

"***Write-Down and Conversion Powers***" means, with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from

time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule.

SECTION 1.02. Computation of Time Periods.

In this Agreement in the computation of periods of time from a specified date to a later specified date, the word "from" means "from and including" and the words "to" and "until" each means "to but excluding".

SECTION 1.03. Accounting Terms.

All accounting terms not specifically defined herein shall be construed in accordance with GAAP consistent with those applied in the preparation of the financial statements referred to in Section 4.01(g). Notwithstanding anything to the contrary contained in this Agreement, any lease that was or would have been treated as an operating lease under GAAP as in effect on the Closing Date that would become or be treated as a capital lease solely as a result of a change in GAAP after the Closing Date shall always be treated as an operating lease for purposes of determining compliance with the financial and other covenants set forth in this Agreement and the other Loan Documents.

SECTION 1.04. Terms Generally.

Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include", "includes" and "including" shall be deemed to be followed by the phrase "without limitation". The word "will" shall be construed to have the same meaning and effect as the word "shall". Unless the context requires otherwise, (i) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, amended and restated, supplemented or otherwise modified (subject to any restrictions on such amendments, restatements, supplements or modifications set forth herein), (ii) any reference herein to any Person shall be construed to include such Person's successors and assigns, (iii) the words "herein", "hereof" and "hereunder", and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provisions hereof, (iv) all references herein to Articles, Sections, Exhibits and Schedules shall be construed to refer to Articles and Sections of, and Exhibits and Schedules to, this Agreement, and (v) the definitions of terms herein shall apply equally to the singular and plural forms of the terms defined.

ARTICLE II
AMOUNTS AND TERMS OF THE ADVANCES

SECTION 2.01. The Advances.

Each Lender severally agrees, on the terms and conditions hereinafter set forth, to make Advances to the Borrower in Dollars only on the Closing Date, in an aggregate amount not to exceed at any time outstanding the Commitment of such Lender. Each Borrowing shall be in an aggregate amount not less than $5,000,000 or an integral multiple of $1,000,000 in excess thereof and shall consist of Advances having the same Interest Period made or Converted on the same day by the Lenders ratably according to their respective Commitments. The Borrower may make multiple Borrowings on the Closing Date, each with a different Interest Period, provided, that all Advances made as part of a single Borrowing will have the same Interest Period. Within the limits of each Lender's Commitment, and subject to the conditions set forth in Article III and the other terms and conditions hereof, the Borrower may request Borrowings hereunder for funding on the Closing Date, and repay or prepay Advances pursuant to Section 2.09; *provided, however*, that once repaid or prepaid, no Advances may be reborrowed. Any unused portion of the Commitments will terminate on the making of the Borrowings on the Closing Date.

SECTION 2.02. Making the Advances.

(a) The Borrowings to be made on the Closing Date pursuant to Section 2.01 shall be made on notice, which may be given by telephone or a Notice of Borrowing (*provided*, that any telephonic notice must be confirmed immediately by delivery to the Administrative Agent of a Notice of Borrowing). Such Notice of Borrowing must be given by the Borrower to the Administrative Agent (i) in the case of a Borrowing comprising Eurodollar Rate Advances, not later than 11:00 a.m. (New York time) on the third Business Day prior to the Closing Date (or such other time as the Administrative Agent and the Lenders may agree in their sole discretion), and (ii) in the case of a Borrowing comprising Alternate Base Rate Advances, not later than 11:00 a.m. (New York time) on the Closing Date, and the Administrative Agent shall give to each Lender prompt notice thereof. Such telephonic notice and Notice of Borrowing shall specify the requested (A) Type of Advances to be made in connection with such Borrowing, (B) aggregate amount of such Borrowing and (C) in the case of a Borrowing comprising Eurodollar Rate Advances, the initial Interest Period for each such Advance, which Borrowing shall be subject to the limitations stated in the definition of "Interest Period" in Section 1.01. Each Lender shall, before 1:00 p.m. (New York time) on the Closing Date, make available for the account of its Applicable Lending Office to the Administrative Agent at its address referred to in Section 8.02, in same day funds, such Lender's Percentage of each such Borrowing. After the Administrative Agent's receipt of such funds and upon fulfillment of the applicable conditions set forth in Article III, the Administrative Agent will make such funds available to the Borrower at the Administrative Agent's aforesaid address.

(b) The Notice of Borrowing delivered pursuant to Section 2.02(a) shall be irrevocable and binding on the Borrower. In the event that such Notice of Borrowing requests Eurodollar Rate Advances, the Borrower shall indemnify each Lender against any loss, cost or expense incurred by such Lender as a result of any failure by the Borrower to fulfill on or before the date specified in such Notice of Borrowing the applicable conditions set forth in Article III, including, without limitation, any loss (including loss of anticipated profits), cost or expense incurred by reason of the liquidation or redeployment of deposits or other funds acquired by such Lender to fund the Advance to be made by such Lender as part of such Borrowing when such Advance, as a result of such failure, is not made on such date.

(c) Unless the Administrative Agent shall have received written notice via facsimile transmission from a Lender prior to (A) 5:00 p.m. (New York time) one Business Day prior to the date of a Borrowing comprising Eurodollar Rate Advances or (B) 12:00 noon (New York time) on the date of a Borrowing comprising Alternate Base Rate Advances that such Lender will not make available to the Administrative Agent such Lender's Percentage of such Borrowing, the Administrative Agent may assume that such Lender has made such portion available to the Administrative Agent on the date of such Borrowing in accordance with subsection (a) of this Section 2.02 and the Administrative Agent may, in reliance upon such assumption, make available to the Borrower on such date a corresponding amount. If and to the extent that such Lender shall not have so made such Percentage of such Borrowing available to the Administrative Agent, such Lender and the Borrower severally agree to repay to the Administrative Agent forthwith on demand such corresponding amount together with interest thereon, for each day from the date such amount is made available to the Borrower until the date such amount is repaid to the Administrative Agent, at (i) in the case of the Borrower, the interest rate applicable at the time to Advances made in connection with such Borrowing and (ii) in the case of such Lender, the Federal Funds Rate. If such Lender shall repay to the Administrative Agent such corresponding amount, such amount so repaid shall constitute such Lender's Advance as part of such Borrowing for purposes of this Agreement.

(d) The obligations of the Lenders hereunder to make Advances and to make payments pursuant to Section 7.06 are several and not joint. The failure of any Lender to make the Advance to be made by it as part of any Borrowing or to make any payment under Section 7.06 on any date required hereunder shall not relieve any other Lender of its corresponding obligation to do so on such date, and no Lender shall be responsible for the failure of any other Lender to make the Advance to be made by such other Lender on the date of any Borrowing or to make its payment under Section 7.06.

SECTION 2.03. Fees.

The Borrower agrees to pay the fees payable by it in such amounts and payable on such terms as set forth in the Fee Letters.

SECTION 2.04. Repayment of Advances.

The Borrower agrees to repay the principal amount of each Advance made by each Lender no later than the Maturity Date.

SECTION 2.05. Interest on Advnces.

The Borrower agrees to pay interest on the unpaid principal amount of each Advance made by each Lender from the date of such Advance until such principal amount shall be paid in full, at the following rates *per annum*, subject to Section 2.12(f):

(a) ***Alternate Base Rate Advances***. If such Advance is an Alternate Base Rate Advance, a rate *per annum* equal at all times to the Alternate Base Rate in effect from time to time *plus* the Applicable Margin for such Alternate Base Rate Advance in effect from time to time, payable quarterly in arrears on the last Business Day of each March, June, September and December, on the Maturity Date and on the date such Alternate Base Rate Advance shall be Converted or be paid in full and as provided in Section 2.09; and

(b) ***Eurodollar Rate Advances***. If such Advance is a Eurodollar Rate Advance, a rate *per annum* equal at all times during the Interest Period for such Advance to the sum of the Eurodollar Rate for such Interest Period *plus* the Applicable Margin for such Eurodollar Rate Advance in effect from time to time, payable on the last day of each Interest Period for such Eurodollar Rate Advance (and, in the case of any Interest Period of six months, on the last Business Day of the third month of such Interest Period), on the Maturity Date and on the date such Eurodollar Rate Advance shall be Converted or be paid in full and as provided in Section 2.09.

SECTION 2.06. Additional Interest on Advances.

The Borrower agrees to pay to each Lender, so long as such Lender shall be required under regulations of the Board of Governors of the Federal Reserve System to maintain reserves with respect to liabilities or assets consisting of or including Eurocurrency Liabilities, additional interest on the unpaid principal amount of each Eurodollar Rate Advance made by such Lender, from the date of such Advance until such principal amount is paid in full, at an interest rate *per annum* equal at all times to the remainder obtained by subtracting (i) the Eurodollar Rate for the Interest Period for such Advance from (ii) the rate obtained by dividing such Eurodollar Rate by a percentage equal to 100% minus the Eurodollar Rate Reserve Percentage of such Lender for such Interest Period, payable on each date on which interest is payable on such Advance; *provided*, that no Lender shall be entitled to demand additional interest under this Section 2.06 more than 90 days following the last day of the Interest Period in respect of which such demand is made; *provided further, however*, that the foregoing proviso shall in no way limit the right of any Lender to demand or receive such additional interest to the extent that such additional interest relates to the retroactive application by the Board of Governors of the Federal Reserve System of any regulation described above if such demand is made within 90 days after the implementation of such retroactive regulation. Such additional interest shall be determined by such Lender and notified to the Borrower through the Administrative Agent, and such determination shall be conclusive and binding for all purposes, absent manifest error.

SECTION 2.07. Interest Rate Determination.

(a) The Administrative Agent shall give prompt notice to the Borrower and the Lenders of the applicable interest rate determined by the Administrative Agent for purposes of Section 2.05(a) or (b).

(b) If, with respect to any Eurodollar Rate Advances, the Majority Lenders notify the Administrative Agent that (i) Dollar deposits are not being offered to banks in the London interbank

eurodollar market for the applicable amount and Interest Period of such Eurodollar Rate Advances, (ii) adequate and reasonable means do not exist for determining the Eurodollar Rate or (iii) the Eurodollar Rate for any Interest Period for such Advances will not adequately reflect the cost to such Majority Lenders of making or funding their respective Eurodollar Rate Advances for such Interest Period, the Administrative Agent shall forthwith so notify the Borrower and the Lenders, whereupon, subject to the definition of "Eurodollar Rate" set forth in Section 1.01,

(i) each Eurodollar Rate Advance will automatically, on the last day of the then existing Interest Period therefor, Convert into an Alternate Base Rate Advance, and

(ii) the obligation of the Lenders to make, or to Convert Advances into, Eurodollar Rate Advances shall be suspended until the Administrative Agent shall notify the Borrower and the Lenders that the circumstances causing such suspension no longer exist.

(c) Upon the occurrence and during the continuance of any Event of Default, (i) each Eurodollar Rate Advance will automatically, on the last day of the then existing Interest Period therefor, Convert into a Base Rate Advance, and the obligation of the Lenders to make or to Convert Advances into, Eurodollar Rate Advances shall be suspended.

SECTION 2.08. Conversion of Advances.

(a) ***Voluntary***. The Borrower may on any Business Day, upon notice which may be given by telephone or a Notice of Conversion (*provided*, that (x) any telephonic notice must be confirmed immediately by delivery to the Administrative Agent of a Notice of Conversion, and (y) such Notice of Conversion must be given by the Borrower to the Administrative Agent not later than 11:00 a.m. (New York time) on the third Business Day prior to the date of any proposed Conversion into Eurodollar Rate Advances, and on the date of any proposed Conversion into Alternate Base Rate Advances), and subject to the provisions of Sections 2.07 and 2.11, Convert all Advances of one Type made to Borrower in connection with the same Borrowing into Advances of another Type or Types or Advances of the same Type having the same or a new Interest Period; *provided, however*, that any Conversion of, or with respect to, any Eurodollar Rate Advances into Advances of another Type or Advances of the same Type having the same or new Interest Periods, shall be made on, and only on, the last day of an Interest Period for such Eurodollar Rate Advances, unless the Borrower shall also reimburse the Lenders in respect thereof pursuant to Section 8.05(b) on the date of such Conversion. Each such Notice of Conversion shall, within the restrictions specified above, specify (i) the date of such Conversion, (ii) the Advances to be Converted, and (iii) if such Conversion is into, or with respect to, Eurodollar Rate Advances, the duration of the Interest Period for each such resulting Advance.

(b) ***Mandatory***. If the Borrower shall fail to select the Type of any Advance or the duration of any Interest Period for any Borrowing comprising Eurodollar Rate Advances in accordance with the provisions contained in the definition of "Interest Period" in Section 1.01 and Section 2.08(a), or if any proposed Conversion of a Borrowing that is to comprise Eurodollar Rate Advances upon Conversion shall not occur as a result of the circumstances described in

paragraph (c) below, the Administrative Agent will forthwith so notify the Borrower and the Lenders, and such Advances will automatically, on the last day of the then existing Interest Period therefor, Convert into Alternate Base Rate Advances.

(c) ***Failure to Convert***. Each Notice of Conversion pursuant to subsection (a) above shall be irrevocable and binding on the Borrower. In the case of any Borrowing that is to comprise Eurodollar Rate Advances upon Conversion, the Borrower agrees to indemnify each Lender against any loss, cost or expense incurred by such Lender as a result of any failure of such Conversion to occur pursuant to the provisions of Section 2.07(c), including, without limitation, any loss, cost or expense incurred by reason of the liquidation or redeployment of deposits or other funds acquired by such Lender to fund such Eurodollar Rate Advances upon such Conversion, when such Conversion does not occur. The Borrower's obligations under this subsection (c) shall survive the repayment of all other amounts owing by the Borrower to the Lenders and the Administrative Agent under this Agreement and any Note and the termination of this Agreement.

SECTION 2.09. Optional Prepayments.

The Borrower may at any time prepay the outstanding principal amounts of the Advances made as part of the same Borrowing in whole or ratably in part, together with accrued interest to the date of such prepayment on the principal amount prepaid, upon notice thereof, which shall be in the form of a Notice of Prepayment, given to the Administrative Agent by the Borrower not later than 11:00 a.m. (New York time) (i) on the date of any such prepayment in the case of Alternate Base Rate Advances and (ii) on the second Business Day prior to any such prepayment in the case of Eurodollar Rate Advances; *provided, however*, that (x) each partial prepayment of any Borrowing shall be in an aggregate principal amount not less than $5,000,000 and (y) in the case of any such prepayment of a Eurodollar Rate Advance, the Borrower shall be obligated to reimburse the Lenders in respect thereof pursuant to Section 8.05(b) on the date of such prepayment.

SECTION 2.10. Increased Costs.

(a) If, due to any Change in Law, there shall be any increase in the cost (other than in respect of Taxes, which are addressed exclusively in Section 2.13) to any Lender of agreeing to make or making, funding or maintaining Eurodollar Rate Advances, then the Borrower shall from time to time, upon demand by such Lender (with a copy of such demand to the Administrative Agent), pay to the Administrative Agent for the account of such Lender additional amounts sufficient to compensate such Lender for such increased cost. A certificate as to the amount of such increased cost and the basis therefor, submitted to the Borrower and the Administrative Agent by such Lender, shall constitute such demand and shall be conclusive and binding for all purposes, absent manifest error.

(b) If any Lender determines that any Change in Law affects or would affect the amount of capital or liquidity required or expected to be maintained by such Lender or any Person controlling such Lender and that the amount of such capital or liquidity is increased by or based upon the existence of (i) such Lender's commitment to lend hereunder and other commitments of this type

or (ii) the Advances made by such Lender, then, upon demand by such Lender (with a copy of such demand to the Administrative Agent), the Borrower shall immediately pay to the Administrative Agent for the account of such Lender, from time to time as specified by such Lender, additional amounts sufficient to compensate such Lender or such Person in the light of such circumstances, to the extent that such Lender determines such increase in capital or liquidity to be allocable to the existence of such Lender's commitment to lend hereunder or the Advances made by such Lender. A certificate as to such amounts submitted to the Borrower and the Administrative Agent by such Lender shall constitute such demand and shall be conclusive and binding for all purposes, absent manifest error.

(c) Failure or delay on the part of any Lender to demand compensation pursuant to this Section shall not constitute a waiver of such Lender's right to demand such compensation, *provided* that the Borrower shall not be required to compensate a Lender pursuant to this Section for any increased costs or additional amounts incurred more than 180 days prior to the date that such Lender notifies the Borrower of such Lender's intention to claim such compensation (except that, if such Change in Law giving rise to such increased costs is retroactive, then the 180-day period referred to above shall be extended to include the period of retroactive effect thereof).

(d) The Borrower's obligations under this Section 2.10 shall survive (x) the repayment of all amounts owing to the Lenders and the Administrative Agent under this Agreement and any Note and (y) the termination of this Agreement, in each case to the extent such obligations were incurred prior to such repayment and termination.

SECTION 2.11. Illegality.

Notwithstanding any other provision of this Agreement, if any Lender shall notify the Administrative Agent that the introduction of or any change in or in the interpretation of any law or regulation makes it unlawful, or any central bank or other governmental authority asserts that it is unlawful, for any Lender or its Eurodollar Lending Office to perform its obligations hereunder to make Eurodollar Rate Advances or to fund or maintain Eurodollar Rate Advances hereunder, (i) the obligation of the Lenders to make, or to Convert Advances into, Eurodollar Rate Advances shall be suspended until the Administrative Agent shall notify the Borrower and the Lenders that the circumstances causing such suspension no longer exist and (ii) the Borrower shall forthwith prepay in full all Eurodollar Rate Advances of all Lenders then outstanding, together with interest accrued thereon, unless (A) the Borrower, within five Business Days of notice from the Administrative Agent, Converts all Eurodollar Rate Advances of all Lenders then outstanding into Advances of another Type in accordance with Section 2.08 or (B) the Administrative Agent notifies the Borrower that the circumstances causing such prepayment no longer exist.

SECTION 2.12. Payments and Computations.

(a) The Borrower shall make each payment hereunder and under any Note not later than 12:00 noon (New York time) on the day when due in Dollars to the Administrative Agent at its address referred to in Section 8.02 in same day funds, without set-off, counterclaim or defense and

any such payment to the Administrative Agent shall constitute payment by the Borrower hereunder or under any Note, as the case may be, for all purposes, and upon such payment the Lenders shall look solely to the Administrative Agent for their respective interests in such payment. The Administrative Agent will promptly after any such payment cause to be distributed like funds relating to the payment of principal or interest ratably (other than amounts payable pursuant to Section 2.02(c), 2.03, 2.06, 2.08(c), 2.10, 2.13, 2.16 or 8.05(b)) (according to the Lenders' respective Percentages) to the Lenders for the account of their respective Applicable Lending Offices, and like funds relating to the payment of any other amount payable to any Lender to such Lender for the account of its Applicable Lending Office, in each case to be applied in accordance with the terms of this Agreement. Upon its acceptance of an Assignment and Assumption and recording of the information contained therein in the Register pursuant to Section 8.08(c), from and after the effective date specified in such Assignment and Assumption, the Administrative Agent shall make all payments hereunder and under any Note in respect of the interest assigned thereby to the Lender assignee thereunder, and the parties to such Assignment and Assumption shall make all appropriate adjustments in such payments for periods prior to such effective date directly between themselves.

(b) The Borrower hereby authorizes each Lender, if and to the extent payment owed to such Lender is not made by the Borrower to the Administrative Agent when due hereunder or under any Note held by such Lender, to charge from time to time against any or all of the Borrower's accounts (other than any payroll account maintained by the Borrower with such Lender, if and to the extent that such Lender shall have expressly waived its set-off rights in writing in respect of such payroll account) with such Lender any amount so due.

(c) All computations of interest based on the Alternate Base Rate (based upon *The Wall Street Journal*'s published "prime rate") shall be made by the Administrative Agent on the basis of a year of 365 or 366 days, as the case may be, and all computations of interest based on the Alternate Base Rate (based upon the Federal Funds Rate or upon clause (iii) of the definition of Alternate Base Rate), the Eurodollar Rate or the Federal Funds Rate shall be made by the Administrative Agent, and all computations of interest pursuant to Section 2.06 shall be made by a Lender, on the basis of a year of 360 days, in each case for the actual number of days (including the first day but excluding the last day) occurring in the period for which such commitment fees or interest are payable. Each determination by the Administrative Agent (or, in the case of Section 2.06, by a Lender) of an interest rate hereunder shall be conclusive and binding for all purposes, absent manifest error.

(d) Whenever any payment hereunder or under any Note shall be stated to be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day, and such extension of time shall in such case be included in the computation of payment of interest; *provided, however*, if such extension would cause payment of interest on or principal of Eurodollar Rate Advances to be made in the next following calendar month, such payment shall be made on the next preceding Business Day.

(e) Unless the Administrative Agent shall have received notice from the Borrower prior to the date on which any payment is due to the Lenders hereunder that the Borrower will not make such payment in full, the Administrative Agent may assume that the Borrower has made such

payment in full to the Administrative Agent on such date and the Administrative Agent may, in reliance upon such assumption, cause to be distributed to each Lender on such due date an amount equal to the amount then due such Lender. If and to the extent that the Borrower shall not have so made such payment in full to the Administrative Agent, each Lender shall repay to the Administrative Agent forthwith on demand such amount distributed to such Lender together with interest thereon, for each day from the date such amount is distributed to such Lender until the date such Lender repays such amount to the Administrative Agent, at the Federal Funds Rate.

(f) The principal amount of any Advance (or any portion thereof) payable by the Borrower hereunder or under any Note that is not paid when due (whether at stated maturity, by acceleration or otherwise) shall (to the fullest extent permitted by law) bear interest from the date when due until paid in full at a rate *per annum* equal at all times to the rate otherwise applicable to such Advance *plus* 2% *per annum*, payable upon demand. Any other amount payable by the Borrower hereunder or under any Note that is not paid when due (whether at stated maturity, by acceleration or otherwise) shall (to the fullest extent permitted by law) bear interest from the date when due until paid in full at a rate *per annum* equal at all times to the rate of interest applicable to Alternate Base Rate Advances *plus* 2% *per annum*, payable upon demand.

(g) To the extent that any payment by or on behalf of the Borrower is made to the Administrative Agent or any Lender, or the Administrative Agent or any Lender exercises its right of setoff, and such payment or the proceeds of such setoff or any part thereof is subsequently invalidated, declared to be fraudulent or preferential, set aside or required (including pursuant to any settlement entered into by the Administrative Agent or such Lender in its discretion) to be repaid to a trustee, receiver or any other party, in connection with any proceeding under any bankruptcy, insolvency or other similar law now or hereafter in effect or otherwise, then (i) to the extent of such recovery, the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such setoff had not occurred, and (ii) each Lender severally agrees to pay to the Administrative Agent upon demand its applicable share (without duplication) of any amount so recovered from or repaid by the Administrative Agent, *plus* interest thereon from the date of such demand to the date such payment is made at a rate *per annum* equal to the Federal Funds Rate from time to time in effect. The obligations of the Lenders under clause (ii) of the preceding sentence shall survive the payment in full of any amounts hereunder and the termination of this Agreement.

SECTION 2.13. Taxes.

(a) ***Defined Terms***. For purposes of this Section 2.13, the term “Applicable Law” includes FATCA.

(b) ***Payments Free of Taxes.*** Any and all payments by or on account of any obligation of the Borrower under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by Applicable Law. If any Applicable Law (as determined in the good faith discretion of an applicable Withholding Agent) requires the deduction or withholding of any Tax from any such payment by a Withholding Agent, then the applicable Withholding Agent shall be entitled to make such deduction or withholding and shall timely pay the full amount deducted

or withheld to the relevant Governmental Authority in accordance with Applicable Law and, if such Tax is an Indemnified Tax, then the sum payable by the Borrower shall be increased as necessary so that after such deduction or withholding has been made (including such deductions and withholdings applicable to additional sums payable under this Section) the applicable Recipient receives an amount equal to the sum it would have received had no such deduction or withholding been made.

(c) ***Payment of Other Taxes by the Borrower.*** The Borrower shall timely pay to the relevant Governmental Authority in accordance with Applicable Law, or at the option of the Administrative Agent timely reimburse it for the payment of, any Other Taxes.

(d) ***Indemnification by the Borrower.*** The Borrower shall indemnify each Recipient, within 30 days after written demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient and any reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to the Borrower by a Lender (with a copy to the Administrative Agent), or by the Administrative Agent on its own behalf or on behalf of a Lender, shall be conclusive absent manifest error. The Borrower shall, and does hereby, indemnify the Administrative Agent, and shall make payment in respect thereof within 10 days after demand therefor, for any amount which a Lender for any reason fails to pay indefeasibly to the Administrative Agent as required pursuant to Section 2.13(e) below.

(e) ***Indemnification by the Lenders.*** Each Lender shall severally indemnify the Administrative Agent, within 30 days after demand therefor, for (i) any Indemnified Taxes attributable to such Lender (but only to the extent that the Borrower has not already indemnified the Administrative Agent for such Indemnified Taxes and without limiting the obligation of the Borrower to do so), (ii) any Taxes attributable to such Lender's failure to comply with the provisions of Section 8.08(d) relating to the maintenance of a Participant Register and (iii) any Excluded Taxes attributable to such Lender, in each case, that are payable or paid by the Administrative Agent in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to any Lender by the Administrative Agent shall be conclusive absent manifest error. Each Lender hereby authorizes the Administrative Agent to set off and apply any and all amounts at any time owing to such Lender under any Loan Document or otherwise payable by the Administrative Agent to the Lender from any other source against any amount due to the Administrative Agent under this subsection (e), including any such amount that had been so due to the Administrative Agent pursuant to the foregoing clause (ii) or clause (iii) (including any reasonable expenses arising therefrom or with respect thereto as provided above) but was paid by the Borrower pursuant to the last sentence of subsection (d) above, in which case the Administrative Agent may effect such set off and application for the benefit of the Borrower to the extent of the aggregate of such amounts paid by the Borrower and the proceeds of such set off and application (if any) shall be promptly remitted to the Borrower in immediately available funds by the Administrative Agent.

(f) ***Evidence of Payments.*** As soon as practicable after any payment of Taxes by the Borrower to a Governmental Authority pursuant to this Section 2.13, the Borrower shall deliver to the Administrative Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of the return reporting such payment or other evidence of such payment reasonably satisfactory to the Administrative Agent.

(g) ***Status of Lenders.*** (i) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to the Borrower and the Administrative Agent, at the time or times reasonably requested by the Borrower or the Administrative Agent, such properly completed and executed documentation reasonably requested by the Borrower or the Administrative Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by the Borrower or the Administrative Agent, shall deliver such other documentation prescribed by Applicable Law or reasonably requested by the Borrower or the Administrative Agent as will enable the Borrower or the Administrative Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation set forth in Section 2.13(g)(ii)(A), (ii)(B) and (ii)(D) below) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.

(ii) Without limiting the generality of the foregoing, in the event that the Borrower is a U.S. Person,

(A) any Lender that is a U.S. Person shall deliver to the Borrower and the Administrative Agent on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), executed originals of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

(B) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), whichever of the following is applicable:

(i) in the case of a Foreign Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed originals of IRS Form W-8BEN-E establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN-E establishing an

exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

(ii) executed originals of IRS Form W-8ECI;

(iii) in the case of a Foreign Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Code, (x) a certificate substantially in the form of Exhibit D-1 to the effect that such Foreign Lender is not a "bank" within the meaning of Section 881(c)(3)(A) of the Code, a "10 percent shareholder" of the Borrower within the meaning of Section 881(c)(3)(B) of the Code, or a "controlled foreign corporation" described in Section 881(c)(3)(C) of the Code (a "***U.S. Tax Compliance Certificate***") and (y) executed originals of IRS Form W-8BEN-E; or

(iv) to the extent a Foreign Lender is not the beneficial owner, executed originals of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN-E, a U.S. Tax Compliance Certificate substantially in the form of Exhibit D-2 or Exhibit D-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; *provided* that if the Foreign Lender is a partnership and one or more direct or indirect partners of such Foreign Lender are claiming the portfolio interest exemption, such Foreign Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit D-4 on behalf of each such direct and indirect partner;

(C) any Foreign Lender shall, to the extent it is legally entitled to do so, deliver to the Borrower and the Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Foreign Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Borrower or the Administrative Agent), executed originals of any other form prescribed by Applicable Law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by Applicable Law to permit the Borrower or the Administrative Agent to determine the withholding or deduction required to be made; and

(D) if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender shall deliver to the Borrower and the Administrative Agent at the time or times prescribed by law and at such time or times reasonably requested by the Borrower or the Administrative Agent such documentation prescribed by Applicable Law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and such additional documentation reasonably requested by the Borrower or the Administrative Agent as may be necessary for the Borrower and the Administrative Agent to comply with

their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (D), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

Each Lender agrees that if any form or certification it previously delivered expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify the Borrower and the Administrative Agent in writing of its legal inability to do so.

(h) ***Treatment of Certain Refunds.*** If any party determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified pursuant to this Section 2.13 (including by the payment of additional amounts pursuant to this Section 2.13), it shall pay to the indemnifying party an amount equal to such refund (but only to the extent of indemnity payments made under this Section with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) of such indemnified party and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund). Such indemnifying party, upon the request of such indemnified party, shall repay to such indemnified party the amount paid over pursuant to this subsection (h) (*plus* any penalties, interest or other charges imposed by the relevant Governmental Authority) in the event that such indemnified party is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this subsection (h), in no event will the indemnified party be required to pay any amount to an indemnifying party pursuant to this subsection (h) the payment of which would place the indemnified party in a less favorable net after-Tax position than the indemnified party would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This subsection shall not be construed to require any indemnified party to make available its Tax returns (or any other information relating to its Taxes that it deems confidential) to the indemnifying party or any other Person.

(i) ***Survival.*** Each party's obligations under this Section 2.13 shall survive the resignation or replacement of the Administrative Agent or any assignment of rights by, or the replacement of, a Lender, the termination of this Agreement and the repayment, satisfaction or discharge of all obligations under any Loan Document.

SECTION 2.14. Sharing of Payments, Etc.

(a) If any Lender shall obtain any payment (whether voluntary, involuntary, through the exercise of any right of set-off, or otherwise) on account of the Advances made by it (other than pursuant to Section 2.02(c), 2.03, 2.06, 2.08(c), 2.10, 2.13, 2.16 or 8.05(b)) in excess of its ratable share of payments on account of the Advances obtained by all the Lenders, such Lender shall forthwith purchase from the other Lenders such participations in the Advances made by them as shall be necessary to cause such purchasing Lender to share the excess payment ratably with each of them; *provided, however*, that if all or any portion of such excess payment is thereafter recovered from such purchasing Lender, such purchase from each Lender shall be rescinded and such Lender shall repay to the purchasing Lender the purchase price to the extent of such recovery together with

an amount equal to such Lender's ratable share (according to the proportion of (a) the amount of such Lender's required repayment to (b) the total amount so recovered from the purchasing Lender) of any interest or other amount paid or payable by the purchasing Lender in respect of the total amount so recovered. The Borrower agrees that any Lender so purchasing a participation from another Lender pursuant to this Section 2.14(a) may, to the fullest extent permitted by law, exercise all its rights of payment (including the right of set-off) with respect to such participation as fully as if such Lender were the direct creditor of the Borrower in the amount of such participation.

(b) If any Lender shall fail to make any payment required to be made by it pursuant to Section 2.02(c) or 7.06, then the Administrative Agent may, in its discretion and notwithstanding any contrary provision hereof, (i) apply any amounts thereafter received by the Administrative Agent for the account of such Lender for the benefit of the Administrative Agent to satisfy such Lender's obligations to it under such Section until all such unsatisfied obligations are fully paid, and/or (ii) hold any such amounts in a segregated account as cash collateral for, and application to, any future funding obligations of such Lender under any such Section, in the case of each of clauses (i) and (ii) above, in any order as determined by the Administrative Agent in its discretion.

SECTION 2.15. Noteless Agreement; Evidence of Indebtedness.

(a) Each Lender shall maintain in accordance with its usual practice an account or accounts evidencing the indebtedness of the Borrower to such Lender resulting from each Advance made by such Lender from time to time, including the amounts of principal and interest payable and paid to such Lender from time to time hereunder.

(b) The Administrative Agent shall also maintain accounts in which it will record (i) the amount of each Advance made hereunder, the Type thereof and the Interest Period (if any) with respect thereto, (ii) the amount of any principal or interest due and payable or to become due and payable from the Borrower to each Lender hereunder, and (iii) the amount of any sum received by the Administrative Agent hereunder from the Borrower and each Lender's share thereof.

(c) Subject to Section 8.08(c), the entries maintained in the accounts maintained pursuant to subsections (a) and (b) above shall be prima facie evidence of the existence and amounts of the obligations therein recorded; *provided*, *however*, that the failure of the Administrative Agent or any Lender to maintain such accounts or any error therein shall not in any manner affect the obligation of the Borrower to repay such obligations in accordance with their terms.

(d) Any Lender may request that its Advances be evidenced by a Note. In such event, the Borrower shall prepare, execute and deliver to such Lender a Note payable to such Lender and its registered assigns. Thereafter, the Advances evidenced by such Note and interest thereon shall at all times (including after any assignment pursuant to Section 8.08(b)) be represented by one or more Notes payable to the payee named therein, or to its registered assigns pursuant to Section 8.08(b), except to the extent that any such Lender or assignee subsequently returns any such Note for cancellation and requests that such Advances once again be evidenced as described in subsections (a) and (b) above.

SECTION 2.16. Defaulting Lenders.

(a) ***Defaulting Lender Adjustments***. Notwithstanding anything to the contrary contained in this Agreement, if any Lender becomes a Defaulting Lender, then, until such time as such Lender is no longer a Defaulting Lender, to the extent permitted by Applicable Law:

(i) ***Waivers and Amendments***. Such Defaulting Lender's right to approve or disapprove any amendment, waiver or consent with respect to this Agreement shall be restricted as set forth in the definition of Majority Lenders and in Section 8.01.

(ii) ***Defaulting Lender Waterfall***. Any payment of principal, interest, fees or other amounts received by the Administrative Agent for the account of such Defaulting Lender (whether voluntary or mandatory, at maturity, pursuant to Article VI or otherwise) shall be applied at such time or times as may be determined by the Administrative Agent as follows: *first*, to the payment of any amounts owing by such Defaulting Lender to the Administrative Agent hereunder; *second*, as the Borrower may request (so long as no Unmatured Default or Event of Default exists), to the funding of any Advance in respect of which such Defaulting Lender has failed to fund its portion thereof as required by this Agreement, as determined by the Administrative Agent; *third*, to the payment of any amounts owing to the Lenders as a result of any judgment of a court of competent jurisdiction obtained by any Lender against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations under this Agreement; *fourth*, so long as no Unmatured Default or Event of Default exists, to the payment of any amounts owing to the Borrower as a result of any judgment of a court of competent jurisdiction obtained by the Borrower against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations under this Agreement; and *fifth*, to such Defaulting Lender or as otherwise directed by a court of competent jurisdiction; *provided* that, if (x) such payment is a payment of the principal amount of any Advances in respect of which such Defaulting Lender has not fully funded its appropriate share, and (y) such Advances were made at a time when the conditions set forth in Section 3.01 were satisfied or waived, such payment shall be applied solely to pay the Advances of all non-Defaulting Lenders on a pro rata basis prior to being applied to the payment of any Advances of such Defaulting Lender until such time as all Advances are held by the Lenders pro rata in accordance with the Commitments. Any payments, prepayments or other amounts paid or payable to a Defaulting Lender that are applied (or held) to pay amounts owed by a Defaulting Lender pursuant to this Section 2.16(a)(ii) shall be deemed paid to and redirected by such Defaulting Lender, and each Lender irrevocably consents hereto.

(b) ***Defaulting Lender Cure***. If the Borrower and the Administrative Agent agree in writing that a Lender is no longer a Defaulting Lender, the Administrative Agent will so notify the parties hereto, whereupon as of the effective date specified in such notice and subject to any conditions set forth therein, such Lender will cease to be a Defaulting Lender; *provided* that no adjustments will be made retroactively with respect to payments made by or on behalf of the

Borrower while that Lender was a Defaulting Lender; and *provided*, *further*, that except to the extent otherwise expressly agreed in writing by the affected parties, no change hereunder from Defaulting Lender to Lender will constitute a waiver or release of any claim of any party hereunder arising from that Lender's having been a Defaulting Lender.

SECTION 2.17. Mitigation Obligations; Replacement of Lenders.

(a) ***Designation of a Different Lending Office.***

(i) If any Lender requests compensation under Section 2.10, or requires the Borrower to pay any Indemnified Taxes or additional amounts to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.13, then such Lender shall (at the request of the Borrower) use reasonable efforts to designate a different Applicable Lending Office for funding or booking its Advances hereunder or to assign its rights and obligations hereunder to another of its offices, branches or Affiliates, if, in the judgment of such Lender, such designation or assignment (i) would eliminate or reduce amounts payable pursuant to Section 2.10 or 2.13, as the case may be, in the future, and (ii) would not subject such Lender to any unreimbursed cost or expense and would not otherwise be disadvantageous to such Lender.

(ii) Any Lender that becomes aware of circumstances that would permit such Lender to notify the Administrative Agent of any illegality under Section 2.11 shall use its commercially reasonable efforts (consistent with its internal policy and legal and regulatory restrictions) to change the jurisdiction of its Applicable Lending Office if the making of such change would avoid or eliminate such illegality and would not, in the reasonable judgment of such Lender, be otherwise disadvantageous to such Lender.

(iii) The Borrower hereby agrees to pay all reasonable costs and expenses incurred by any Lender in connection with any such designation or assignment.

(b) ***Replacement of Lenders.*** If any Lender requests compensation under Section 2.10 or delivers any notice to the Administrative Agent pursuant to Section 2.11 resulting in the suspension of obligations of the Lenders with respect to Eurodollar Rate Advances, or if the Borrower is required to pay any Indemnified Taxes or additional amounts to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 2.13, and, in each case, such Lender has declined or is unable to designate a different Applicable Lending Office in accordance with Section 2.17 (a), or if any Lender is a Defaulting Lender or a Non-Consenting Lender, then the Borrower may, at its sole expense and effort, upon notice to such Lender and the Administrative Agent, require such Lender to assign and delegate, without recourse (in accordance with and subject to the restrictions contained in, and consents required by, Section 8.08(b)), all of its interests and rights (other than its existing rights to payments pursuant to Section 2.10, 2.11 or Section 2.13) under this Agreement and the related Loan Documents to an Eligible Assignee (which assignee may be another Lender, if a Lender accepts such assignment); *provided* that:

(i) the Borrower shall have paid to the Administrative Agent the assignment fee (if any) specified in Section 8.08(b);

(ii) such Lender shall have received payment of an amount equal to the outstanding principal amount of its Advances, accrued interest thereon and all other amounts payable to it hereunder and under the other Loan Documents (including any amounts under Section 8.05(b)) from the assignee (to the extent of such outstanding principal and accrued interest) or the Borrower (in the case of all other amounts);

(iii) in the case of any such assignment resulting from a claim for compensation under Section 2.10 or payments required to be made pursuant to Section 2.13, such assignment will result in a reduction in such compensation or payments thereafter;

(iv) such assignment does not conflict with Applicable Law; and

(v) in the case of any assignment resulting from a Lender becoming a Non-Consenting Lender, the applicable assignee shall have consented to the applicable amendment, waiver or consent.

A Lender shall not be required to make any such assignment or delegation if, prior thereto, as a result of a waiver by such Lender or otherwise, the circumstances entitling the Borrower to require such assignment and delegation cease to apply.

ARTICLE III
CONDITIONS OF LENDING

SECTION 3.01. Conditions Precedent to Effectiveness and Advances.

The obligation of each Lender to make its Advances in connection with the Borrowings on the Closing Date are subject to the conditions precedent (or waiver thereof in accordance with Section 8.01) that on or before the date of any such Borrowings:

(a) The Administrative Agent shall have received the following, each dated the same date (except for the financial statements referred to in paragraph (iv)), in form and substance satisfactory to the Administrative Agent:

(i) This Agreement, duly executed by each of the parties hereto, and Notes requested by any Lender pursuant to Section 2.15(d), duly completed and executed by the Borrower and payable to such Lender;

(ii) Certified copies of the resolutions of the Board of Directors of the Borrower approving this Agreement and the other Loan Documents to which it is, or is to be, a party and of all documents evidencing any other necessary corporate action with respect to this Agreement and such Loan Documents;

(iii) A certificate of the Secretary or an Assistant Secretary of the Borrower certifying (A) the names and true signatures of the officers of the Borrower authorized to sign each Loan Document to which the Borrower is, or is to become, a party and the other documents to be delivered hereunder; (B) that attached thereto are true and correct copies of the Organizational Documents of the Borrower, in each case as in effect on such date, and (C) that there is no Governmental Action required for the due execution, delivery and performance by the Borrower of this Agreement and each other Loan Document to which the Borrower is, or is to become, a party;

(iv) Copies of all the Disclosure Documents (it being agreed that those Disclosure Documents publicly available on the SEC's EDGAR Database or on FE's website no later than the Business Day immediately preceding the date of such Borrowings will be deemed to have been delivered under this clause (iv));

(v) [Reserved];

(vi) An opinion of Jones Day, special counsel for the Borrower; and

(vii) Such other certifications, opinions, financial or other information, approvals and documents as the Administrative Agent or any Lender may have reasonably requested at least one Business Day prior to the Closing Date, all in form and substance satisfactory to the Administrative Agent or such Lender (as the case may be).

(b) The Administrative Agent and each Lender shall have received a Beneficial Ownership Certification in relation to the Borrower to the extent the Borrower qualifies as a "legal entity customer" under the Beneficial Ownership Regulation.

(c) The Borrower shall have paid all of the fees payable in accordance with the Fee Letters.

(d) Prior to or concurrently with the effectiveness of this Agreement and the making of Borrowings on the Closing Date, the aggregate Commitments (as defined in the FE Revolving Credit Agreement) under the FE Revolving Credit Agreement shall have been permanently reduced to an amount not exceeding $2,500,000,000.

(e) The Administrative Agent shall have received all documentation and information required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including, without limitation, the Patriot Act and the Beneficial Ownership Regulation, to the extent such documentation or information is requested by the Administrative Agent on behalf of the Lenders prior to the date hereof.

(f) The following statements shall be true (and the giving of the Notice of Borrowing and the acceptance by the Borrower of the proceeds of any such Borrowings shall constitute a representation and warranty by the Borrower that on the date of such Borrowings such statements are true):

(A) The representations and warranties of the Borrower contained in Section 4.01 hereof are true and correct on and as of the date of such Borrowings, before and after giving effect to such Borrowings and to the application of the proceeds therefrom, as though made on and as of such date (other than as to any such representation or warranty that by its terms refers to a specific date other than the date of such Borrowings, in which case, such representation and warranty is true and correct as of such specific date); and

(B) No event has occurred and is continuing, or would result from such Borrowings or from the application of the proceeds therefrom, that constitutes an Event of Default or an Unmatured Default.

ARTICLE IV
REPRESENTATIONS AND WARRANTIES

SECTION 4.01. Representations and Warranties of the Borrower.

The Borrower represents and warrants as follows:

(a) ***Existence and Power***. It is a corporation duly formed, validly existing and in good standing under the laws of the State of Ohio, is duly qualified to do business as a foreign corporation in and is in good standing under the laws of each state in which the ownership of its properties or the conduct of its business makes such qualification necessary, except where the failure to be so qualified would not reasonably be expected to have a Material Adverse Effect, and has all corporate powers and all governmental licenses, authorizations, consents and approvals required to carry on its business as now conducted except where the failure to do so, in each case, would not reasonably be expected to have a Material Adverse Effect.

(b) ***Due Authorization***. The execution, delivery and performance by it of each Loan Document to which it is, or is to become, a party, have been duly authorized by all necessary corporate action on its part and do not, and will not, require the consent or approval of its shareholders, other than such consents and approvals as have been duly obtained, given or accomplished.

(c) ***No Violation, Etc.*** Neither the execution, delivery or performance by it of this Agreement or any other Loan Document to which it is, or is to become, a party, nor the consummation by it of the transactions contemplated hereby or thereby, nor compliance by it with the provisions hereof or thereof, contravenes or will contravene, or results or will result in a breach of, any of the provisions of its Organizational Documents, any Applicable Law, or any indenture, mortgage, deed of trust, lease, license or any other agreement or instrument to which it or any of its Subsidiaries is party or by which its property or the property of any of its Subsidiaries is bound, or results or will result in the creation or imposition of any Lien upon any of its property or the property of any of its Subsidiaries except as provided herein, except to the extent such contravention or breach, or the creation or imposition of any such Lien, individually or in the aggregate, has not had and would not reasonably be expected to have a Material Adverse Effect. The Borrower and each of its Subsidiaries is in compliance with all laws (including, without limitation, ERISA and Environmental

Laws), regulations and orders of any Governmental Authority applicable to it or its property and all indentures, agreements and other instruments binding upon it or its property, except where the failure to do so, individually or in the aggregate, has not had and would not reasonably be expected to have a Material Adverse Effect.

(d) ***Governmental Actions***. No Governmental Action is or will be required in connection with the execution, delivery or performance by it, or the consummation by it of the transactions contemplated by this Agreement or any other Loan Document to which it is, or is to become, a party.

(e) ***Execution and Delivery***. This Agreement and the other Loan Documents to which it is, or is to become, a party have been or will be (as the case may be) duly executed and delivered by it, and this Agreement is, and upon execution and delivery thereof each other Loan Document will be, the legal, valid and binding obligation of it enforceable against it in accordance with its terms, *subject, however*, to the application by a court of general principles of equity and to the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally.

(f) ***Litigation***. Except as disclosed in the Disclosure Documents, there is no pending or, to the Borrower's knowledge, threatened action or proceeding (including, without limitation, any proceeding relating to or arising out of Environmental Laws) affecting the Borrower or any of its Subsidiaries before any court, governmental agency or arbitrator that would reasonably be expected to have a Material Adverse Effect.

(g) ***Financial Statements; Material Adverse Change***. The consolidated balance sheets of the Borrower and its Subsidiaries, as at December 31, 2017, and the related consolidated statements of income, retained earnings and cash flows of the Borrower and its Subsidiaries, certified by PricewaterhouseCoopers LLP, independent public accountants, and the unaudited consolidated balance sheet of the Borrower and its Subsidiaries, as at June 30, 2018, and the related consolidated statements of income, retained earnings and cash flows of the Borrower and its Subsidiaries, for the six months then ended, copies of which have been furnished to each Lender, in all cases as amended and restated to the date hereof, present fairly in all material respects the consolidated financial position of the Borrower and its Subsidiaries as at the indicated dates and the consolidated results of the operations of the Borrower and its Subsidiaries for the periods ended on the indicated dates, all in accordance with GAAP consistently applied (in the case of such statements that are unaudited, subject to year-end adjustments and the exclusion of detailed footnotes). Except as disclosed in the Disclosure Documents, there has been no change, event or occurrence since December 31, 2017 that has had a Material Adverse Effect.

(h) ***ERISA***. Except as would not reasonably be expected to have a Material Adverse Effect:

(i) No Termination Event has occurred or is reasonably expected to occur with respect to any Plan.

(ii) Schedule SB (Actuarial Information) to the most recent annual report (Form 5500 Series) with respect to each Plan, copies of which have been filed with the Department of Labor and furnished (or made available) to the Lenders, (A) is complete and accurate, (B) fairly presents the funding status of such Plan, and (C) since the date of such Schedule SB there has been no change in such funding status.

(iii) Neither the Borrower nor any member of the Controlled Group has incurred or reasonably expects to incur any withdrawal liability under ERISA to any Multiemployer Plan.

(i) ***Margin Stock***. After applying the proceeds of each Borrowing, not more than 25% of the value of the assets of the Borrower and its Subsidiaries subject to the restrictions of Section 5.03(a) or (b) will consist of or be represented by Margin Stock. The Borrower is not engaged in the business of extending credit for the purpose of purchasing or carrying Margin Stock, and no proceeds of any Borrowing will be used to purchase or carry any Margin Stock or to extend credit to others for the purpose of purchasing or carrying any Margin Stock.

(j) ***Investment Company***. The Borrower is not an "investment company" or a company "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

(k) ***No Event of Default***. No event has occurred and is continuing that constitutes an Event of Default or an Unmatured Default.

(l) ***Anti-Corruption Laws and Sanctions***. The Borrower has implemented and maintains in effect policies and procedures reasonably designed to ensure compliance with Anti-Corruption Laws and Sanctions in all material respects by the Covered Entities and their respective directors, officers, employees and, to the extent commercially reasonable, agents under the control and acting on behalf of the Covered Entities. The Covered Entities are in compliance in all material respects with (i) the Trading with the Enemy Act, as amended, and each of the regulations promulgated by OFAC (31 CFR, Subtitle B, Chapter V, as amended) and any other enabling legislation or executive order relating thereto, and (ii) the Patriot Act. The Covered Entities and their respective officers and employees and, to the knowledge of the Borrower, the Covered Entities' directors and agents, are in compliance with Anti-Corruption Laws and applicable Sanctions in all material respects. None of the Covered Entities or any of their respective directors, officers or employees or, to the knowledge of the Borrower, any agent of the Covered Entities (i) is a Sanctioned Person, (ii) has assets located in Sanctioned Countries in violation of applicable Sanctions, (iii) does business in or with, or derives its operating income from investments in, or transactions with, Sanctioned Persons or (iv) does unauthorized business in or with, or derives its operating income from unauthorized investments in, or transactions with, Sanctioned Countries. No Borrowing or use of proceeds thereof will violate Anti-Corruption Laws or applicable Sanctions.

(m) ***No Material Misstatements.*** The reports, financial statements and other written information furnished by or on behalf of the Borrower to the Administrative Agent or any Lender pursuant to or in connection with the Loan Documents and the transactions contemplated thereby, when taken together with the Disclosure Documents, do not contain and will not contain, when

taken as a whole, any untrue statement of a material fact and do not omit and will not omit, when taken as a whole, to state any fact necessary to make the statements therein, in the light of the circumstances under which they were or will be made, not misleading in any material respect.

(n) ***EEA Financial Institution***. The Borrower is not an EEA Financial Institution.

(o) ***Beneficial Ownership***. As of the Closing Date, the information included in the Beneficial Ownership Certification delivered by the Borrower to the Administrative Agent on or before the Closing Date is true and correct in all respects.

ARTICLE V
COVENANTS OF THE BORROWER

SECTION 5.01. Affirmative Covenants of the Borrower.

Unless the Majority Lenders shall otherwise consent in writing, so long as any amount payable by the Borrower hereunder shall remain unpaid or any Lender shall have any Commitment hereunder, the Borrower will:

(a) ***Preservation of Corporate Existence, Etc.*** (i) Without limiting the right of the Borrower to merge with or into or consolidate with or into any other corporation or entity in accordance with the provisions of Section 5.03(c) hereof, preserve and maintain its corporate existence under the laws of a State of the United States or the District of Columbia, (ii) qualify and remain qualified as a foreign corporation in each jurisdiction in which such qualification is reasonably necessary in view of its business and operations or the ownership of its properties and (iii) preserve, renew and keep in full force and effect the rights, privileges and franchises necessary or desirable in the normal conduct of its business, except, in the case of clauses (ii) and (iii) above, to the extent that failure to do so would not reasonably be expected to result in a Material Adverse Effect.

(b) ***Compliance with Laws, Etc.*** Comply, and cause each of its Subsidiaries to comply, in all material respects with all applicable laws, rules, regulations, and orders of any Governmental Authority, the noncompliance with which would not reasonably be expected to result in a Material Adverse Effect, such compliance to include, without limitation, compliance with the Patriot Act, regulations promulgated by OFAC, Environmental Laws and ERISA and paying before the same become delinquent all material taxes, assessments and governmental charges imposed upon it or upon its property, except to the extent compliance with any of the foregoing is then being contested in good faith by appropriate legal proceedings.

(c) ***Maintenance of Insurance, Etc.*** Maintain, and cause its Subsidiaries to maintain, insurance with responsible and reputable insurance companies or associations or through its own program of self-insurance in such amounts and covering such risks as is usually carried by companies engaged in similar businesses and owning similar properties in the same general areas in which the Borrower and its Subsidiaries operate.

(d) ***Inspection Rights***. At any reasonable time and from time to time as the Administrative Agent or any Lender may reasonably request (upon five Business Days' prior notice delivered to the Borrower and no more than once a year, unless an Event of Default has occurred and is continuing), permit the Administrative Agent or such Lender or any agents or representatives thereof to examine and make copies of and abstracts from the records and books of account of, and visit the properties of, the Borrower and any of its Subsidiaries, and to discuss the affairs, finances and accounts of the Borrower and any of its Subsidiaries with any of their respective senior executives or officers; *provided, however,* that (x) the Borrower reserves the right to restrict access to any of its Subsidiaries' facilities in accordance with reasonably adopted procedures relating to safety and security and (y) neither the Borrower nor any of its Subsidiaries shall be required to disclose to the Administrative Agent or any Lender or any agents or representatives thereof any information that is the subject of attorney-client privilege or attorney work-product privilege properly asserted by the applicable Person to prevent the loss of such privilege in connection with such information or that is prevented from disclosure pursuant to a confidentiality agreement with third parties (*provided* that the Borrower agrees to use commercially reasonable efforts to obtain any required third-party consent to such disclosure, subject to customary nondisclosure restrictions applicable to the Administrative Agent or the Lenders, as applicable). The Administrative Agent and each Lender agree to use reasonable efforts to ensure that any information concerning the Borrower or any of its Subsidiaries obtained by the Administrative Agent or such Lender pursuant to this subsection (d) or subsection (g) below that is not contained in a report or other document filed with the SEC, distributed by the Borrower to its security holders or otherwise generally available to the public, will, to the extent permitted by law and except as may be required by valid subpoena or in the normal course of the Administrative Agent's or such Lender's business operations be treated confidentially by the Administrative Agent or such Lender, as the case may be, and will not be distributed or otherwise made available by the Administrative Agent or such Lender, as the case may be, to any Person, other than the Administrative Agent's or such Lender's employees, authorized agents or representatives (including, without limitation, attorneys and accountants).

(e) ***Keeping of Books***. Keep, and cause each of its Subsidiaries to keep, proper books of record and account in which entries shall be made of all financial transactions and the assets and business of the Borrower and each of its Subsidiaries, in each case, in accordance with GAAP.

(f) ***Maintenance of Properties***. Maintain and preserve, and cause each of its Subsidiaries to maintain and preserve, all of its properties (except such properties the failure of which to maintain or preserve would not have, individually or in the aggregate, a Material Adverse Effect) that are used or that are useful in the conduct of its business in good working order and condition, ordinary wear and tear excepted, and in accordance with prudent industry practices applicable to the industry of the Borrower, in all material respects, and (subject to subsection (b) above) Applicable Law it being understood that this covenant relates only to the good working order and condition of such properties and shall not be construed as a covenant of the Borrower or any of its Subsidiaries not to dispose of such properties by sale, lease, transfer or otherwise.

(g) ***Reporting Requirements***. Furnish, or cause to be furnished, to the Administrative Agent, with sufficient copies for each Lender, the following:

(i) promptly after becoming aware of the occurrence of any Event of Default continuing on the date of such statement, the statement of an Authorized Officer of the Borrower setting forth details of such Event of Default and the action that the Borrower has taken or proposes to take with respect thereto;

(ii) as soon as available and in any event within 60 days after the close of each of the first three quarters in each fiscal year of the Borrower, consolidated balance sheets of the Borrower and its Subsidiaries as at the end of such quarter and consolidated statements of income of the Borrower and its Subsidiaries for the period commencing at the end of the previous fiscal year and ending with the end of such quarter, fairly presenting in all material respects the financial condition of the Borrower and its Subsidiaries as at such date and the results of operations of the Borrower and its Subsidiaries for such period and setting forth in each case in comparative form the corresponding figures for the corresponding period of the preceding fiscal year, all in reasonable detail and duly certified (subject to year-end audit adjustments) by the chief financial officer, treasurer, assistant treasurer or controller of the Borrower as having been prepared in accordance with GAAP consistently applied (in the case of such statements that are unaudited, subject to year-end adjustments and the exclusion of detailed footnotes);

(iii) as soon as available and in any event within 105 days after the end of each fiscal year of the Borrower, a copy of the annual report for such year for the Borrower and its Subsidiaries, containing consolidated and consolidating financial statements of the Borrower and its Subsidiaries for such year certified by PricewaterhouseCoopers LLP or other independent public accountants of recognized national standing as fairly presenting, in all material respects, the financial position of the Borrower and its Subsidiaries as at the end of such year and the results of their operations and their cash flows for the three-year period ending as at the end of such year in conformity with GAAP;

(iv) concurrently with the delivery of the financial statements specified in clauses (ii) and (iii) above a certificate of the chief financial officer, treasurer, assistant treasurer or controller of the Borrower (A) stating whether the Borrower has any knowledge of the occurrence and continuance at the date of such certificate of any Event of Default not theretofore reported pursuant to the provisions of clause (i) of this subsection (g), and, if so, stating the facts with respect thereto, and (B) setting forth in a true and correct manner, the calculation of the ratio contemplated by Section 5.02 hereof, as of the date of the most recent financial statements accompanying such certificate, to show the Borrower's compliance with or the status of the financial covenant contained in Section 5.02 hereof;

(v) promptly after the sending or filing thereof, copies of any reports that the Borrower sends to any of its securityholders, and copies of all reports on Form 10-K, Form 10-Q or Form 8-K, if any, that the Borrower or any of its Subsidiaries files with the SEC;

(vi) as soon as possible and in any event within 20 days after the Borrower or any member of the Controlled Group knows or has reason to know that any Termination Event with respect to any Plan has occurred or is reasonably likely to occur, that would reasonably be expected to result in liability exceeding $100,000,000 to the Borrower or such

member of the Controlled Group, a statement of the chief financial officer of the Borrower describing such Termination Event and the action, if any, that the Borrower or such member of the Controlled Group, as the case may be, proposes to take with respect thereto;

(vii) promptly upon reasonable request by the Administrative Agent or any Lender, after the filing thereof with the Department of Labor, copies of each Schedule SB (Actuarial Information) to the annual report (Form 5500 Series) with respect to each Plan;

(viii) promptly upon request and in any event within five Business Days after receipt thereof by the Borrower or any member of the Controlled Group from a Multiemployer Plan sponsor, a copy of each notice received by the Borrower or such member of the Controlled Group concerning the imposition of withdrawal liability pursuant to Section 4202 of ERISA;

(ix) promptly and in any event within five Business Days after Moody's or S&P has changed any relevant Reference Rating, notice of such change;

(x) promptly upon the occurrence of a Reportable Compliance Event, notice of such occurrence;

(xi) promptly after the Borrower becomes aware of any change in the information provided in a Beneficial Ownership Certification that would result in a change to the list of beneficial owners identified in parts (c) or (d) of such certification, a written notice specifying any such change; and

(xii) such other information respecting the condition or operations, financial or otherwise, of the Borrower or any of its Subsidiaries, including, without limitation, copies of all reports and registration statements that the Borrower or any Subsidiary files with the SEC or any national securities exchange, as the Administrative Agent or any Lender (through the Administrative Agent) may from time to time reasonably request.

The financial statements and reports described in paragraphs (ii), (iii) and (v) above will be deemed to have been delivered hereunder if publicly available on the SEC's EDGAR Database or on FE's website no later than the date specified for delivery of same under paragraph (ii), (iii) or (v), as applicable, above; *provided*, that the Borrower shall deliver paper copies of such documents to the Administrative Agent or any Lender upon its request to the Borrower to deliver such paper copies until a written request to cease delivering paper copies is given by the Administrative Agent or such Lender. The Administrative Agent shall have no obligation to request the delivery of or to maintain paper copies of the documents referred to above, and in any event shall have no responsibility to monitor compliance by the Borrower with any such request by a Lender for delivery, and each Lender shall be solely responsible for requesting delivery to it or maintaining its copies of such documents. If any financial statements or report described in paragraph (ii), (iii) or (v) above is due on a date that is not a Business Day, then such financial statements or report shall be delivered on the next succeeding Business Day.

The Borrower hereby acknowledges that (A) the Administrative Agent may, but shall not be obligated to, make available to the Lenders materials and/or information provided by or on behalf of the Borrower hereunder (collectively, "***Borrower Materials***") by posting the Borrower Materials on Debtdomain, IntraLinks, SyndTrak, ClearPar, or a substantially similar electronic transmission system (the "***Platform***") and (B) certain of the Lenders (each, a "***Public Lender***") may have personnel who do not wish to receive material non-public information with respect to the Borrower or its Affiliates, or the respective securities of any of the foregoing, and who may be engaged in investment and other market-related activities with respect to such Persons' securities. The Borrower hereby agrees that (w) all Borrower Materials that are to be made available to Public Lenders shall be clearly and conspicuously marked "PUBLIC" which, at a minimum, shall mean that the word "PUBLIC" shall appear prominently on the first page thereof; (x) by marking Borrower Materials "PUBLIC," the Borrower shall be deemed to have authorized the Administrative Agent and the Lenders to treat such Borrower Materials as not containing any material non-public information with respect to the Borrower or its securities for purposes of United States Federal and state securities laws; (y) all Borrower Materials marked "PUBLIC" are permitted to be made available through a portion of the Platform designated "Public Side Information;" and (z) the Administrative Agent shall be entitled to treat any Borrower Materials that are not marked "PUBLIC" as being suitable only for posting on a portion of the Platform not designated "Public Side Information.

(h) ***Compliance with Anti-Corruption Laws and Sanctions***. (i) Maintain in effect and enforce, and cause the other Covered Entities to maintain in effect and enforce, policies and procedures reasonably designed to ensure compliance with Anti-Corruption Laws and applicable Sanctions in all material respects by the Covered Entities and their respective directors, officers, employees and, to the extent commercially reasonable, agents under the control and acting on behalf of the Covered Entities, and (ii) comply, and cause the other Covered Entities to comply, in all material respects with Anti-Corruption Laws and Sanctions applicable to it or its property.

SECTION 5.02. Financial Covenant.

Unless the Majority Lenders shall otherwise consent in writing, so long as any amount payable by the Borrower hereunder shall remain unpaid or any Lender shall have any Commitment hereunder, the Borrower will maintain a Debt to Capitalization Ratio of no more than 0.65 to 1.00 (determined as of the last day of each fiscal quarter).

SECTION 5.03. Negative Covenants of the Borrower.

Unless the Majority Lenders shall otherwise consent in writing, so long as any amount payable by the Borrower hereunder shall remain unpaid or any Lender shall have any Commitment hereunder, the Borrower will not:

(a) ***Sales, Etc.*** (i) Sell, lease, transfer or otherwise dispose of any shares of common stock or other equity interests of any Significant Subsidiary of the Borrower, whether now owned or hereafter acquired by the Borrower, or permit any Significant Subsidiary of the Borrower to do so, or (ii) sell, lease, transfer or otherwise dispose of (whether in one transaction or a series of

transactions) or permit any of its Subsidiaries to sell, lease, transfer or dispose of (whether in one transaction or a series of transactions) assets located in the United States (other than any assets that are purported to be conveyed in connection with a Permitted Securitization but including assets purported to be conveyed pursuant to any sale leaseback transaction) having an aggregate book value (determined as of the date of such transaction for all such transactions since the date hereof) that is greater than 20% of the book value of all of the consolidated fixed assets of the Borrower, as reported on the most recent consolidated balance sheet of the Borrower prior to the date of such sale, lease transfer or disposition to any entity other than the Borrower or any of its wholly owned direct or indirect Subsidiaries; *provided*, *however*, that the limitation in this clause (ii) shall not in any way restrict, and shall not apply to, (A) the sale, transfer or other disposition of any equity interests in or assets of any Unregulated Subsidiary, (B) the sale, lease, transfer or other disposition of the Bath County hydroelectric generation facility located in Warm Springs, Virginia, or (C) the sale, lease, transfer or other disposition of the Borrower's assets to a Subsidiary of the Borrower or a newly-formed Person to which all or substantially all of the assets and liabilities of the Borrower and its Subsidiaries are being transferred, in each case under this clause (C), pursuant to a transaction permitted under subsection (c) below.

(b) ***Liens, Etc.*** Create or suffer to exist, or permit any Significant Subsidiary of the Borrower to create or suffer to exist, any Lien upon or with respect to any of its properties (including, without limitation, any shares of any class of equity security of any Significant Subsidiary of the Borrower), in each case to secure or provide for the payment of Indebtedness, other than (i) liens consisting of (A) pledges or deposits in the ordinary course of business to secure obligations under worker's compensation laws or similar legislation, (B) deposits in the ordinary course of business to secure, or in lieu of, surety, appeal, or customs bonds to which the Borrower or Significant Subsidiary is a party, (C) deposits, in an aggregate amount not to exceed $250,000,000 at any one time outstanding, made by the Borrower to secure, or in lieu of, surety, appeal, or customs bonds to which any Unregulated Subsidiary is a party, (D) pledges or deposits in the ordinary course of business to secure performance in connection with bids, tenders or contracts (other than contracts for the payment of money), or (E) materialmen's, mechanics', carriers', workers', repairmen's or other like Liens incurred in the ordinary course of business for sums not yet due or currently being contested in good faith by appropriate proceedings diligently conducted, or deposits to obtain in the release of such Liens; (ii) purchase money liens or purchase money security interests upon or in any property acquired or held by the Borrower or Significant Subsidiary in the ordinary course of business, which secure the purchase price of such property or secure indebtedness incurred solely for the purpose of financing the acquisition of such property; (iii) Liens existing on property acquired by the Borrower or Significant Subsidiary or on the property of any Person at the time that such Person becomes a direct or indirect Significant Subsidiary of the Borrower or Significant Subsidiary or is merged into or consolidated with the Borrower or Significant Subsidiary; *provided*, in each case, that such Liens were not created to secure the acquisition of such Person; (iv) Liens in existence on the date of this Agreement; (v) Liens created by any First Mortgage Indenture, so long as under the terms thereof no "event of default" (howsoever designated) in respect of any bonds issued thereunder will be triggered by reference to an Event of Default or Unmatured Default; (vi) Liens securing Attributable Securitization Obligations on the assets purported to be sold in connection with the applicable Permitted Securitization; (vii) Liens securing Nonrecourse Indebtedness; (viii) Liens on cash or cash equivalents deposited on behalf of or pledged to counterparties with respect

to Permitted Obligations of the Borrower or any of its Significant Subsidiaries; (ix) Liens on cash or cash equivalents to defease Indebtedness of the Borrower or any of its Subsidiaries; (x) Liens on cash or cash equivalents constituting proceeds from a disposition of assets otherwise not prohibited under subsection (a) above, which proceeds are deposited in escrow accounts for indemnification, adjustment of purchase price or similar obligations to the purchaser of such assets; (xi) Liens securing obligations in respect of pollution control or industrial revenue bonds or nuclear fuel leases, *provided* that such Liens extend to only the equipment, project, nuclear fuel or other assets financed with the proceeds of such financing; (xii) Liens arising in connection with leases that shall have been or should be, in accordance with GAAP, recorded as capital leases in respect of which the Borrower or Significant Subsidiary is liable as lessee; *provided*, that no such Lien shall extend to or cover any assets of the Borrower or Significant Subsidiary other than the assets of the Borrower or Significant Subsidiary subject to such lease and proceeds thereof; and (xiii) Liens created for the sole purpose of refinancing, extending, renewing or replacing in whole or in part Indebtedness secured by any Lien referred to in the foregoing clauses (i) through (xii); *provided*, *however*, that the principal amount of Indebtedness (or, if greater, the aggregate lending commitment) secured thereby shall not exceed the principal amount of Indebtedness (or, if greater, the aggregate lending commitment) so secured at the time of such refinancing, extension, renewal or replacement, and that such refinancing, extension, renewal or replacement, as the case may be, shall be limited to all or a part of the property or Indebtedness that secured the Lien so extended, renewed or replaced (and any improvements on such property).

(c) ***Mergers, Etc.*** Merge with or into or consolidate with or into any other Person, or permit any of its Subsidiaries to do so, unless (i) immediately after giving effect thereto, no event shall have occurred and be continuing that constitutes an Event of Default, (ii) the consolidation or merger shall not materially and adversely affect the ability of the Borrower (or its successor by merger or consolidation as contemplated by clause (A) of this subsection (c)) to perform its obligations hereunder or under any other Loan Document, and (iii) in the case of any merger or consolidation to which the Borrower is a party, the Person formed by such consolidation or into which the Borrower shall be merged shall (1) assume the Borrower's obligations under this Agreement and the other Loan Documents to which it is a party in a writing reasonably satisfactory in form and substance to the Administrative Agent and (2) be organized under the laws of a State of the United States or the District of Columbia. Without limiting the foregoing, (A) the Borrower may merge with or into or consolidate with or into a Significant Subsidiary or into a newly-formed Person into which one or more Significant Subsidiaries are being merged or consolidated (which Person will become the Borrower hereunder), and (B) the Borrower may transfer all or substantially all of its assets and liabilities to a Significant Subsidiary or to a newly-formed Person to which all or substantially all of the assets and liabilities of one or more Significant Subsidiaries are being transferred (which Person will become the Borrower hereunder), in each case of clauses (A) and (B), if (1) the surviving Person, transferee or Person otherwise specified above to become the Borrower hereunder, as applicable, assumes the Borrower's obligations under this Agreement and the other Loan Documents pursuant to an instrument in form and substance reasonably satisfactory to the Administrative Agent, (2) the Reference Ratings of the surviving or resulting Borrower are not, after giving effect to such transactions, any lower than the Reference Ratings of the Borrower immediately prior to the consummation of such transactions, unless the Reference Ratings of such surviving or resulting Borrower are at least BBB- by S&P and Baa3 by Moody's, and (3) the parties

to such transaction deliver to the Administrative Agent certified copies of all corporate or limited liability, equity holder and Governmental Authority approvals required in connection with such transactions and legal opinions of counsel to such parties relating to such transactions and the assumption agreement described in clause (1) above; *provided, however*, that notwithstanding anything herein to the contrary, in no event shall (x) the Borrower or any Significant Subsidiary merge with or into or consolidate with or into any Unregulated Subsidiary or (y) the Borrower or any Significant Subsidiary transfer all or substantially all of its assets to an Unregulated Subsidiary. Notwithstanding the foregoing, nothing in this Section 5.03(c) shall restrict any merger or consolidation of any Unregulated Subsidiary in connection with any sale, transfer or other disposition of any equity interests in or assets of such Unregulated Subsidiary to any Person that is not an Affiliate of the Borrower in a transaction permitted under Section 5.03(a).

(d) ***Compliance with ERISA***. (i) Enter into any nonexempt "prohibited transaction" (within the meaning of Section 4975 of the Code or Section 406 of ERISA) involving any Plan that may result in any liability of the Borrower to any Person that (in the opinion of the Majority Lenders) would reasonably be expected to have a Material Adverse Effect or (ii) allow or suffer to exist any event or condition known to the Borrower that results in any liability of the Borrower to the PBGC that would reasonably be expected to have a Material Adverse Effect. For purposes of this subsection (d), "liability" shall not include termination insurance premiums payable under Section 4007 of ERISA.

(e) ***Use of Proceeds.*** Use the proceeds of any Borrowing for any purpose other than working capital and other general corporate purposes of the Borrower and its Subsidiaries (which, for the avoidance of doubt, shall include intercompany loans and advances by the Borrower to any of its Subsidiaries, including any Unregulated Subsidiary); *provided, however*, that the Borrower may not use such proceeds in connection with any Hostile Acquisition.

(f) ***Limitation on Cross-Default Provisions.*** Incur or permit any Significant Subsidiary to incur (which for purposes of this subsection (f), shall not include the drawdown by the Borrower or any Significant Subsidiary of any revolving credit facility or any letter of credit facility of the Borrower or any Significant Subsidiary in existence on June 17, 2011 or any other incurrence of Indebtedness or other obligation under agreements in existence on such date pursuant to the terms thereof as in effect on such date) after the date hereof any Indebtedness, Commodity Trading Obligations or Hedging Obligations that shall or may become subject to acceleration, redemption or mandatory purchase prior to the stated maturity date of such Indebtedness or the stated or otherwise applicable date for performance of such Commodity Trading Obligations or Hedging Obligations, as the case may be, upon the occurrence of one or more events of default or credit events or similar events (howsoever designated) under any document or instrument evidencing any Indebtedness, Commodity Trading Obligations or Hedging Obligations of FES, AESC or any of their respective Subsidiaries.

(g) ***Compliance with Anti-Corruption Laws and Sanctions.*** Request any Borrowing, or use, or permit any of the other Covered Entities and its or their respective directors, officers, employees and agents to use, the proceeds of any Borrowing (i) in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to

any Person in violation of any Anti-Corruption Laws, (ii) for the purpose of funding, financing or facilitating any activities, business or transaction of or with any Sanctioned Person, (iii) for the purpose of unauthorized funding, financing or facilitating any activities, business or transaction of or with any Sanctioned Country, or (iv) in any manner that would result in the violation of any Sanctions applicable to, or the imposition of any Sanctions on, any Covered Entity or, to the knowledge of the Borrower, any other party hereto.

(h) ***Equity Contributions.*** Make, or permit any Significant Subsidiary to make, any equity contributions to any Unregulated Subsidiary; *provided*, *however*, that this Section 5.03(h) shall not restrict or otherwise apply to (i) any such equity contributions that are required by Applicable Law or court order or (ii) any intercompany advances made to any Unregulated Subsidiary (including, without limitation, pursuant to the Unregulated Money Pool Agreement) that are recharacterized by a court or other Governmental Authority as equity contributions.

ARTICLE VI
EVENTS OF DEFAULT

SECTION 6.01. Events of Default.

If any of the following events shall occur and be continuing (an "***Event of Default***"):

(a) (i) Any principal of any Advance shall not be paid by the Borrower when the same becomes due and payable, or (ii) any interest on any Advance or any fees or other amounts payable hereunder shall not be paid by the Borrower within three Business Days after the same becomes due and payable; or

(b) Any representation or warranty made by the Borrower (or any of its officers) in any Loan Document or in connection with any Loan Document shall prove to have been incorrect or misleading in any material respect when made; or

(c) (i) The Borrower shall fail to perform or observe any covenant set forth in Section 5.01(a)(i), Section 5.01(g)(i), Section 5.01(h), Section 5.02 or Section 5.03, or (ii) the Borrower shall fail to perform or observe any other term, covenant or agreement (other than those covenants otherwise covered in clause (a) or (c)(i) of this Section 6.01) contained in this Agreement or any other Loan Document and such failure shall remain unremedied for 30 days after written notice thereof shall have been given to the Borrower by the Administrative Agent or any Lender; or

(d) Any material provision of this Agreement or any other Loan Document shall at any time and for any reason cease to be valid and binding upon the Borrower, except pursuant to the terms thereof, or shall be declared to be null and void, or the validity or enforceability thereof shall be contested in any manner by the Borrower or any Governmental Authority, or the Borrower shall deny in any manner that it has any or further liability or obligation under this Agreement or any other Loan Document; or

(e) The Borrower or any Significant Subsidiary shall fail to pay any principal of or premium or interest on any Indebtedness (other than Indebtedness of the Borrower under this Agreement) that is outstanding in a principal amount in excess of $100,000,000 in the aggregate when the same becomes due and payable (whether by scheduled maturity, required prepayment, acceleration, demand or otherwise), and such failure shall continue after the applicable grace period, if any, specified in the agreement or instrument relating to such Indebtedness; or any other event shall occur or condition shall exist under any agreement or instrument relating to any such Indebtedness and shall continue after the applicable grace period, if any, specified in such agreement or instrument, if the effect of such event or condition is to accelerate, or to permit the acceleration of, the maturity of such Indebtedness; or any such Indebtedness shall be declared to be due and payable, or required to be prepaid (other than by a regularly scheduled required prepayment), prior to the stated maturity thereof; or

(f) The Borrower or any Significant Subsidiary shall generally not pay its debts as such debts become due, or shall admit in writing its inability to pay its debts generally, or shall make a general assignment for the benefit of creditors; or any proceeding shall be instituted by or against the Borrower or any Significant Subsidiary seeking to adjudicate it a bankrupt or insolvent, or seeking liquidation, winding up, reorganization, arrangement, adjustment, protection, relief, or composition or arrangement with creditors, a readjustment of its debts, in each case under any law relating to bankruptcy, insolvency or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian or other similar official for it or for any substantial part of its property and, in the case of any such proceeding instituted against it (but not instituted or acquiesced in by it), either such proceeding shall remain undismissed or unstayed for a period of 60 consecutive days, or any of the actions sought in such proceeding (including, without limitation, the entry of an order for relief against, or the appointment of a receiver, trustee, custodian or other similar official for, it or for any substantial part of its property) shall occur; or the Borrower or any Significant Subsidiary shall take any corporate action to authorize or to consent to any of the actions set forth above in this subsection (f); or

(g) Any judgment or order for the payment of money exceeding any applicable insurance coverage by more than $100,000,000 shall be rendered by a court of final adjudication against the Borrower or any Significant Subsidiary and either (i) valid enforcement proceedings shall have been commenced by any creditor upon such judgment or order or (ii) there shall be any period of 30 consecutive days during which a stay of enforcement of such judgment or order, by reason of a pending appeal or otherwise, shall not be in effect; or

(h) Any Termination Event with respect to a Plan shall have occurred or the Borrower or any member of the Controlled Group as employer under a Multiemployer Plan shall have made a complete or partial withdrawal from such Multiemployer Plan, and, 30 days after notice thereof shall have been given to the Borrower by the Administrative Agent or any Lender, such Termination Event (if correctable) shall not have been corrected, and, as applicable, (1) the actual liability in respect of such Termination Event to the Borrower

would reasonably be expected to exceed $100,000,000, or (2) as a result of such complete or partial withdrawal from a Multiemployer Plan, the Borrower would reasonably be expected to incur withdrawal liability in an amount exceeding $100,000,000; or

(i) (i) The Borrower shall fail to own directly or indirectly 100% of the issued and outstanding shares of common stock of each Significant Subsidiary, (ii) any Person or two or more Persons acting in concert shall have acquired beneficial ownership (within the meaning of Rule 13d-3 of the SEC under the Exchange Act), directly or indirectly, of securities of the Borrower (or other securities convertible into such securities) representing 30% or more of the combined voting power of all securities of the Borrower entitled to vote in the election of directors; or (iii) commencing after the date of this Agreement, individuals who as of the date of this Agreement were directors shall have ceased for any reason to constitute a majority of the Board of Directors of the Borrower unless the Persons replacing such individuals were nominated by the stockholders or the Board of Directors of the Borrower in accordance with the Borrower's Organizational Documents (each a "***Change of Control***"); or

(j) An "Event of Default" (as defined in the FE Revolving Credit Agreement) shall have occurred and be continuing;

then, and in any such event, the Administrative Agent shall at the request, or may with the consent, of the Majority Lenders, (i) by notice to the Borrower, declare the obligation of each Lender to make Advances to be terminated, whereupon the same shall forthwith terminate, and (ii) by notice to the Borrower, declare the Advances and all other amounts payable under this Agreement and the other Loan Documents by the Borrower to be forthwith due and payable, whereupon such Advances and all such amounts shall become and be forthwith due and payable, without presentment, demand, protest or further notice of any kind, all of which are hereby expressly waived by the Borrower; *provided*, *however*, that in the event of an actual or deemed entry of an order for relief with respect to the Borrower or any Significant Subsidiary under the Bankruptcy Code, (A) the obligation of each Lender to make Advances shall automatically be terminated and (B) all Advances and all other amounts payable under this Agreement by the Borrower shall automatically become and be due and payable, without presentment, demand, protest or any notice of any kind, all of which are hereby expressly waived by the Borrower.

ARTICLE VII
THE ADMINISTRATIVE AGENT

SECTION 7.01. Appointment and Authority.

Each of the Lenders hereby irrevocably appoints Scotiabank to act on its behalf as the Administrative Agent hereunder and under the other Loan Documents and authorizes the Administrative Agent to take such actions on its behalf and to exercise such powers as are delegated to the Administrative Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto. The provisions of this Article are solely for the benefit of the Administrative Agent and the Lenders, and the Borrower shall not have rights as a third party

beneficiary of any of such provisions. It is understood and agreed that the use of the term "agent" herein or in any other Loan Documents (or any other similar term) with reference to the Administrative Agent is not intended to connote any fiduciary or other implied (or express) obligations arising under agency doctrine of any Applicable Law. Instead such term is used as a matter of market custom, and is intended to create or reflect only an administrative relationship between contracting parties.

SECTION 7.02. Rights as a Lender.

The Person serving as the Administrative Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not the Administrative Agent and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated or unless the context otherwise requires, include the Person serving as the Administrative Agent hereunder in its individual capacity. Such Person and its Affiliates may accept deposits from, lend money to, own securities of, act as the financial advisor or in any other advisory capacity for and generally engage in any kind of business with the Borrower or any Subsidiary or other Affiliate thereof as if such Person were not the Administrative Agent hereunder and without any duty to account therefor to the Lenders.

SECTION 7.03. Exculpatory Provisions.

The Administrative Agent shall not have any duties or obligations except those expressly set forth herein and in the other Loan Documents, and its duties hereunder shall be administrative in nature. Without limiting the generality of the foregoing, the Administrative Agent:

(a) shall not be subject to any fiduciary or other implied duties, regardless of whether an Unmatured Default or an Event of Default has occurred and is continuing;

(b) shall not have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that the Administrative Agent is required to exercise as directed in writing by the Majority Lenders (or such other number or percentage of the Lenders as shall be expressly provided for herein or in the other Loan Documents), *provided* that the Administrative Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose the Administrative Agent to liability or that is contrary to any Loan Document or Applicable Law, including for the avoidance of doubt any action that may be in violation of the automatic stay under the Bankruptcy Code or any other law relating to bankruptcy, insolvency or reorganization or relief of debtors or that may effect a forfeiture, modification or termination of property of a Defaulting Lender in violation of the Bankruptcy Code or such other law; and

(c) shall not, except as expressly set forth herein and in the other Loan Documents, have any duty to disclose, and shall not be liable for the failure to disclose, any information relating to the Borrower or any of its Affiliates that is communicated to or

obtained by the Person serving as the Administrative Agent or any of its Affiliates in any capacity.

The Administrative Agent shall not be liable for any action taken or not taken by it (i) with the consent or at the request of the Majority Lenders (or such other number or percentage of the Lenders as shall be necessary, or as the Administrative Agent shall believe in good faith shall be necessary, under the circumstances as provided in Sections 8.01 and 6.01) or (ii) in the absence of its own gross negligence or willful misconduct as determined by a court of competent jurisdiction by final and non-appealable judgment. The Administrative Agent shall be deemed not to have knowledge of any Unmatured Default or Event of Default unless and until notice describing such Unmatured Default or Event of Default is given in writing to the Administrative Agent by the Borrower or a Lender.

The Administrative Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (ii) the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, (iii) the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or therein or the occurrence of any Unmatured Default or Event of Default, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or (v) the satisfaction of any condition set forth in Article III or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to the Administrative Agent.

The Administrative Agent does not assume and shall not be deemed to have assumed any obligation or duty or any other relationship as the agent, fiduciary or trustee of or for any Lender other than as expressly set forth herein and in the other Loan Documents, regardless of whether an Unmatured Default or an Event of Default has occurred and is continuing. Each Lender agrees that it will not assert any claim against the Administrative Agent based on an alleged breach of fiduciary duty by the Administrative Agent in connection with this Agreement and/or the transactions contemplated hereby.

Nothing in this Agreement or any other Loan Document shall require the Administrative Agent to account to any Lender for any sum or the profit element of any sum received by the Administrative Agent for its own account.

SECTION 7.04. Reliance by Administrative Agent.

The Administrative Agent shall be entitled to rely upon, and shall not incur any liability for relying upon, any notice, request, certificate, consent, statement, instrument, document or other writing (including any electronic message, Internet or intranet website posting or other distribution) believed by it in good faith to be genuine and to have been signed, sent or otherwise authenticated by the proper Person. The Administrative Agent also may rely upon any statement made to it orally or by telephone and believed by it in good faith to have been made by the proper Person, and shall not incur any liability for relying thereon. In determining compliance with any condition hereunder

to the making of an Advance that by its terms must be fulfilled to the satisfaction of a Lender, the Administrative Agent may presume that such condition is satisfactory to such Lender unless the Administrative Agent shall have received notice to the contrary from such Lender prior to the making of such Advance. The Administrative Agent may consult with legal counsel (who may be counsel for the Borrower), independent accountants and other experts selected by it, and shall not be liable for any action taken or not taken by it in accordance with the advice of any such counsel, accountants or experts.

SECTION 7.05. Delegation of Duties.

The Administrative Agent may perform any and all of its duties and exercise its rights and powers hereunder or under any other Loan Document by or through any one or more sub-agents appointed by the Administrative Agent. The Administrative Agent and any such sub-agent may perform any and all of its duties and exercise its rights and powers by or through their respective Related Parties. The exculpatory provisions of this Article shall apply to any such sub-agent and to the Related Parties of the Administrative Agent and any such sub-agent, and shall apply to their respective activities in connection with the syndication of the credit facilities provided for herein as well as activities as Administrative Agent. The Administrative Agent shall not be responsible for the negligence or misconduct of any sub-agents except to the extent that a court of competent jurisdiction determines in a final and non-appealable judgment that the Administrative Agent acted with gross negligence or willful misconduct in the selection of such sub-agents.

SECTION 7.06. Indemnification.

Each Lender agrees to indemnify the Administrative Agent and its Affiliates and their respective officers, directors, employees and professional advisors (to the extent not reimbursed by the Borrower) from and against such Lender's ratable share (determined as provided below) of any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements of any kind or nature whatsoever that may be imposed on, incurred by, or asserted against the Administrative Agent or any such other Indemnified Person in any way relating to or arising out of this Agreement or any action taken or omitted by the Administrative Agent (in its capacity as such), or by such other Indemnified Person acting for the Administrative Agent in connection with such capacity, under this Agreement; *provided* that no Lender shall be liable for any portion of such liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, expenses or disbursements resulting from the Administrative Agent's or such other Indemnified Person's (as the case may be) gross negligence or willful misconduct as determined by the final, non-appealable judgment of a court of competent jurisdiction. Without limitation of the foregoing, each Lender agrees to reimburse the Administrative Agent promptly upon demand for its ratable share of any out-of-pocket expenses (including reasonable counsel fees) incurred by the Administrative Agent in connection with the preparation, execution, delivery, administration, modification, amendment or enforcement (whether through negotiations, legal proceedings or otherwise) of, or legal advice in respect of rights or responsibilities under, this Agreement, to the extent that such expenses are reimbursable by the Borrower but for which the Administrative Agent is not reimbursed by the Borrower. For purposes of this Section 7.06, the Lenders' respective ratable

shares of any amount shall be determined, at any time, according to the sum of (i) the aggregate principal amount of the Advances outstanding at such time and owing to the respective Lenders or (ii) the aggregate amounts of their respective unused Commitments at such time. In the event that any Lender shall have failed to make any Advance as required hereunder, such Lender's Commitment shall be considered to be unused for purposes of this Section 7.06 to the extent of the amount of such Advance. The obligations of the Lenders under this Section 7.06 are subject to the provisions of Section 2.02(d).

SECTION 7.07. Resignation of Administrative Agent.

(a) The Administrative Agent may at any time give notice of its resignation to the Lenders and the Borrower. Upon receipt of any such notice of resignation, the Majority Lenders shall have the right, with the prior written consent of the Borrower (which consent shall not be unreasonably withheld or delayed, but which consent shall not be required if an Event of Default shall have occurred and be continuing), to appoint a successor, which shall be a bank with an office in the United States, or an Affiliate of any such bank with an office in the United States. If no such successor shall have been so appointed by the Majority Lenders and shall have accepted such appointment within 30 days after the retiring Administrative Agent gives notice of its resignation (or such earlier day as shall be agreed by the Majority Lenders) (the "***Resignation Effective Date***"), then the retiring Administrative Agent may (but shall not be obligated to) on behalf of the Lenders, appoint a successor Administrative Agent meeting the qualifications set forth above, *provided* that in no event shall any such successor Administrative Agent be a Defaulting Lender. Whether or not a successor has been appointed, such resignation shall become effective in accordance with such notice on the Resignation Effective Date.

(b) If the Person serving as Administrative Agent is a Defaulting Lender pursuant to clause (iv) of the definition thereof, the Majority Lenders may, to the extent permitted by Applicable Law, by notice in writing to the Borrower and such Person remove such Person as Administrative Agent and, with the prior written consent of the Borrower (which consent shall not be unreasonably withheld or delayed, but which consent shall not be required if an Event of Default shall have occurred and be continuing), appoint a successor, which successor shall be a Lender or an Affiliate of a Lender (the effective date of such removal and appointment of a successor being referred to herein as the "***Removal Effective Date***").

(c) With effect from the Resignation Effective Date or the Removal Effective Date (as applicable) (1) the retiring or removed Administrative Agent shall be discharged from its duties and obligations hereunder and under the other Loan Documents and (2) except for any indemnity payments or other amounts then owed to the retiring or removed Administrative Agent, all payments, communications and determinations provided to be made by, to or through the Administrative Agent shall instead be made by or to each Lender directly, until such time, if any, as the Majority Lenders appoint a successor Administrative Agent as provided for above. Upon the acceptance of a successor's appointment as Administrative Agent hereunder, such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring (or removed) Administrative Agent (other than as provided in Section 2.13(i) and other than any rights to indemnity payments or other amounts owed to the retiring or removed Administrative Agent as of

the Resignation Effective Date or the Removal Effective Date, as applicable), and the retiring or removed Administrative Agent shall be discharged from all of its duties and obligations hereunder or under the other Loan Documents (if not already discharged therefrom as provided above in this Section). The fees payable by the Borrower to a successor Administrative Agent shall be the same as those payable to its predecessor unless otherwise agreed between the Borrower and such successor. After the retiring or removed Administrative Agent's resignation or removal hereunder and under the other Loan Documents, the provisions of this Article and Section 8.05 shall continue in effect for the benefit of such retiring or removed Administrative Agent, its sub-agents and their respective Related Parties in respect of any actions taken or omitted to be taken by any of them (i) while the retiring or removed Administrative Agent was acting as Administrative Agent and (ii) after such resignation or removal for as long as any of them continues to act in any capacity hereunder or under the other Loan Documents, including in respect of any actions taken in connection with transferring the agency to any successor Administrative Agent.

SECTION 7.08. Non-Reliance on Administrative Agent and Other Lenders.

Each Lender acknowledges that it has, independently and without reliance upon the Administrative Agent or any other Lender or any of their Related Parties (or any such Person or any Affiliate thereof acting in the capacity of "Joint Lead Arranger", "Syndication Agent" or "Documentation Agent") and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Agreement. Each Lender also acknowledges that it will, independently and without reliance upon the Administrative Agent or any other Lender or any of their Related Parties (or any such Person or any Affiliate thereof acting in the capacity of "Joint Lead Arranger", "Syndication Agent" or "Documentation Agent") and based on such documents and information as it shall from time to time deem appropriate, continue to make its own decisions in taking or not taking action under or based upon this Agreement, any other Loan Document or any related agreement or any document furnished hereunder or thereunder.

SECTION 7.09. No Other Duties, Etc.

Anything herein to the contrary notwithstanding, none of the Persons listed on the cover page hereof as a "Joint Lead Arranger", "Documentation Agent" or "Syndication Agent" shall have any powers, duties or responsibilities under this Agreement or any of the other Loan Documents, except in its capacity, as applicable, as the Administrative Agent or a Lender hereunder. All references to Merrill Lynch, Pierce, Fenner & Smith Incorporated in its capacity as a "Joint Lead Arranger" shall include any other registered broker-dealer wholly-owned by Bank of America Corporation to which all of Bank of America Corporation's or any of its Subsidiaries' investment banking, commercial lending services or related businesses may be transferred following the date of this Agreement.

SECTION 7.10. Administrative Agent May File Proofs of Claim.

In case of the pendency of any proceeding under the Bankruptcy Code or any other law relating to bankruptcy, insolvency or reorganization or relief of debtors or any other judicial proceeding relative to the Borrower, the Administrative Agent (irrespective of whether the principal of any Advance shall then be due and payable as herein expressed or by declaration or otherwise and irrespective of whether the Administrative Agent shall have made any demand on the Borrower) shall be entitled and empowered, by intervention in such proceeding or otherwise:

(a) to file and prove a claim for the whole amount of the principal and interest owing and unpaid in respect of the Advances and all other amounts that are owing and unpaid and to file such other documents as may be necessary or advisable in order to have the claims of the Lenders and the Administrative Agent (including any claim for the reasonable compensation, expenses, disbursements and advances of the Lenders and the Administrative Agent and their respective agents and counsel, and all other amounts due the Lenders and the Administrative Agent under Sections 2.03 and 8.05) allowed in such judicial proceeding; and

(b) to collect and receive any monies or other property payable or deliverable on any such claims and to distribute the same;

and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Lender to make such payments to the Administrative Agent and, in the event that the Administrative Agent shall consent to the making of such payments directly to the Lenders, to pay to the Administrative Agent any amount due for the reasonable compensation, expenses, disbursements and advances of the Administrative Agent and its agents and counsel, and any other amounts due the Administrative Agent, under Sections 2.03 and 8.05.

Nothing contained herein shall be deemed to authorize the Administrative Agent to authorize or consent to or accept or adopt on behalf of any Lender any plan of reorganization, arrangement, adjustment or composition affecting the Advances or other amounts payable by the Borrower under this Agreement and the other Loan Documents or the rights of any Lender to authorize the Administrative Agent to vote in respect of the claim of any Lender in any such proceeding.

SECTION 7.11. Certain ERISA Matters.

%3. Each Lender (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and not, for the avoidance of doubt, to or for the benefit of the Borrower, that at least one of the following is and will be true:

(i) such Lender is not using “plan assets” (within the meaning of Section 3(42) of ERISA or otherwise) of one or more Benefit Plans with respect to such Lender’s entrance into, participation in, administration of and performance of the Advances or this Agreement;

(ii) the transaction exemption set forth in one or more PTEs, such as PTE 84-14 (a class exemption for certain transactions determined by independent qualified professional asset managers), PTE 95-60 (a class exemption for certain transactions involving insurance company general accounts), PTE 90-1 (a class exemption for certain transactions involving insurance company pooled separate accounts), PTE 91-38 (a class exemption for certain transactions involving bank collective investment funds) or PTE 96-23 (a class exemption for certain transactions determined by in-house asset managers), is applicable with respect to such Lender's entrance into, participation in, administration of and performance of the Advances, the Commitments and this Agreement;

(iii) (A) such Lender is an investment fund managed by a "Qualified Professional Asset Manager" (within the meaning of Part VI of PTE 84-14), (B) such Qualified Professional Asset Manager made the investment decision on behalf of such Lender to enter into, participate in, administer and perform the Loans, the Commitments and this Agreement, (C) the entrance into, participation in, administration of and performance of the Advances, the Commitments and this Agreement satisfies the requirements of sub-sections (b) through (g) of Part I of PTE 84-14 and (D) to the best knowledge of such Lender, the requirements of subsection (a) of Part I of PTE 84-14 are satisfied with respect to such Lender's entrance into, participation in, administration of and performance of the Advances, the Commitments and this Agreement; or

(iv) such other representation, warranty and covenant as may be agreed in writing between the Administrative Agent, in its sole discretion, and such Lender.

(b) In addition, unless either (1) sub-clause (i) in the immediately preceding paragraph (a) is true with respect to a Lender or (2) a Lender has provided another representation, warranty and covenant in accordance with sub-clause (iv) in the immediately preceding paragraph (a), such Lender further (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and not, for the avoidance of doubt, to or for the benefit of the Borrower, that the Administrative Agent is not a fiduciary with respect to the assets of such Lender involved in such Lender's entrance into, participation in, administration of and performance of the Advances, the Commitments and this Agreement (including in connection with the reservation or exercise of any rights by the Administrative Agent under this Agreement, any Loan Document or any documents related hereto or thereto).

(c) The Administrative Agent hereby informs the Lenders that the Administrative Agent is not undertaking to provide investment advice or to give advice in a fiduciary capacity, in connection with the transactions contemplated hereby, and that the Administrative Agent has a financial interest in the transactions contemplated hereby in that the Administrative Agent or an Affiliate thereof (i) may receive interest or other payments with respect to the Advances, the Commitments, this Agreement and any other Loan Documents, (ii) may recognize a gain if it extended the Advances or the Commitments for an amount less than the amount being paid for an interest in the Advances or the Commitments by such Lender or (iii) may receive fees or other

payments in connection with the transactions contemplated hereby, the Loan Documents or otherwise, including structuring fees, commitment fees, arrangement fees, facility fees, upfront fees, underwriting fees, ticking fees, agency fees, administrative agent fees, utilization fees, minimum usage fees, deal-away or alternate transaction fees, amendment fees, processing fees, term out premiums, banker's acceptance fees, breakage or other early termination fees or fees similar to the foregoing.

ARTICLE VIII
MISCELLANEOUS

SECTION 8.01. ***Amendments, Etc.***

Subject to Section 2.16(a)(i) and except as otherwise expressly provided in the definition of "Eurodollar Rate" set forth in Section 1.01, no amendment or waiver of any provision of this Agreement or any Note, nor consent to any departure by the Borrower therefrom, shall in any event be effective unless the same shall be in writing and signed by the Majority Lenders and the Borrower (and acknowledged by the Administrative Agent), and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given; *provided, however,* that no amendment, waiver or consent shall, unless in writing and signed by all the Lenders affected thereby (other than, in the case of clause (a), (f) or (g)(ii) below, any Defaulting Lender), do any of the following: (a) waive any of the conditions specified in Section 3.01, (b) increase or extend the Commitments of the Lenders or subject the Lenders to any additional obligations, (c) change any provision hereof in a manner that would alter the pro rata sharing of payments or the pro rata reduction of Commitments among the Lenders, (d) reduce the principal of, or interest (or rate of interest) on, the Advances or any fees or other amounts payable hereunder, (e) postpone any date fixed for any payment of principal of, or interest on, the Advances or any fees or other amounts payable hereunder, (f) change the percentage of the Commitments or of the aggregate unpaid principal amount of the Advances or the number of Lenders, that shall be required for the Lenders or any of them to take any action hereunder or (g) waive or amend (i) this Section 8.01, (ii) the definition of "Majority Lenders" or (iii) the proviso contained in Section 8.07; and *provided, further,* that (i) no amendment, waiver or consent shall, unless in writing and signed by the Administrative Agent in addition to the Lenders required above to take such action, affect the rights or duties of the Administrative Agent under this Agreement or Section 2.16; (ii) Section 8.08(g) may not be amended, waived or otherwise modified without the consent of each Granting Lender all or any part of whose Advances are being funded by an SPC at the time of such amendment, waiver or other modification; and (iii) this Agreement may be amended and restated without the consent of any Lender or the Administrative Agent if, upon giving effect to such amendment and restatement, such Lender or the Administrative Agent, as the case may be, shall no longer be a party to this Agreement (as so amended and restated) or have any Commitment or other obligation hereunder and shall have been paid in full all amounts payable hereunder to such Lender or the Administrative Agent, as the case may be. Notwithstanding the foregoing, the Borrower and the Administrative Agent may amend this Agreement and the other Loan Documents without the consent of any Lender to the extent necessary (1) to cure any ambiguity, omission, mistake, error, defect or inconsistency (as reasonably determined by the Administrative Agent) or (2) to make administrative changes of a

technical or immaterial nature; provided, that, in each case, (x) such amendment does not adversely affect the rights of any Lender and (y) the Lenders shall have received at least five (5) Business Days' prior written notice thereof and the Administrative Agent shall not have received, within five (5) Business Days of the date of such notice to the Lenders, a written notice from the Majority Lenders stating that the Majority Lenders object to such amendment.

SECTION 8.02. Notices, Etc.

Unless specifically provided otherwise in this Agreement, all notices and other communications provided for hereunder shall be in writing (including facsimile) and delivered by hand or overnight courier service, mailed or sent by facsimile, if to the Borrower, to it at its address at 76 South Main Street, Akron, Ohio 44308, Attention: Treasurer, Facsimile: ____; if to any Bank, at its Domestic Lending Office specified opposite its name on Schedule I hereto; if to any other Lender, at its Domestic Lending Office specified in the Assignment and Assumption pursuant to which it became a Lender; if to the Administrative Agent, at its applicable address set forth in Schedule II hereto; or, as to each party, at such other address as shall be designated by such party in a written notice to the other parties. Subject to the other notice requirements of this Agreement, all notices and communications given to any party hereto in accordance with the provisions of this Agreement shall be deemed to have been given on the date of receipt if delivered by hand or overnight courier service, mailed or sent by facsimile to such party and received during the normal business hours of such party as provided in this Section or in accordance with the latest unrevoked direction from such party given in accordance with this Section. If such notices and communications are received after the normal business hours of such party, receipt shall be deemed to have been given upon the opening of the recipient's next Business Day.

SECTION 8.03. Electronic Communications.

(a) The Borrower hereby agrees that it will provide to the Administrative Agent all information, documents and other materials that it is obligated to furnish to the Administrative Agent pursuant to the Loan Documents, including, without limitation, all notices, requests, financial statements, financial and other reports, certificates and other information materials, but excluding any such communication that (i) relates to a request for a new, or a conversion of an existing, Borrowing (including any election of an interest rate or Interest Period relating thereto), (ii) relates to the payment of any principal or other amount due under this Agreement prior to the scheduled date therefor, (iii) provides notice of any Unmatured Default or Event of Default under this Agreement or (iv) is required to be delivered to satisfy any condition precedent to the effectiveness of this Agreement and/or any Borrowing thereunder (all such non-excluded communications being referred to herein collectively as "***Communications***"), by transmitting the Communications in an electronic/soft medium in a format acceptable to the Administrative Agent to _____ or faxing the Communications to _____. In addition, the Borrower agrees to continue to provide the Communications to the Administrative Agent in the manner otherwise specified in this Agreement, but only to the extent requested by the Administrative Agent.

(b) The Borrower further agrees that the Administrative Agent may make the Communications available to the Lenders by posting the Communications on the Platform. The Borrower acknowledges that the distribution of material through an electronic medium is not necessarily secure and that there are confidentiality and other risks associated with such distribution.

(c) THE PLATFORM IS PROVIDED "AS IS" AND "AS AVAILABLE". THE AGENT PARTIES (AS DEFINED BELOW) DO NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE COMMUNICATIONS, OR THE ADEQUACY OF THE PLATFORM AND EXPRESSLY DISCLAIM LIABILITY FOR ERRORS OR OMISSIONS IN THE COMMUNICATIONS. NO WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF THIRD PARTY RIGHTS OR FREEDOM FROM VIRUSES OR OTHER CODE DEFECTS, IS MADE BY THE AGENT PARTIES IN CONNECTION WITH THE COMMUNICATIONS OR THE PLATFORM. IN NO EVENT SHALL THE ADMINISTRATIVE AGENT OR ANY OF ITS RELATED PARTIES (COLLECTIVELY, "***AGENT PARTIES***") HAVE ANY LIABILITY TO THE BORROWER, ANY LENDER OR ANY OTHER PERSON OR ENTITY FOR DAMAGES OF ANY KIND, INCLUDING, WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES OR EXPENSES (WHETHER IN TORT, CONTRACT OR OTHERWISE) ARISING OUT OF THE BORROWER'S OR THE ADMINISTRATIVE AGENT'S TRANSMISSION OF THE COMMUNICATIONS THROUGH THE PLATFORM, EXCEPT TO THE EXTENT THE LIABILITY OF ANY AGENT PARTY IS FOUND IN A FINAL NON-APPEALABLE JUDGMENT BY A COURT OF COMPETENT JURISDICTION TO HAVE RESULTED PRIMARILY FROM SUCH AGENT PARTY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

(d) The Administrative Agent agrees that the receipt of the Communications by the Administrative Agent at its e-mail address set forth above shall constitute effective delivery of the Communications to the Administrative Agent for purposes of the Loan Documents. Each Lender agrees that notice to it (as provided in the next sentence) specifying that the Communications have been posted to the Platform shall constitute effective delivery of the Communications to such Lender for purposes of the Loan Documents. Each Lender agrees to notify the Administrative Agent in writing (including by electronic communication) from time to time of such Lender's e-mail address to which the foregoing notice may be sent by electronic transmission and that the foregoing notice may be sent to such e-mail address. Subject to the other notice requirements of this Agreement, all such notices and Communications given to the Administrative Agent or such Lender in accordance with the provisions of this Agreement shall be deemed to have been given on the date of receipt if delivered by electronic/soft medium to such party and received during the normal business hours of such party as provided in this Section or in accordance with the latest unrevoked direction from such party given in accordance with this Section. If such notices and communications are received after the normal business hours of such party, receipt shall be deemed to have been given upon the opening of the recipient's next Business Day.

(e) Nothing herein shall prejudice the right of the Administrative Agent or any Lender to give any notice or other communication pursuant to any Loan Document in any other manner specified in such Loan Document.

SECTION 8.04. No Waiver; Remedies.

No failure on the part of any Lender or the Administrative Agent to exercise, and no delay in exercising, any right hereunder or under any Note shall operate as a waiver thereof; nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or the exercise of any other right. The remedies herein provided are cumulative and not exclusive of any remedies provided by law.

Notwithstanding anything to the contrary contained herein or in any other Loan Document, the authority to enforce rights and remedies hereunder and under the other Loan Documents against the Borrower shall be vested exclusively in, and all actions and proceedings at law in connection with such enforcement shall be instituted and maintained exclusively by, the Administrative Agent in accordance with Section 6.01 for the benefit of all the Lenders; *provided*, *however*, that the foregoing shall not prohibit (a) the Administrative Agent from exercising on its own behalf the rights and remedies that inure to its benefit (solely in its capacity as Administrative Agent) hereunder and under the other Loan Documents, (b) any Lender from exercising setoff rights in accordance with Section 8.06 (subject to the terms of Section 2.14), or (c) any Lender from filing proofs of claim or appearing and filing pleadings on its own behalf during the pendency of a proceeding relative to the Borrower under the Bankruptcy Code; and *provided*, *further*, that if at any time there is no Person acting as Administrative Agent hereunder and under the other Loan Documents, then the Majority Lenders shall have the rights otherwise ascribed to the Administrative Agent pursuant to Section 6.01.

SECTION 8.05. Costs and Expenses; Indemnification.

(a) The Borrower agrees to pay on demand all reasonable out-of-pocket costs and expenses incurred by the Administrative Agent in connection with the preparation, execution, delivery, syndication, administration, modification and amendment of this Agreement, any Note and the other documents to be delivered hereunder, including, without limitation, the reasonable fees and out-of-pocket expenses of counsel for the Administrative Agent with respect thereto and with respect to advising the Administrative Agent as to its rights and responsibilities under this Agreement. The Borrower further agrees to pay on demand all reasonable out-of-pocket costs and expenses, if any (including, without limitation, reasonable counsel fees and expenses of counsel), incurred by the Administrative Agent and the Lenders in connection with the enforcement (whether through negotiations, legal proceedings or otherwise) of this Agreement, any Note and the other documents to be delivered hereunder, including, without limitation, counsel fees and expenses in connection with the enforcement of rights under this Section 8.05(a). The Borrower's obligations under this Section 8.05(a) shall survive (x) the repayment of all amounts owing to the Lenders and the Administrative Agent under this Agreement and any Note and (y) the termination of this Agreement.

(b) Except as otherwise expressly provided to the contrary herein, if any payment of principal of, or Conversion of, any Eurodollar Rate Advance is made other than on the last day of the Interest Period for such Advance, as a result of a payment or Conversion pursuant to Section 2.08 or 2.11 or a prepayment pursuant to Section 2.09 or acceleration of the maturity of any amounts owing hereunder pursuant to Section 6.01 or upon an assignment made upon demand of the Borrower pursuant to Section 2.17(b) or for any other reason, the Borrower shall, upon demand by any Lender (with a copy of such demand to the Administrative Agent), pay to the Administrative Agent for the account of such Lender any amounts required to compensate such Lender for any additional losses, costs or expenses that it may reasonably incur as a result of such payment or Conversion, including, without limitation, any loss, cost or expense incurred by reason of the liquidation or redeployment of deposits or other funds acquired by any Lender to fund or maintain such Advance. The Borrower's obligations under this Section 8.05(b) shall survive the repayment of all other amounts owing to the Lenders and the Administrative Agent under this Agreement and any Note and the termination of this Agreement.

(c) The Borrower hereby agrees to indemnify and hold each Lender, the Administrative Agent and their respective Affiliates and their respective officers, directors, partners, employees and professional advisors (each, an "***Indemnified Person***") harmless from and against any and all claims, damages, liabilities, obligations, losses, penalties, costs or expenses (including reasonable attorney's fees and expenses, whether or not such Indemnified Person is named as a party to any proceeding or is otherwise subjected to judicial or legal process arising from any such proceeding) that any of them may incur or that may be claimed against any of them by any Person (including the Borrower) by reason of or in connection with or arising out of any investigation, litigation or proceeding related to this Agreement, any of the transactions contemplated herein and any use or proposed use by the Borrower of the proceeds of any Advance, except to the extent such claim, damage, liability, obligation, loss, penalty, cost or expense is found in a final, non-appealable judgment by a court of competent jurisdiction to have resulted from such Indemnified Person's gross negligence or willful misconduct. The Borrower's obligations under this Section 8.05(c) shall survive (x) the repayment of all amounts owing to the Lenders and the Administrative Agent under this Agreement and any Note and (y) the termination of this Agreement. If and to the extent that the obligations of the Borrower under this Section 8.05 (c) are unenforceable for any reason, the Borrower agrees to make the maximum payment in satisfaction of such obligations that are not unenforceable that is permissible under Applicable Law or, if less, such amount that may be ordered by a court of competent jurisdiction.

(d) To the extent permitted by law, the Borrower also agrees not to assert any claim against any Indemnified Person on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to actual or direct damages) in connection with, arising out of, or otherwise relating to this Agreement, any of the transactions contemplated herein or the actual or proposed use of the proceeds of the Advances.

SECTION 8.06. Right of Set-off.

Upon the occurrence and during the continuance of any Event of Default each Lender is hereby authorized at any time and from time to time, to the fullest extent permitted by law, to set

off and apply any and all deposits (general or special, time or demand, provisional or final, *excluding, however*, any payroll accounts maintained by the Borrower with such Lender if and to the extent that such Lender shall have expressly waived its set-off rights in writing in respect of such payroll account) at any time held and other indebtedness at any time owing by such Lender to or for the credit or the account of the Borrower against any and all of the obligations of the Borrower now or hereafter existing under this Agreement and any Note held by such Lender, whether or not such Lender shall have made any demand under this Agreement or such Note and although such obligations may be unmatured. Each Lender agrees promptly to notify the Borrower and the Administrative Agent after any such set-off and application made by such Lender, *provided* that the failure to give such notice shall not affect the validity of such set-off and application. The rights of each Lender under this Section 8.06 are in addition to other rights and remedies (including, without limitation, other rights of set-off) that such Lender may have.

SECTION 8.07. Binding Effect.

This Agreement shall become effective when it shall have been executed by the Borrower and the Administrative Agent and when the Administrative Agent shall have been notified by each Bank that such Bank has executed it and thereafter shall be binding upon and inure to the benefit of the Borrower, the Administrative Agent and each Lender and their respective successors and permitted assigns; *provided*, that the Borrower shall not have the right to assign its rights or obligations hereunder or any interest herein except (x) with the prior written consent of each Lender (and any such assignment (other than any assignment pursuant to the following clause (y)) without such consent shall be null and void *ab initio*) or (y) pursuant to Section 5.03(c).

SECTION 8.08. Assignments and Participations.

(a) ***Successors and Assigns Generally***. No Lender may assign or otherwise transfer any of its rights or obligations hereunder except (i) to an assignee in accordance with the provisions of subsection (b) of this Section 8.08, (ii) by way of participation in accordance with the provisions of subsection (d) of this Section 8.08, (iii) by way of pledge or assignment of a security interest subject to the restrictions of subsection (f) of this Section 8.08, or (iv) to an SPC in accordance with the provisions of subsection (g) of this Section 8.08 (and any other attempted assignment or transfer by any party hereto shall be null and void). Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto, their respective successors and assigns permitted hereby, Participants to the extent provided in subsection (d) of this Section 8.08 and, to the extent expressly contemplated hereby, the Related Parties of each of the Administrative Agent and the Lenders) any legal or equitable right, remedy or claim under or by reason of this Agreement.

(b) ***Assignments by Lenders***. Any Lender may at any time assign to one or more assignees all or a portion of its rights and obligations under this Agreement (including all or a portion of its Commitment and the Advances at the time owing to it); provided that any such assignment shall be subject to the following conditions:

(i) ***Minimum Amounts***.

(A) in the case of an assignment of the entire remaining amount of the assigning Lender's Commitment and/or the Advances at the time owing to it or contemporaneous assignments to related Approved Funds that equal at least the amount specified in subsection (b)(i)(B) of this Section 8.08 in the aggregate or in the case of an assignment to a Lender, an Affiliate of a Lender or an Approved Fund, no minimum amount need be assigned; and

(B) in any case not described in subsection (b)(i)(A) of this Section 8.08, the aggregate amount of the Commitment (which for this purpose includes Advances outstanding thereunder) or, if the applicable Commitment is not then in effect, the principal outstanding balance of the Advances of the assigning Lender subject to each such assignment (determined as of the date the Assignment and Assumption with respect to such assignment is delivered to the Administrative Agent or, if the "Trade Date" is specified in the Assignment and Assumption, as of the Trade Date) shall not be less than $5,000,000, or an integral multiple of $1,000,000 in excess thereof, unless each of the Administrative Agent and, so long as no Event of Default has occurred and is continuing, the Borrower otherwise consents (such consent not to be unreasonably withheld or delayed); *provided* that the Borrower shall be deemed to have consented to any such assignment unless it shall object thereto by giving written notice to the Administrative Agent within five Business Days after having received notice thereof.

(ii) ***Proportionate Amounts***. Each partial assignment shall be made as an assignment of a proportionate part of all the assigning Lender's rights and obligations under this Agreement with respect to the Advance or the Commitment assigned.

(iii) ***Required Consents***. No consent shall be required for any assignment except to the extent required by subsection (b)(i)(B) of this Section 8.08 and, in addition:

(A) the consent of the Borrower (such consent not to be unreasonably withheld or delayed) shall be required unless (x) an Event of Default has occurred and is continuing at the time of such assignment, or (y) such assignment is to a Lender, an Affiliate of a Lender or an Approved Fund; *provided* that the Borrower shall be deemed to have consented to any such assignment unless it shall object thereto by giving written notice to the Administrative Agent within five Business Days after having received notice thereof, and *provided, further*, that the Borrower's consent shall not be required during the primary syndication hereof; and

(B) the consent of the Administrative Agent (such consent not to be unreasonably withheld or delayed) shall be required for assignments if such assignment is to a Person that is not a Lender, an Affiliate of such Lender or an Approved Fund with respect to such Lender.

(iv) ***Assignment and Assumption***. The parties to each assignment shall execute and deliver to the Administrative Agent an Assignment and Assumption, together with a processing and recordation fee of $3,500 (to be paid by the assigning Lender, or, in the case of an assignment pursuant to Section 2.17(b), the Borrower); *provided* that the Administrative Agent may, in its sole discretion, elect to waive such processing and recordation fee in the case of any assignment. The assignee, if it is not a Lender, shall deliver to the Administrative Agent an Administrative Questionnaire.

(v) ***No Assignment to Certain Persons***. No such assignment shall be made to (A) the Borrower or any of the Borrower's Affiliates or Subsidiaries or (B) to any Defaulting Lender or any of its Subsidiaries, or any Person who, upon becoming a Lender hereunder, would constitute any of the foregoing Persons described in this clause (B).

(vi) ***No Assignment to Natural Persons***. No such assignment shall be made to a natural Person (or to a holding company, investment vehicle or trust for, or owned and operated for the primary benefit of, a natural Person).

(vii) ***Certain Additional Payments***. In connection with any assignment of rights and obligations of any Defaulting Lender hereunder, no such assignment shall be effective unless and until, in addition to the other conditions thereto set forth herein, the parties to the assignment shall make such additional payments to the Administrative Agent in an aggregate amount sufficient, upon distribution thereof as appropriate (which may be outright payment, purchases by the assignee of participations or subparticipations, or other compensating actions, including funding, with the consent of the Borrower and the Administrative Agent, the applicable pro rata share of Advances previously requested but not funded by the Defaulting Lender, to each of which the applicable assignee and assignor hereby irrevocably consent), to (x) pay and satisfy in full all payment liabilities then owed by such Defaulting Lender to the Administrative Agent and each other Lender hereunder (and interest accrued thereon), and (y) acquire (and fund as appropriate) its full pro rata share of all Advances in accordance with its Percentage. Notwithstanding the foregoing, in the event that any assignment of rights and obligations of any Defaulting Lender hereunder shall become effective under Applicable Law without compliance with the provisions of this subsection, then the assignee of such interest shall be deemed to be a Defaulting Lender for all purposes of this Agreement until such compliance occurs.

Subject to acceptance and recording thereof by the Administrative Agent pursuant to subsection (c) of this Section 8.08, from and after the effective date specified in each Assignment and Assumption, the assignee thereunder shall be a party to this Agreement and, to the extent of the interest assigned by such Assignment and Assumption, have the rights and obligations of a Lender under this Agreement, and the assigning Lender thereunder shall, to the extent of the interest assigned by such Assignment and Assumption, be released from its obligations under this Agreement (and, in the case of an Assignment and Assumption covering all of the assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto) but shall continue to be entitled to the benefits of Sections 2.10, 2.13 and 8.05 with respect to facts and circumstances occurring prior to the effective date of such assignment; provided, that except to the extent otherwise expressly

agreed by the affected parties, no assignment by a Defaulting Lender will constitute a waiver or release of any claim of any party hereunder arising from that Lender's having been a Defaulting Lender. Any assignment or transfer by a Lender of rights or obligations under this Agreement that does not comply with this subsection shall be treated for purposes of this Agreement as a sale by such Lender of a participation in such rights and obligations in accordance with subsection (d) of this Section 8.08.

(c) ***Register***. The Administrative Agent, acting solely for this purpose as an agent of the Borrower, shall maintain at its address referred to in Section 8.02, a copy of each Assignment and Assumption delivered to it and a register for the recordation of the names and addresses of the Lenders, and the Commitments of, and principal amounts (and stated interest) of the Advances owing to, each Lender pursuant to the terms hereof from time to time (the "***Register***"). The entries in the Register shall be conclusive absent manifest error, and the Borrower, the Administrative Agent and the Lenders shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender hereunder for all purposes of this Agreement. The Register shall be available for inspection by the Borrower and any Lender, at any reasonable time and from time to time upon reasonable prior notice.

(d) ***Participations***. Any Lender may at any time, without the consent of, or notice to, the Borrower or the Administrative Agent, sell participations to any Person (other than a Person described in Section 8.08(b)(v) or (vi)) (each, a "***Participant***") in all or a portion of such Lender's rights and/or obligations under this Agreement (including all or a portion of its Commitment and/or the Advances owing to it); *provided* that (i) such Lender's obligations under this Agreement shall remain unchanged, (ii) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations, and (iii) the Borrower, the Administrative Agent and the Lenders shall continue to deal solely and directly with such Lender in connection with such Lender's rights and obligations under this Agreement. For the avoidance of doubt, each Lender shall be responsible for the indemnity under Section 7.06 with respect to any payments made by such Lender to its Participant(s).

Any agreement or instrument pursuant to which a Lender sells such a participation shall provide that such Lender shall retain the sole right to enforce this Agreement and to approve any amendment, modification or waiver of any provision of this Agreement; *provided* that such agreement or instrument may provide that such Lender will not, without the consent of the Participant, agree to any amendment, modification or waiver described in clauses (a) through (g) of Section 8.01 that affects such Participant. The Borrower agrees that each Participant shall be entitled to the benefits of Sections 2.10, 2.13 and 8.05(b) (subject to the requirements and limitations therein, including the requirements under Section 2.13(g) (it being understood that the documentation required under Section 2.13(g) shall be delivered to the participating Lender)) to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to subsection (b) of this Section; *provided* that such Participant (A) agrees to be subject to the provisions of Section 2.17 as if it were an assignee under subsection (b) of this Section; and (B) shall not be entitled to receive any greater payment under Section 2.10 or 2.13, with respect to any participation, than its participating Lender would have been entitled to receive, except to the extent (x) such entitlement to receive a greater payment results from a Change in Law that occurs after the Participant

acquired the applicable participation and (y) the sale to such Participant is made with the Borrower's prior written consent. Each Lender that sells a participation to any Participant agrees, at the Borrower's request and expense, to use reasonable efforts to cooperate with the Borrower to effectuate the provisions of Section 2.17(b) with respect to such Participant. To the extent permitted by law, each Participant also shall be entitled to the benefits of Section 8.06 as though it were a Lender; *provided* that such Participant agrees to be subject to Section 2.14 as though it were a Lender. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Borrower, maintain a register on which it enters the name and address of each Participant and the principal amounts (and stated interest) of each Participant's interest in the Commitments, Advances or other obligations under the Loan Documents (the "***Participant Register***"); *provided* that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any Participant or any information relating to a Participant's interest in any Commitments, Advances or its other obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such Commitment, Advance or other obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, the Administrative Agent (in its capacity as Administrative Agent) shall have no responsibility for maintaining a Participant Register. A Participant that would be a Foreign Lender if it were a Lender shall not be entitled to the benefits of Section 2.13 unless the Borrower is notified of the participation sold to such Participant and such Participant agrees, for the benefit of the Borrower, to comply with Section 2.13(g) as though it were a Lender.

(e) ***Certain Pledges***. Any Lender may at any time pledge or assign a security interest in all or any portion of its rights under this Agreement to secure obligations of such Lender, including any pledge or assignment to secure obligations to a Federal Reserve Bank or other central banking authority; *provided* that no such pledge or assignment shall release such Lender from any of its obligations hereunder or substitute any such pledgee or assignee for such Lender as a party hereto.

(f) ***Disclosure of Certain Information***. Any Lender may, in connection with any assignment or participation or proposed assignment or participation pursuant to this Section 8.08, disclose to the assignee or participant or proposed assignee or participant, any information relating to the Borrower furnished to such Lender by or on behalf of the Borrower; *provided*, that prior to any such disclosure, the assignee or participant or proposed assignee or participant shall agree to preserve the confidentiality of any confidential information relating to the Borrower received by it from such Lender.

(g) ***Special Purpose Funding Vehicles***. Notwithstanding anything to the contrary contained herein, any Lender (a "***Granting Lender***") may grant to a special purpose funding vehicle identified as such in writing from time to time by the Granting Lender to the Administrative Agent and the Borrower (an "***SPC***") the option to provide all or any part of any Advance that such Granting Lender would otherwise be obligated to make pursuant to this Agreement; *provided* that (i) nothing herein shall constitute a commitment by any SPC to fund any Advance, and (ii) if an SPC elects not to exercise such option or otherwise fails to make all or any part of such Advance, the Granting

Lender shall be obligated to make such Advance pursuant to the terms hereof or, if it fails to do so, to make such payment to the Administrative Agent as is required under Section 2.12(e). Each party hereto hereby agrees that (A) neither the grant to any SPC nor the exercise by any SPC of such option shall increase the costs or expenses or otherwise increase or change the obligations of the Borrower under this Agreement (including its obligations under Section 2.10), (B) no SPC shall be liable for any indemnity or similar payment obligation under this Agreement for which a Lender would be liable, and (C) the Granting Lender shall for all purposes, including the approval of any amendment, waiver or other modification of any provision of any Loan Document, remain the lender of record hereunder. The making of an Advance by an SPC hereunder shall utilize the Commitment of the Granting Lender to the same extent, and as if, such Advance were made by such Granting Lender. In furtherance of the foregoing, each party hereto hereby agrees (which agreement shall survive the termination of this Agreement) that, prior to the date that is one year and one day after the payment in full of all outstanding commercial paper or other senior debt of any SPC, it will not institute against, or join any other Person in instituting against, such SPC any bankruptcy, reorganization, arrangement, insolvency, or liquidation proceeding under the laws of the United States or any State thereof. Notwithstanding anything to the contrary contained herein, any SPC may (1) with notice to, but without prior consent of, the Borrower and the Administrative Agent and with the payment of a processing fee in the amount of $3,500 (which processing fee may be waived by the Administrative Agent in its sole discretion), assign all or any portion of its right to receive payment with respect to any Advance to the Granting Lender and (2) disclose on a confidential basis any non-public information relating to its funding of Advances to any rating agency, commercial paper dealer or provider of any surety or guarantee or credit or liquidity enhancement to such SPC.

SECTION 8.09. Governing Law.

THIS AGREEMENT AND EACH OTHER LOAN DOCUMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

SECTION 8.10. Consent to Jurisdiction; Waiver of Jury Trial.

(a) To the fullest extent permitted by law, the Borrower hereby irrevocably (i) submits to the exclusive jurisdiction of any New York State or Federal court sitting in the Borough of Manhattan, New York City and any appellate court from any thereof in any action or proceeding arising out of or relating to this Agreement or any other Loan Document and (ii) agrees that all claims in respect of such action or proceeding may be heard and determined in such New York State court or in such Federal court. The Borrower hereby irrevocably waives, to the fullest extent permitted by law, the defense of an inconvenient forum to the maintenance of such action or proceeding. The Borrower also irrevocably consents, to the fullest extent permitted by law, to the service of any and all process in any such action or proceeding by the mailing by certified mail of copies of such process to the Borrower at its address specified in Section 8.02. The Borrower agrees, to the fullest extent permitted by law, that a final judgment in any such action or proceeding shall

be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

(b) **THE BORROWER, THE ADMINISTRATIVE AGENT AND THE LENDERS HEREBY WAIVE ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR RELATING TO THIS AGREEMENT, ANY OTHER LOAN DOCUMENT OR ANY OTHER INSTRUMENT OR DOCUMENT DELIVERED HEREUNDER OR THEREUNDER.**

SECTION 8.11. Severability.

Any provision of this Agreement that is prohibited, unenforceable or not authorized in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition, unenforceability or non-authorization without invalidating the remaining provisions hereof or affecting the validity, enforceability or legality of such provision in any other jurisdiction.

SECTION 8.12. Entire Agreement.

This Agreement and the Notes issued hereunder constitute the entire contract among the parties relative to the subject matter hereof. Any previous agreement among the parties with respect to the subject matter hereof is superseded by this Agreement, except (i) as expressly agreed in any such previous agreement and (ii) for the Fee Letters. Except as is expressly provided for herein, nothing in this Agreement, expressed or implied, is intended to confer upon any party other than the parties hereto any rights, remedies, obligations or liabilities under or by reason of this Agreement.

SECTION 8.13. Execution in Counterparts; Electronic Execution of Assignments and Certain Other Documents.

(a) This Agreement may be executed in any number of counterparts and by different parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

(b) The words “execute”, “execution”, “signed”, “signature” and words of like import in or related to any document to be signed in connection with this Agreement and the transactions contemplated hereby (including, without limitation, Assignment and Assumptions, amendments or other modifications, Notices of Borrowing, Notices of Conversion, Notices of Prepayment, waivers and consents) shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Administrative Agent or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any Applicable Law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act; *provided* that, notwithstanding anything contained herein to the contrary, the

Administrative Agent is under no obligation to agree to accept electronic signatures in any form or in any format (other than, for the avoidance of doubt, manually signed documents sent by facsimile pursuant to Section 8.02 and other manually signed Communications sent pursuant to Section 8.03) unless expressly agreed to by the Administrative Agent pursuant to procedures approved by it.

SECTION 8.14. USA PATRIOT Act Notice.

Each Lender that is subject to the Patriot Act and the Administrative Agent (for itself and not on behalf of any Lender) hereby notifies the Borrower pursuant to the requirements of the Patriot Act that it is required to obtain, verify and record information that identifies the Borrower, which information includes the name and address of the Borrower and other information that will allow such Lender or the Administrative Agent, as applicable, to identify the Borrower in accordance with the Patriot Act.

SECTION 8.15. No Fiduciary Duty.

The Administrative Agent, each Lender and their respective Affiliates (collectively, the "***Credit Parties***"), may have economic interests that conflict with those of the Borrower, their stockholders and/or their affiliates. The Borrower agrees that nothing in the Loan Documents or otherwise will be deemed to create an advisory, fiduciary or agency relationship or fiduciary or other implied duty between any Credit Party, on the one hand, and the Borrower, its stockholders or its affiliates, on the other. The Borrower acknowledges and agrees that (i) the transactions contemplated by the Loan Documents (including the exercise of rights and remedies hereunder and thereunder) are arm's-length commercial transactions between the Credit Parties, on the one hand, and the Borrower, on the other, and (ii) in connection therewith and with the process leading thereto, (x) no Credit Party has assumed an advisory or fiduciary responsibility in favor of the Borrower, its stockholders or its affiliates with respect to the transactions contemplated hereby (or the exercise of rights or remedies with respect thereto) or the process leading thereto (irrespective of whether any Credit Party has advised, is currently advising or will advise the Borrower, its stockholders or its Affiliates on other matters) or any other obligation to the Borrower except the obligations expressly set forth in the Loan Documents and (y) each Credit Party is acting solely as principal and not as the agent or fiduciary of the Borrower, its management, stockholders, creditors or any other Person. The Borrower acknowledges and agrees that it has consulted its own legal and financial advisors to the extent it deemed appropriate and that it is responsible for making its own independent judgment with respect to such transactions and the process leading thereto. The Borrower agrees that it will not claim that any Credit Party has rendered advisory services of any nature or respect, or owes a fiduciary or similar duty to the Borrower, in connection with such transaction or the process leading thereto.

SECTION 8.16. Acknowledgment and Consent to Bail-In of EEA Financial Institutions.

Solely to the extent any Lender that is an EEA Financial Institution is a party to this Agreement and notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges

that any liability of any Lender that is an EEA Financial Institution arising under any Loan Document, to the extent such liability is unsecured, may be subject to the Write-Down and Conversion Powers of an EEA Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by an EEA Resolution Authority to any such liabilities arising hereunder which may be payable to it by any Lender hereto that is an EEA Financial Institution; and

(b) the effects of any Bail-in Action on any such liability, including, if applicable:

(i) a reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such EEA Financial Institution, its parent undertaking, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the Write-Down and Conversion Powers of any EEA Resolution Authority.

SECTION 8.17. Treatment of Certain Information; Confidentiality.

Each of the Administrative Agent and the Lenders agrees to maintain the confidentiality of the Information (as defined below), except that Information may be disclosed (a) to its Affiliates, its auditors and its Related Parties, including, without limitation, their respective accountants, legal counsel and other advisors (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such Information and instructed to keep such Information confidential), (b) to the extent required or requested by any regulatory authority purporting to have jurisdiction over such Person or its Related Parties (including any self-regulatory authority, such as the National Association of Insurance Commissioners), (c) to the extent required by Applicable Laws or by any subpoena or similar legal process, (d) to any other party hereto, (e) in connection with the exercise of any remedies hereunder or under any other Loan Document or any action or proceeding relating to this Agreement or any other Loan Document or the enforcement of rights hereunder or thereunder, (f) subject to an agreement containing provisions substantially the same as those of this Section, to (i) any assignee of or Participant in, or any prospective assignee of or Participant in, any of its rights and obligations under this Agreement or (ii) any actual or prospective party (or its Related Parties) to any swap, derivative or other transaction under which payments are to be made by reference to the Borrower and its obligations, this Agreement or payments hereunder, (g) on a confidential basis to (i) any rating agency in connection with rating the Borrower or its Subsidiaries or the credit facilities provided hereunder or (ii) the CUSIP Service Bureau or any similar agency in connection with the issuance and monitoring of CUSIP numbers or other market identifiers with respect to the credit facilities provided hereunder, (h) with the consent of the Borrower or (i) to the extent such Information (x) becomes publicly available other

than as a result of a breach of this Section or (y) becomes available to the Administrative Agent, any Lender or any of their respective Affiliates on a non-confidential basis from a source other than the Borrower; in the event of any required disclosure by the Administrative Agent or any Lender under clause (c) above, the Administrative Agent or such Lender, as applicable, agrees to use reasonable efforts to inform the Borrower as promptly as practicable to the extent legally permitted to do so. In addition, the Administrative Agent and the Lenders may disclose the existence of this Agreement and information about this Agreement to market data collectors and similar service providers to the lending industry, such information to consist of deal terms and other information customarily found in Gold Sheets and similar industry publications.

For purposes of this Section, "***Information***" means all information received from the Borrower or any of its Subsidiaries relating to the Borrower or any of its Subsidiaries or any of their respective businesses, other than any such information that is available to the Administrative Agent or any Lender on a non-confidential basis prior to disclosure by the Borrower or such Subsidiary, *provided* that, in the case of information received from the Borrower or any of its Subsidiaries after the date hereof, such information is clearly identified at the time of delivery as confidential. Any Person required to maintain the confidentiality of Information as provided in this Section shall be considered to have complied with its obligation to do so if such Person has exercised the same degree of care to maintain the confidentiality of such Information as such Person would accord to its own confidential information.

EACH LENDER ACKNOWLEDGES THAT INFORMATION (AS DEFINED IN THE IMMEDIATELY PRECEDING PARAGRAPH) FURNISHED TO IT BY THE BORROWER OR THE ADMINISTRATIVE AGENT PURSUANT TO, OR IN THE COURSE OF ADMINISTERING, THIS AGREEMENT (INCLUDING, WITHOUT LIMITATION, REQUESTS FOR WAIVERS AND AMENDMENTS) MAY INCLUDE MATERIAL NON-PUBLIC INFORMATION CONCERNING THE BORROWER AND ITS AFFILIATES OR THEIR RESPECTIVE SECURITIES, AND CONFIRMS THAT IT HAS DEVELOPED COMPLIANCE PROCEDURES REGARDING THE USE OF MATERIAL NON-PUBLIC INFORMATION AND THAT IT WILL HANDLE SUCH MATERIAL NON-PUBLIC INFORMATION IN ACCORDANCE WITH THOSE PROCEDURES AND APPLICABLE LAW, INCLUDING FEDERAL AND STATE SECURITIES LAWS.

[Signatures to Follow]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized, as of the date first above written.

FIRSTENERGY CORP.

By */s/ Steven R. Staub*
Name: Steven R. Staub
Title: Vice President and Treasurer

THE BANK OF NOVA SCOTIA, as Administrative Agent and a Bank

By */s/ Nick Giarratano*
Name: Nick Giarratano
Title: Director

BANK OF AMERICA, N.A., as a Bank

By */s/ J.B. Meanor*
Name: JB Meanor
Title: Managing Director

MIZUHO BANK, LTD., as a Bank

By */s/ Donna DeMagistris*
Name: Donna DeMagistris
Title: Authorized Signatory

JPMORGAN CHASE BANK, N.A., as a Bank

By */s/ Juan Javellana*
Name: Juan Javellana
Title: Executive Director

PNC BANK, NATIONAL ASSOCIATION, as Bank

By */s/ Thomas E. Redmond*
Name: Thomas E. Redmond
Title: Managing Director

MUFG BANK, LTD. (formerly known as The Bank of Tokyo-Mitsubishi UFJ, Ltd.), as a Bank

By */s/ Jeffrey Flagg*
Name: Jeffrey Flagg
Title: Director

CITIBANK, N.A., as a Bank

By */s/ Richard D. Rivera*
Name: Richard Rivera
Title: Vice President

BARCLAYS BANK PLC, as a Bank

By */s/ Sydney G. Dennis*
Name: Sydney G. Dennis
Title: Director

CANADIAN IMPERIAL BANK OF
COMMERCE, NEW YORK BRANCH, as a Bank

By */s/ Gordon R. Eadon*
Name: Gordon R. Eadon
Title: Authorized Signatory

By */s/ Joshua Hogarth*
Name: Joshua Hogarth
Title: Authorized Signatory

MORGAN STANLEY BANK, N.A., as a Bank

By */s/ Michael King*
Name: Michael King
Title: Authorized Signatory

SUMITOMO MITSUI BANKING CORPORATION, as a Bank

By */s/ James Weinstein*
Name: James Weinstein
Title: Managing Director

TD BANK, N.A., as a Bank

By */s/ Shannon Batchman*
Name: Shannon Batchman
Title: Senior Vice President

U.S. BANK NATIONAL ASSOCIATION, as a Bank

By */s/ Eric J. Cosgrove*
Name: Eric J. Cosgrove
Title: Senior Vice President

KEYBANK NATIONAL ASSOCIATION, as a Bank

By */s/ Renee M. Bonnell*
Name: Renee M. Bonnell
Title: Vice President

SANTANDER BANK, N.A., as a Bank

By */s/ Andres Barbosa*
Andres Barbosa
Executive Director

By */s/ Daniel Kostman*
Daniel Kostman
Executive Director

FIFTH THIRD BANK, as a Bank

By */s/ William Merritt*
Name: William Merritt
Title: Director II

INDUSTRIAL AND COMMERCIAL BANK OF CHINA LIMITED, NEW YORK BRANCH, as a Bank

By */s/ C. McKay*
Name: Christopher McKay
Title: Director

By */s/ Pinyen Shih*
Name: Pinyen Shih
Title: Executive Director

THE BANK OF NEW YORK MELLON, as a Bank

By */s/ Richard K. Fronapfel, Jr.*
Name: Richard K. Fronapfel, Jr.
Title: Director

CITIZENS BANK, N.A., as a Bank

By */s/ Stephen A. Maenhout*
Name: Stephen A. Maenhout
Title: Senior Vice President

THE HUNTINGTON NATIONAL BANK, as a Bank

By: */s/ Brian H. Gallagher*
Name: Brian H. Gallagher
Title: Managing Director

FIRST NATIONAL BANK OF PENNSYLVANIA,
as a Bank

By: */s/ Robert E. Henler*

Name: Robert E. Henler
Title: Vice Pres.

SCHEDULE I

List of Commitments and Lending Offices

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
Bank of America, N.A.	$65,468,750.00	100 North Tryon Street NC1-007-17-18 Charlotte, NC 28255-0001 Contact: Jerry Wells Phone: Email:	Same as Domestic Lending Office
Mizuho Bank, Ltd.	$85,468,750.00	1251 Avenue of the Americas New York, NY 10020 Contact: Adam Cohen Phone: Fax: Email:	Same as Domestic Lending Office
JPMorgan Chase Bank, N.A.	$75,468,750.00	500 Stanton Christiana Road, Ops 2, Floor 3 Newark, DE 19713-2107 Contact: Jiabei Han Phone: Email:	Same as Domestic Lending Office
PNC Bank, National Association	$75,468,750.00	249 First Avenue Pittsburgh, PA 15222 Contact: Maja Kuljic Phone: Fax: Email:	Same as Domestic Lending Office
MUFG Bank, Ltd.	$75,468,750.00	1251 Avenue of the Americas New York, NY 10020-1104 Contact: Nadia Sleiman Phone: Email:	Same as Domestic Lending Office
The Bank of Nova Scotia	$75,468,750.00	40 King Street West, 55th Floor Toronto, ON Canada M5H 1H1 Contact: Nick Giarratano Phone: Fax: Email:	Same as Domestic Lending Office

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
Citibank, N.A.	$75,468,750.00	388 Greenwich St. New York, NY 10013 Contact: Amit Vasani Phone: Email:	Same as Domestic Lending Office
Barclays Bank PLC	$75,468,750.00	745 7th Avenue New York, NY 10019 Contact: Leah Kaniampuram Phone: Fax: Email:	Same as Domestic Lending Office
Canadian Imperial Bank of Commerce, New York Branch	$50,000,000.00	30 Madison Avenue, 5th Floor New York, NY 10017 Contact: Gordon Eadon Phone: Fax: Email:	Same as Domestic Lending Office
Morgan Stanley Bank, N.A.	$56,250,000.00	1300 Thames Street Wharf, 4th Floor Baltimore, MD 21231 Contact: Morgan Stanley Loan Servicing Phone: Fax: Email:	Same as Domestic Lending Office
Sumitomo Mitsui Banking Corporation	$75,000,000.00	277 Park Avenue New York, NY 10172 Contact: Emily Estevez Phone: Fax: Email:	Same as Domestic Lending Office
TD Bank, N.A.	$75,000,000.00	444 Madison Avenue, 2nd Floor New York, NY 10022 Contact: Shannon Batchman Phone: Email:	Same as Domestic Lending Office

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
U.S. Bank National Association	$75,000,000.00	425 Walnut Street Cincinnati, Ohio 45202 Contact: Eric Cosgrove Phone: Fax: Email:	Same as Domestic Lending Office
KeyBank National Association	$75,000,000.00	127 Public Square Cleveland, OH 44114 Contact: Renee Bonnell Phone: (Email:	Same as Domestic Lending Office
Santander Bank, N.A.	$60,000,000.00	45 E. 53rd Street New York, NY 10022 Contact: Kyle Hoffman Phone: Email:	Same as Domestic Lending Office
Fifth Third Bank	$37,500,000.00	38 Fountain Square Plaza Cincinnati, Ohio 45263 Contact: Mark Stapleton Phone: Email:	Same as Domestic Lending Office
Industrial and Commercial Bank of China Limited, New York Branch	$37,500,000.00	1633 Broadway, 28th Floor New York, NY 10019 Contact: Yung Tuen Lee Phone: Fax:	Same as Domestic Lending Office
The Bank of New York Mellon	$37,500,000.00	225 Liberty Street, 17th Floor New York, NY 10286 Contact: Richard Fronapfel Phone: Fax: Email:	Same as Domestic Lending Office
Citizens Bank, N.A.	$30,000,000.00	71 S. Wacker Drive, 29th Floor Chicago, IL 60606 Contact: Steve Maenhout Phone: Email:	Fax: 855-724-2361

Lender	**Commitment Amount**	**Domestic Lending Office**	**Eurodollar Lending Office**
The Huntington National Bank	$15,000,000.00	41 S. High Street Columbus, OH 43215 Contact: Martin McGinty Phone: Email:	Same as Domestic Lending Office
First National Bank of Pennsylvania	$22,500,000.00	4140 East State Street Hermitage, PA 15148 Contact: Robert E Heuler Phone: Fax: Email:	Same as Domestic Lending Office
TOTAL	**$1,250,000,000.00**		

SCHEDULE II

Administrative Agent's Addresses for Notices

Administrative Agent's Office
(for payments and Notices of Borrowing, Notices of Conversion and
Notices of Prepayment):

The Bank of Nova Scotia
Address: 720 King Street West, 2nd Floor
Attention: GWO Loan Operations
Telephone:
Facsimile:
Electronic Mail:

The Bank of Nova Scotia
ABA#:
Account No.:
Attention: U.S. Loans Operations
Reference: FirstEnergy Corp.

Other Notices as Administrative Agent:

The Bank of Nova Scotia
40 King Street W
Toronto, On M5W 1H1
Attention: Stephen Ort
Telephone:
Electronic Mail:

EXHIBIT A
Form of Assignment and Assumption

ASSIGNMENT AND ASSUMPTION

This Assignment and Assumption (this "***Assignment and Assumption***") is dated as of the Effective Date set forth below and is entered into by and between [the][each] Assignor identified in item 1 below ([the][each, an] "***Assignor***") and [the][each] Assignee identified in item 2 below ([the][each, an] "***Assignee***"). [It is understood and agreed that the rights and obligations of [the Assignors][the Assignees] hereunder are several and not joint.] Capitalized terms used but not defined herein shall have the meanings given to them in the Term Loan Credit Agreement identified below (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), receipt of a copy of which is hereby acknowledged by [the][each] Assignee. The Standard Terms and Conditions set forth in Annex 1 attached hereto are hereby agreed to and incorporated herein by reference and made a part of this Assignment and Assumption as if set forth herein in full.

For an agreed consideration, [the][each] Assignor hereby irrevocably sells and assigns to [the Assignee][the respective Assignees], and [the][each] Assignee hereby irrevocably purchases and assumes from [the Assignor][the respective Assignors], subject to and in accordance with the Standard Terms and Conditions and the Credit Agreement, as of the Effective Date inserted by the Administrative Agent as contemplated below (i) all of [the Assignor's][the respective Assignors'] rights and obligations in [its capacity as a Lender][their respective capacities as Lenders] under the Credit Agreement and any other documents or instruments delivered pursuant thereto to the extent related to the amount and percentage interest identified below of all of such outstanding rights and obligations of [the Assignor][the respective Assignors] under the Credit Agreement, and (ii) to the extent permitted to be assigned under Applicable Law, all claims, suits, causes of action and any other right of [the Assignor (in its capacity as a Lender)][the respective Assignors (in their respective capacities as Lenders)] against any Person, whether known or unknown, arising under or in connection with the Credit Agreement, any other documents or instruments delivered pursuant thereto or the loan transactions governed thereby or in any way based on or related to any of the foregoing, including, but not limited to, contract claims, tort claims, malpractice claims, statutory claims and all other claims at law or in equity related to the rights and obligations sold and assigned pursuant to clause (i) above (the rights and obligations sold and assigned by [the][any] Assignor to [the][any] Assignee pursuant to clauses (i) and (ii) above being referred to herein collectively as [the][an] "***Assigned Interest***"). Each such sale and assignment is without recourse to [the][any] Assignor and, except as expressly provided in this Assignment and Assumption, without representation or warranty by [the][any] Assignor.

1. Assignor[s]: _____

_____

[Assignor [is] [is not] a Defaulting Lender]

2.Assignee[s]: _____

_____

[for each Assignee, indicate [Affiliate][Approved Fund] of [*identify Lender*]

3. Borrower: FirstEnergy Corp.

4.Administrative Agent: The Bank of Nova Scotia, as the administrative agent under the Credit Agreement

5.Credit Agreement: The $1,250,000,000 Term Loan Credit Agreement, dated as of October 19, 2018, among FirstEnergy Corp., as Borrower, the Lenders parties thereto and The Bank of Nova Scotia, as Administrative Agent

6.Assigned Interest[s]:

Assignor[s]	Assignee[s]	Aggregate Amount of Commitment/Advances for all Lenders	Amount of Commitment/Advances Assigned[8]	Percentage Assigned of Commitment/ Advances	CUSIP Number
		$	$	%	
		$	$	%	
		$	$	%	

[7. Trade Date: _____]

Effective Date: _____ ___, 201__ [TO BE INSERTED BY ADMINISTRATIVE AGENT AND WHICH SHALL BE THE EFFECTIVE DATE OF RECORDATION OF TRANSFER IN THE REGISTER THEREFOR.]

The terms set forth in this Assignment and Assumption are hereby agreed to:

ASSIGNOR[S]

[NAME OF ASSIGNOR]

By_____
Name:
Title:

[NAME OF ASSIGNOR]

By_____
Name:
Title:

ASSIGNEE[S]

[NAME OF ASSIGNEE]

By:_____
Name:
Title:

[NAME OF ASSIGNEE]

By:_____
Name:
Title:

[Consented to and] Accepted:

THE BANK OF NOVA SCOTIA, as
Administrative Agent

By: _____
Name:
Title:

Consented to:

[FIRSTENERGY CORP.

By_____
Name:
Title:]

$1,250,000,000 Term Loan Credit Agreement, dated as of October 19, 2018, among FirstEnergy Corp., as Borrower, the Lenders parties thereto and The Bank of Nova Scotia, as Administrative Agent

STANDARD TERMS AND CONDITIONS FOR
ASSIGNMENT AND ASSUMPTION

1. ***Representations and Warranties***.

1.1 ***Assignor[s]***. [The][Each] Assignor (a) represents and warrants that (i) it is the legal and beneficial owner of [the][the relevant] Assigned Interest, (ii) [the][such] Assigned Interest is free and clear of any lien, encumbrance or other adverse claim, (iii) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and (iv) it is [not] a Defaulting Lender; and (b) assumes no responsibility with respect to (i) any statements, warranties or representations made in or in connection with the Credit Agreement or any other Loan Document, (ii) the execution, legality, validity, enforceability, genuineness, sufficiency or value of the Loan Documents or any collateral thereunder, (iii) the financial condition of the Borrower, any of its Subsidiaries or Affiliates or any other Person obligated in respect of any Loan Document, or (iv) the performance or observance by the Borrower, any of its Subsidiaries or Affiliates or any other Person of any of their respective obligations under any Loan Document.

1.2. ***Assignee[s]***. [The][Each] Assignee (a) represents and warrants that (i) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and to become a Lender under the Credit Agreement, (ii) it meets all the requirements to be an assignee under Section 8.08(b)(iii), (v) and (vi) of the Credit Agreement (subject to such consents, if any, as may be required under Section 8.08(b)(iii) of the Credit Agreement), (iii) from and after the Effective Date, it shall be bound by the provisions of the Credit Agreement as a Lender thereunder and, to the extent of [the][the relevant] Assigned Interest, shall have the obligations of a Lender thereunder, (iv) it is sophisticated with respect to decisions to acquire assets of the type represented by the Assigned Interest and either it, or the Person exercising discretion in making its decision to acquire the Assigned Interest, is experienced in acquiring assets of such type, (v) it has received a copy of the Credit Agreement, and has received or has been accorded the opportunity to receive copies of the most recent financial statements delivered pursuant to Section 5.01(g) thereof, as applicable, and such other documents and information as it deems appropriate to make its own credit analysis and decision to enter into this Assignment and Assumption and to purchase [the][such] Assigned Interest, (vi) it has, independently and without reliance upon the Administrative Agent or any other Lender and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Assignment and Assumption and to purchase [the][such] Assigned Interest, and (vii) if it is not a U.S. Person, attached to the Assignment and Assumption is any documentation required to be delivered by it pursuant to the terms of the Credit Agreement (including pursuant to Section 2.13(g) of the Credit Agreement), duly completed and executed by

[the][such] Assignee; (b) appoints and authorizes the Administrative Agent to take such action as agent on its behalf and to exercise such powers under the Loan Documents as are delegated to the Administrative Agent by the terms thereof, together with such powers as are reasonably incidental thereto; and (c) agrees that (i) it will, independently and without reliance on the Administrative Agent, [the][any] Assignor or any other Lender, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Loan Documents, and (ii) it will perform in accordance with their terms all of the obligations which by the terms of the Loan Documents are required to be performed by it as a Lender.

2. ***Payments***. From and after the Effective Date, the Administrative Agent shall make all payments in respect of [the][each] Assigned Interest (including payments of principal, interest, fees and other amounts) to [the][the relevant] Assignor for amounts which have accrued to but excluding the Effective Date and to [the][the relevant] Assignee for amounts which have accrued from and after the Effective Date. Notwithstanding the foregoing, the Administrative Agent shall make all payments of interest, fees or other amounts paid or payable in kind from and after the Effective Date to [the][the relevant] Assignee.

3. ***General Provisions***. This Assignment and Assumption shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and assigns. This Assignment and Assumption may be executed in any number of counterparts, which together shall constitute one instrument. Delivery of an executed counterpart of a signature page of this Assignment and Assumption by facsimile shall be effective as delivery of a manually executed counterpart of this Assignment and Assumption. This Assignment and Assumption shall be governed by, and construed in accordance with, the law of the State of New York.

EXHIBIT B
Form of Note

PROMISSORY NOTE

U.S.$[_____] _____ __, 20__

FOR VALUE RECEIVED, the undersigned, FIRSTENERGY CORP., an Ohio corporation (the "***Borrower***"), HEREBY PROMISES TO PAY to [_____] (the "***Lender***") for the account of its Applicable Lending Office (such term and other capitalized terms herein being used as defined in the Credit Agreement referred to below), or its registered assigns, the principal sum of U.S.$[_____] or, if less, the aggregate principal amount of the Advances made by the Lender to the Borrower pursuant to the Credit Agreement outstanding on the Maturity Date, payable on the Maturity Date.

The Borrower promises to pay interest on the unpaid principal amount of each Advance from the date of such Advance until such principal amount is paid in full, at such interest rates, and payable at such times, as are specified in the Credit Agreement.

Both principal and interest are payable in lawful money of the United States of America to The Bank of Nova Scotia, as Administrative Agent, at **[INSERT PAYMENT ADDRESS]**, in same day funds. Each Advance made by the Lender to the Borrower pursuant to the Credit Agreement, and all payments made on account of principal thereof, shall be recorded by the Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Promissory Note.

This Promissory Note is one of the Notes referred to in, and is entitled to the benefits of, the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among the Borrower, the Lenders party thereto and The Bank of Nova Scotia, as Administrative Agent for the Lenders thereunder. The Credit Agreement, among other things, (i) provides for the making of Advances by the Lender to the Borrower from time to time in an aggregate amount not to exceed at any time outstanding the Dollar amount first above mentioned, the indebtedness of the Borrower resulting from each such Advance being evidenced by this Promissory Note, and (ii) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events and also for prepayments on account of principal hereof prior to the maturity hereof upon the terms and conditions therein specified.

The Borrower hereby waives presentment, demand, protest and notice of any kind. No failure to exercise, and no delay in exercising, any rights hereunder on the part of the holder hereof shall operate as a waiver of such rights.

THIS PROMISSORY NOTE SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

FIRSTENERGY CORP.

By__
Name:
Title:

EXHIBIT C-1
Form of Notice of Borrowing

The Bank of Nova Scotia, as Administrative Agent
for the Lenders party to the Credit Agreement
referred to below

[DATE]

Ladies and Gentlemen:

The undersigned refers to the Term Loan Credit Agreement, dated as of October 19, 2018 (the "***Credit Agreement***", the terms defined therein being used herein as therein defined), among the undersigned, the Lenders party thereto and The Bank of Nova Scotia, as Administrative Agent for the Lenders thereunder, and hereby gives you notice, irrevocably, pursuant to Section 2.02 of the Credit Agreement that the undersigned hereby requests [a] Borrowing[s] under the Credit Agreement, and in that connection sets forth below the information relating to such Borrowing[s] (the "***Proposed Borrowing[s]***") as required by Section 2.02(a) of the Credit Agreement:

(i) The Business Day of the Proposed Borrowing[s] is October 19, 2018.

(ii) The Type of Advance to be made in connection with the [First] Proposed Borrowing is [an Alternate Base Rate Advance] [a Eurodollar Rate Advance]. The aggregate amount of such Proposed Borrowing is $_____. [The Interest Period for each Eurodollar Rate Advance made as part of such Proposed Borrowing is ____ [week][month[s]].]

[(iii) The Type of Advance to be made in connection with the [Second] Proposed Borrowing is [an Alternate Base Rate Advance] [a Eurodollar Rate Advance]. The aggregate amount of such Proposed Borrowing is $_____. [The Interest Period for each Eurodollar Rate Advance made as part of such Proposed Borrowing is ____ [week][month[s]].]

The undersigned hereby certifies that the following statements are true on the date hereof, and will be true on the date of the Proposed Borrowing[s]:

(A) the representations and warranties contained in Section 4.01 of the Credit Agreement are true and correct, before and after giving effect to the Proposed Borrowing[s] and to the application of the proceeds therefrom, as though made on

and as of such date (other than as to any such representation or warranty that by its terms refers to a specific date other than the date of the Proposed Borrowing[s], in which case, such representation and warranty is true and correct as of such specific date); and

(B) no event has occurred and is continuing, or would result from such Proposed Borrowing[s] or from the application of the proceeds therefrom, that constitutes an Event of Default or an Unmatured Default.

Please transfer or credit the funds to the following account:

Bank: _____

Address: _____

ABA #: _____

Account #: _____

Beneficiary: _____

[remainder of page intentionally left blank]

Very truly yours,

FIRSTENERGY CORP.

By__
Name:
Title:

EXHIBIT C-2
Form of Notice of Conversion

The Bank of Nova Scotia, as Administrative Agent
for the Lenders party to the Credit Agreement
referred to below

[DATE]

Ladies and Gentlemen:

The undersigned refers to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***", the terms defined therein being used herein as therein defined), among the undersigned, the Lenders named therein and party thereto from time to time and The Bank of Nova Scotia, as Administrative Agent for the Lenders thereunder, and hereby gives you notice, irrevocably, pursuant to Section 2.08 of the Credit Agreement that the undersigned hereby requests a Conversion of Advances:

1. On _____ (a Business Day).
2. The Advances to be Converted are comprised of [Alternate Base Rate Advances] [Eurodollar Rate Advances].
3. In the amount of $_____.
4. Such Advances to be Converted to [Alternate Base Rate Advances] [Eurodollar Rate Advances]. (Type of Advances requested)
5. For Eurodollar Rate Advances: with an Interest Period of _____ [week] [month[s]]. (Interest Period requested)

Very truly yours,

FIRSTENERGY CORP.

By__
Name:
Title:

EXHIBIT C-3
Form of Notice of Prepayment

The Bank of Nova Scotia, as Administrative Agent
for the Lenders party to the Credit Agreement
referred to below

[DATE]

Ladies and Gentlemen:

The undersigned refers to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***", the terms defined therein being used herein as therein defined), among the undersigned, the Lenders named therein and party thereto from time to time and The Bank of Nova Scotia, as Administrative Agent for the Lenders thereunder, and hereby gives you notice, irrevocably, pursuant to Section 2.09 of the Credit Agreement that the undersigned will prepay Advances:

1. On _____ (a Business Day).
2. In the amount of $_____.
3. Such Advances to be prepaid are [Alternate Base Rate Advances] [Eurodollar Rate Advances].
4. If Eurodollar Rate Advances are to be prepaid: such Advances to be prepaid have an Interest Period of _____ [week] [month[s]].

Such prepayment complies with the proviso in Section 2.09 of the Credit Agreement.

Very truly yours,

FIRSTENERGY CORP.

By__
Name:
Title:

92390772_3
92537902_2

EXHIBIT D-1
Form of U.S. Tax Compliance Certificate
(For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)

U.S. TAX COMPLIANCE CERTIFICATE
(For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among FirstEnergy Corp. (the "***Borrower***"), the Lenders party thereto from time to time and The Bank of Nova Scotia, as Administrative Agent.

Pursuant to the provisions of Section 2.13 of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the Advance(s) (as well as any Note(s) evidencing such Advance(s)) in respect of which it is providing this certificate, (ii) it is not a bank within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a ten percent shareholder of the Borrower within the meaning of Section 871(h)(3)(B) of the Code and (iv) it is not a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished the Administrative Agent and the Borrower with a certificate of its non-U.S. Person status on IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform the Borrower and the Administrative Agent, and (2) the undersigned shall have at all times furnished the Borrower and the Administrative Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF LENDER]

By:__
Name:
Title:

Date: _____ __, 20[ ]

EXHIBIT D-2
Form of U.S. Tax Compliance Certificate
(For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)

U.S. TAX COMPLIANCE CERTIFICATE
(For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among FirstEnergy Corp. (the "***Borrower***"), the Lenders party thereto from time to time and The Bank of Nova Scotia, as Administrative Agent.

Pursuant to the provisions of Section 2.13 of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the participation in respect of which it is providing this certificate, (ii) it is not a bank within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a ten percent shareholder of the Borrower within the meaning of Section 871(h)(3)(B) of the Code, and (iv) it is not a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with a certificate of its non-U.S. Person status on IRS Form W-8BEN-E. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform such Lender in writing, and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit

Agreement.

[NAME OF PARTICIPANT]

By:__
Name:
Title:

Date: _____ __, 20[ ]

EXHIBIT D-3
Form of U.S. Tax Compliance Certificate
(For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)

U.S. TAX COMPLIANCE CERTIFICATE
(For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among FirstEnergy Corp. (the "***Borrower***"), the Lenders party thereto from time to time and The Bank of Nova Scotia, as Administrative Agent.

Pursuant to the provisions of Section 2.13 of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the participation in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such participation, (iii) with respect such participation, neither the undersigned nor any of its direct or indirect partners/members is a bank extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a ten percent shareholder of the Borrower within the meaning of Section 871(h)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, from each of such partner's/member's beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform such Lender and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF PARTICIPANT]

By:__
Name:
Title:

Date: _____ __, 20[ ]

EXHIBIT D-4
Form of U.S. Tax Compliance Certificate
(For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)

U.S. TAX COMPLIANCE CERTIFICATE
(For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Term Loan Credit Agreement, dated as of October 19, 2018 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "***Credit Agreement***"), among FirstEnergy Corp. (the "***Borrower***"), the Lenders party thereto from time to time and The Bank of Nova Scotia, as Administrative Agent.

Pursuant to the provisions of Section 2.13 of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the Advance(s) (as well as any Note(s) evidencing such Advance(s)) in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such Advance(s) (as well as any Note(s) evidencing such Advance(s)), (iii) with respect to each extension of credit pursuant to the Credit Agreement or any other Loan Document, neither the undersigned nor any of its direct or indirect partners/members is a bank extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a ten percent shareholder of the Borrower within the meaning of Section 871(h)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished the Administrative Agent and the Borrower with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, from each of such partner's/member's beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform the Borrower and the Administrative Agent, and (2) the undersigned shall have at all times furnished the Borrower and the Administrative Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF LENDER]

By:__
Name:
Title:

Date: _____ __, 20[ ]

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Section 9: EX-10.67 (EXHIBIT 10.67)

Exhibit 10.67

FIRSTENERGY CORP.

2015 Incentive Compensation Plan

2019-2021 Performance-Adjusted Restricted Stock Unit Award Agreement

THIS PERFORMANCE-ADJUSTED RESTRICTED STOCK UNIT AWARD AGREEMENT (the "Agreement"), effective as of March __,

2019 (the “Grant Date”), is entered into by and between FirstEnergy Corp., an Ohio corporation, and its successors (the “Company”), and [NAME] (the “Grantee”).

1. Definitions. Unless otherwise specified in this Agreement, capitalized terms shall have the meanings attributed to them under the FirstEnergy Corp. 2015 Incentive Compensation Plan, as amended from time to time (the “Plan”). For purposes of this Agreement, the following terms shall be defined as follows:

“Retirement” shall mean, the Grantee’s Separation from Service (except due to death) on or after attaining age fifty-five (55) and after providing at least ten (10) years of service to the Company or any Subsidiary or affiliate and any predecessor thereof.

2. “Separation from Service” shall mean, with respect to the Grantee, the “separation from service” within the meaning of Code Section 409A, of the Grantee with the Company and any Subsidiaries, for any reason, including without limitation, quit, discharge, leave of absence (including military leave, sick leave, or other bona fide leave of absence such as temporary employment by the government if the period of such leave exceeds the greater of six months, or the period for which the Grantee’s right to reemployment is provided either by statute or by contract) or permanent decrease in service to a level that is no more than twenty percent (20%) of its prior level. For this purpose, whether a “Separation from Service” has occurred is determined based on whether it is reasonably anticipated that no further services will be performed by the Grantee after a certain date or that the level of bona fide services the Grantee will perform after such date (whether as an employee or as an independent contractor) would permanently decrease to no more than twenty percent (20%) of the average level of bona fide services performed (whether as an employee or an independent contractor) over the immediately preceding 36-month period (or the full period of services if the Grantee has been providing services for less than 36 months).

3. Grant of Restricted Stock Units. As of the Grant Date, the Company grants to the Grantee [NUMBER] (the “Target Number”) of Restricted Stock Units (the “Restricted Stock Units” or “RSUs”) listed as “Target” on the Overview page in Morgan Stanley, which will vest and become payable in accordance with the terms and conditions of this Agreement. The Target Number shall be adjusted with respect to Dividend Equivalents as provided in Section 8 below. Each RSU that becomes vested and payable hereunder represents the right of the Grantee to receive the cash value of one share of FirstEnergy Corp. common stock, $0.10 par value per share (each, a “Share”), subject to the terms and conditions of this Agreement. The RSUs are granted in accordance with, and subject to, all the terms, conditions and restrictions of the Plan, which is hereby incorporated by reference in its entirety. The Grantee irrevocably agrees to, and accepts, the terms, conditions and restrictions of the Plan and this Agreement on the Grantee’s own behalf and on behalf of any heirs, successors and assigns.

4. Restrictions on RSUs. Except as otherwise provided herein, the Grantee cannot sell, transfer, assign, hypothecate or otherwise dispose of the RSUs or pledge any RSU as collateral for a loan, other than by will or by the laws of descent and distribution. In no event may any RSU or this Award be transferred for value. In addition, the RSUs, and any payments made with respect to the RSUs, will be subject to such other restrictions as the Committee deems necessary or appropriate, including, without limitation, the Company's Executive Compensation Recoupment Policy, as may be amended from time to time, to the extent applicable.

5. Vesting and Settlement of RSUs.

(a) Vesting. Except as otherwise provided in Sections 6 and 7 below, if and to the extent the performance goals set forth on Exhibit A attached to this Agreement (the "Performance Goals") are achieved during the performance period set forth on Exhibit A (the "Performance Period"), the RSUs will vest on March __, 2022 (the "Vesting Date"), as long as the Grantee remains continuously employed by the Company or a Subsidiary until such Vesting Date. The number of RSUs that shall vest will range from 0% to 200% of the Target Number, as determined by the extent to which the Performance Goals are achieved. The Grantee will have no rights to any payment with respect to the RSUs until the RSUs have vested (each RSU that vests pursuant to this Section 4 or Sections 6 and 7 below, a "Vested RSU"). Prior to settlement, each RSU (whether or not a Vested RSU) represents an unfunded and unsecured obligation of the Company.

(b) Settlement. Except as otherwise provided in Sections 6, 7 and 10 below, the Company shall settle each Vested RSU by making a cash payment equal to the Fair Market Value of one Share per Vested RSU to the Grantee as soon as administratively practicable (and no later than 60 days) after the Vesting Date. With respect to any Vested RSU, the Fair Market Value of one Share shall be determined as of the Vesting Date, except as provided in Section 6. Notwithstanding the foregoing or any provision in Sections 6 or 7 to the contrary, if the Grantee elects to defer the settlement of the RSUs pursuant to the Company's Executive Deferred Compensation Plan (or any other non-qualified deferred compensation plan providing for the ability to defer settlement of the RSUs), then the time, form and medium of payment with respect to any deferred RSUs shall be made pursuant to the terms and conditions of the Executive Deferred Compensation Plan (or similar non-qualified deferred compensation plan).

6. Forfeiture. Except as otherwise provided in Sections 6 and 7, the Grantee will forfeit his or her interest in the RSUs to the extent the Performance Goals are not achieved during the Performance Period or if the Grantee terminates his or her employment with the Company or any of its Subsidiaries prior to the Vesting Date.

7. Certain Events. Notwithstanding any provision in this Agreement to the contrary and in each case subject to Section 6(g) below,

(a) Death. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee dies, a prorated number of RSUs shall become Vested RSUs. For purposes of this Section 6(a), the number of RSUs that shall become Vested RSUs due to the Grantee's death shall be

equal to (i) the Target Number of RSUs *multiplied by* (ii) a fraction, where the numerator is the number of full calendar months the Grantee remained employed after the Grant Date and the denominator is 36. The Company shall settle any RSUs that become Vested RSUs under this Section 6(a) by paying the Grantee's estate a cash amount equal to the Fair Market Value of one Share for each Vested RSU as soon as administratively practicable after the date of the Grantee's death, but in any event, by March 15th of the year following the year in which the Grantee's death occurred. For purposes of this Section 6(a), the Fair Market Value shall be determined as of the date of the Grantee's death.

(b) Disability. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee's employment is terminated due to the Grantee's Disability, then, after the end of the Performance Period, a Prorated Number of RSUs shall become Vested RSUs (as determined in Section 6(f) below). The Company shall settle any RSUs that become Vested RSUs under this Section 6(b) by paying the Grantee a cash amount equal to the Fair Market Value of one Share for each Vested RSU as soon as administratively practicable after the Vesting Date, but in any event within the short-term deferral period specified in Treasury Regulation § 1.409A-1(b)(4). .

(c) Termination without Cause. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee's employment is terminated by the Company or a Subsidiary without Cause, then, after the end of the Performance Period, a Prorated Number of RSUs shall become Vested RSUs (as determined in Section 6(f) below). The Company shall settle any RSUs that become Vested RSUs under this Section 6(c) by paying the Grantee a cash amount equal to the Fair Market Value of one Share for each Vested RSU as soon as administratively practicable after the Vesting Date, but in any event within the short-term deferral period specified in Treasury Regulation § 1.409A-1(b)(4).

(d) Retirement. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee's employment is terminated due to the Grantee's Retirement, then, after the end of the Performance Period, a Prorated Number of RSUs shall become Vested RSUs (as determined in Section 6(f) below). The Company shall settle any RSUs that become Vested RSUs under this Section 6(d) by paying the Grantee a cash amount equal to the Fair Market Value of one Share for each Vested RSU as soon as administratively practicable after the Vesting Date, but in any event within the short-term deferral period specified in Treasury Regulation § 1.409A-1(b)(4).

(e) Change in Position. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee is transferred to a position with the Company or a Subsidiary that is not an executive position eligible for such an award, then, after the end of the Performance Period, a Prorated Number of RSUs shall become Vested RSUs (as determined in Section 6(f) below). The Company shall settle any RSUs that become Vested RSUs under this Section 6(e) by paying the Grantee a cash amount equal to the Fair Market Value of one Share for each Vested RSU as soon as administratively practicable after the Vesting Date, but in any event within the short-term deferral period specified in Treasury Regulation § 1.409A-1(b)(4).

(f) Prorated Vesting. The Prorated Number of RSUs described in Section 6(b), (c), (d) or (e) above (the "Prorated Number") shall be determined as follows:

The Prorated Number = X *multiplied by* (Y/Z), where

X = the number of RSUs that would have become Vested RSUs based on actual performance against the Performance Goals if the Grantee had remained employed (and in an eligible executive position) until the Vesting Date;

Y = the number of full calendar months the Grantee remained employed (and in an eligible executive position) after the Grant Date; and

Z = 36.

(g) Release Requirement. Notwithstanding any provision herein to the contrary, except as otherwise determined by the Company, in order for the Grantee to receive payment pursuant to the settlement of Vested RSUs under Section 6(a), (b), (c), (d) or (e) above, the Grantee (or the representative of his or her estate) must execute and deliver to the Company a general release and waiver of claims against the Company, its Subsidiaries and their directors, officers, employees, shareholders and other affiliates in a form that is satisfactory to the Company (the "Release"). The Release must become effective and irrevocable under applicable law no later than 60 days following the date of the Grantee's death, termination of employment or transfer of position, as applicable.

8. Change in Control. If a Change in Control occurs, the RSUs shall generally become subject to the terms and conditions of Article 16 of the Plan; provided that if the RSUs subject to this Agreement are not replaced with a Replacement Award, then a prorated number of the RSUs (as determined by the formula in the following sentence) shall become Vested RSUs as of the date of the Change in Control and shall be settled no later than 60 days after the Change in Control in the manner set forth in Article 16 of the Plan. For purposes of this Section 7, the prorated number of RSUs that may become Vested RSUs upon a Change in Control shall be equal to the Target Number of RSUs granted hereunder times a fraction, in which the numerator is the number of full months completed from the Grant Date to the date of the consummation of the Change in Control and the denominator is 36.

9. Dividend Equivalents. Until the date on which the RSUs are settled for cash, and pursuant to the terms and conditions of this Agreement, the Grantee will be credited (in the manner described in the following sentences) on the books and records of the Company with an amount per each RSU equal to the amount per share of any cash dividends declared by the Board of Directors of the Company with a record date on or after the Grant Date on the outstanding common stock of the Company (such amount, a "Dividend Equivalent"). Such Dividend Equivalents will be credited in the form of an additional number of RSUs and the Target Number of RSUs shall be adjusted by each additional RSU credited to the Grantee pursuant to the Dividend Equivalents. The additional number of RSUs will be equal to the aggregate amount of Dividend Equivalents credited under this Agreement on the respective dividend payment date divided by the average of the high and low prices per share of common stock on the respective dividend payment date. The RSUs attributable to the Dividend Equivalents will be either settled or forfeited, as appropriate, under the same terms and conditions that apply to the other RSUs under this Award Agreement, including the achievement of the Performance Goals and any action taken by the Committee. For the avoidance of doubt, if the Grantee defers settlement of any portion of the RSUs pursuant to the Executive Deferred Compensation Plan, then, during the deferral period, the Grantee's stock account

under the Executive Deferred Compensation Plan shall continue to be credited with Dividend Equivalents pursuant to this Section 8 until such deferred RSUs are settled for Shares or cash, as applicable, under the terms of the Executive Deferred Compensation Plan.

10. Continuous Employment. So long as the Grantee continues to be an employee of the Company or any of its Subsidiaries, he or she shall not be considered to have experienced a termination of employment because of: (i) any temporary leave of absence approved in writing by the Company or such Subsidiary; or (ii) any change of duties or position (including transfer from one Subsidiary to another); provided, however, that, in the case of any change of duties or position that results in the Grantee no longer being an executive of the Company or a Subsidiary, the terms of Section 6(e) shall apply.

11. Withholding. Upon settlement of the RSUs, the Company shall withhold an amount sufficient to satisfy all federal, state, and local taxes to be withheld in connection with the settlement of RSUs under this Agreement.

12. No Shareholder Rights. The Grantee shall have no shareholder rights (or rights as a beneficial owner), including no voting rights, with respect to any RSU or the Share underlying the RSU at any time.

13. Recoupment. If the Grantee is or has been deemed to be, or becomes, an "insider" for purposes of Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), this Agreement will be administered in compliance with Section 10D of the Exchange Act, any applicable rules or regulations promulgated by the Securities and Exchange Commission or any national securities exchange or national securities association on which the Shares may be traded, and subject to the Company's Executive Compensation Recoupment Policy, as amended from time to time, or any other Company policy adopted pursuant to such law, rules, or regulations and this Agreement may be amended to further such purpose without the consent of the Grantee.

14. Termination of Agreement. This Agreement will terminate on the earliest of: (i) the date of the Grantee's termination of employment with the Company, except if such termination of employment is due to death, Disability, Retirement, or a termination by the Company without Cause, (ii) the date the RSUs are settled pursuant to the terms of this Agreement, or (iii) if no RSUs have become Vested RSUs as of the Vesting Date, the Vesting Date. Any terms or conditions of this Agreement that the Company determines are reasonably necessary to effectuate its purposes shall survive the termination of this Agreement.

15. Miscellaneous Provisions.

(a) Adjustments. In the event of a corporate event or transaction described in Section 4.5 of the Plan, this Award and the RSUs granted hereunder shall be adjusted as set forth in Section 4.5 of the Plan.

(b) Successors and Legal Representatives. This Agreement will bind and inure to the benefit of the Company and the Grantee, and their respective successors, assigns and legal representatives.

(c) Integration. This Agreement, together with the Plan, constitutes the entire agreement between the Grantee and the Company with respect to the subject matter hereof. Any waiver of any term, condition or breach thereof will not be a waiver of any other term or condition or of the same term or condition for the future, or of any subsequent breach. To the extent a conflict exists between the terms of this Agreement and the provisions of the Plan, the provisions of the Plan shall govern, except with

respect to the Committee's authority to adjust downward the number of RSUs that vest under this Agreement, as provided under Section 14(h) below.

(d) Notice. Any notice relating to this grant must be in writing, which may include an electronic writing.

(e) No Employment Right Created. Nothing in this Agreement will be construed to confer upon the Grantee the right to continue in the employment or service of the Company or any of its Subsidiaries, or to be employed or serve in any particular position therewith, or affect any right which the Company or any of its Subsidiaries may have to terminate the Grantee's employment or service with or without cause.

(f) Severability. In the event of the invalidity of any part or provision of this Agreement, such invalidity will not affect the enforceability of any other part or provision of this Agreement.

(g) Section Headings. The section headings of this Agreement are for convenience of reference only and are not intended to define, extend or limit the contents of the sections.

(h) Amendment. The terms and conditions of this Agreement may be modified by the Committee:

(i) in any case permitted by the terms of the Plan or this Agreement;

(ii) except with respect to an adjustment made pursuant to the last paragraph of this Section 14(h), with the written consent of the Grantee; or

(iii) without the consent of the Grantee if the amendment is either not materially adverse to the interests of the Grantee or is necessary or appropriate in the view of the Committee to conform with, or to take into account, applicable law, including either exemption from or compliance with any applicable tax law.

Notwithstanding any provision in this Agreement or the Plan to the contrary, the Committee shall retain the discretion to adjust the number of RSUs that vest under this Agreement without the Grantee's consent, notwithstanding the Company's actual performance against the Performance Goals, either on a formula or discretionary basis or a combination of the two, as the Committee determines in its sole discretion.

(i) Plan Administration. The Plan is administered by the Committee, which has full and exclusive discretionary power to interpret, implement, construe and adopt rules, forms and guidelines for administering the Plan and this Agreement. All actions, interpretations and determinations made by the Committee, the Board of Directors, or any of their delegates as to the provisions of this Agreement and the Plan shall be final, conclusive, and binding on all persons and the Grantee agrees to be bound by such actions, interpretations and determinations.

(j) Governing Law. Except as may otherwise be provided in the Plan, this Agreement will be governed by, construed and enforced in accordance with the internal laws of the State of Ohio, without giving effect to its principles of conflict of laws. By accepting this Award, the Grantee agrees to the exclusive jurisdiction and venue of the courts of the United States District Court for the Northern District of Ohio or the Summit County (Ohio) Court of Common Pleas to adjudicate any and all claims brought with respect to this Agreement.

(k) Internal Revenue Code Section 409A. Notwithstanding anything in the Plan or this Agreement to the contrary, the Award of RSUs granted hereunder is intended to meet any applicable requirements for compliance under, or exemption from, Code Section 409A and this Agreement shall be construed and administered accordingly. However, notwithstanding anything in this Agreement to the contrary, the Company makes no representations or warranties as to the tax effects of payments made to the Grantee (or Grantee's estate) pursuant to this Agreement, and any and all tax consequences incident to such shall solely be the responsibility of the Grantee (or Grantee's estate).

(l) Data Privacy.

In order to implement, administer and manage the Grantee's participation in the Plan, the Company and its affiliates may hold certain personal information about the Grantee, including, but not limited to, the Grantee's name, home address and telephone number, date of birth, social security number or other identification number, salary, nationality, job title, any Shares or directorships held in the Company or any affiliate, details of all Awards or any other entitlement to Shares awarded, canceled, exercised, vested, unvested or outstanding in the Grantee's favor, for the exclusive purpose of implementing, administering and managing the Plan (collectively, the "Personal Data").

The Grantee hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Grantee's Personal Data as described above, as applicable, to the Company and its affiliates for the sole purpose of administering the Plan. The Grantee understands that Personal Data may be transferred to third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in the United States or elsewhere, and that the recipient's country may have different data privacy laws and protections than the United States or the Grantee's state of residence. The Grantee understands that he or she may request a list with the names and addresses of any potential recipients of the Personal Data by contacting the Executive Compensation group of Human Resources. The Grantee authorizes the recipients to receive, possess, use, retain and transfer the Personal Data, in electronic or other form, for the purposes of implementing, administering and managing the Grantee's participation in the Plan, including any requisite transfer of such Personal Data as may be required to a broker or other third party with whom the Grantee may elect to deposit any Shares received upon vesting of the RSUs. The Grantee understands that Personal Data will be held only as long as is necessary to implement, administer and manage the Grantee's participation in the Plan and to comply with SEC and/or NYSE reporting obligations, any other applicable law or regulation and any applicable document retention policies of the Company. The Grantee understands that he or she may, at any time, view Personal Data, request additional information about the storage and processing of Personal Data, require any necessary amendments to Personal Data or refuse or withdraw the consents herein, without cost, by contacting in writing the Executive Compensation group of Human Resources. The Grantee understands that refusal or withdrawal of consent may affect the Grantee's ability to participate in the Plan or to realize benefits from the RSUs. For more information on the consequences of the Grantee's refusal to consent or withdrawal of consent, the Grantee understands that he or she may contact the Executive Compensation group of Human Resources.

(m) Signatures and Electronic Delivery. This Agreement may be executed electronically and in counterparts, each of which shall be deemed to be an original, and when taken together shall constitute one binding agreement. The Company may, in its sole discretion, deliver any documents related to current or future participation in the Plan by electronic means. The Grantee hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

[SIGNATURE ON FOLLOWING PAGE]

The Grantee acknowledges receipt of this Performance-Adjusted Restricted Stock Unit Award Agreement and accepts and agrees with the terms and conditions stated above.

_____

(Signature of the Grantee)

_____

(Date)

EXHIBIT A

Performance Goals

Performance Period

The Performance Period for this Agreement is:

Performance Goals[1]

The annual Performance Goals for the Performance Period are based on:

[1] Notwithstanding any other provision of this Agreement, in addition to any other rights of the Committee under the Plan (as defined in the Agreement), the Committee may, in any evaluation of the Company's level of achievement with respect to the Performance Goals, include or exclude any of the following events that occur during the Performance Period: (a) asset write-downs, (b) litigation or claim judgments or settlements, (c) the effect of changes in tax laws, accounting principles or other laws or provisions affecting reported results, (d) any reorganization and restructuring programs, (e) extraordinary nonrecurring items, (f) acquisitions or divestitures and/or (g) foreign exchange gains and losses.

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Section 10: EX-10.68 (EXHIBIT 10.68)

Exhibit 10.68

FIRSTENERGY CORP.

2015 Incentive Compensation Plan

2019-2021 Performance-Adjusted Restricted Stock Unit Award Agreement

THIS PERFORMANCE-ADJUSTED RESTRICTED STOCK UNIT AWARD AGREEMENT (the "Agreement"), effective as of March __, 2019 (the "Grant Date"), is entered into by and between FirstEnergy Corp., an Ohio corporation, and its successors (the "Company"), and [NAME] (the "Grantee").

1. Definitions. Unless otherwise specified in this Agreement, capitalized terms shall have the meanings attributed to them under the FirstEnergy Corp. 2015 Incentive Compensation Plan, as amended from time to time (the "Plan"). For purposes of this Agreement, the following terms shall be defined as follows:

"Retirement" shall mean, the Grantee's Separation from Service (except due to death) on or after attaining age fifty-five (55) and after providing at least ten (10) years of service to the Company or any Subsidiary or affiliate and any predecessor thereof.

"Separation from Service" shall mean, with respect to the Grantee, the "separation from service" within the meaning of Code Section 409A, of the Grantee with the Company and any Subsidiaries, for any reason, including without limitation, quit, discharge, leave of absence (including military leave, sick leave, or other bona fide leave of absence such as temporary employment by the government if the period of such leave exceeds the greater of six months, or the period for which the Grantee's right to reemployment is provided either by statute or by contract) or permanent decrease in service to a level that is no more than twenty percent (20%) of its prior level. For this purpose, whether a "Separation from Service" has occurred is determined based on whether it is reasonably anticipated that no further services will be performed by the Grantee after a certain date or that the level of bona fide services the Grantee will perform after such date (whether as an employee or as an independent contractor) would permanently decrease to no more than twenty percent (20%) of the average level of bona fide services performed (whether as an employee or an independent contractor) over the immediately preceding 36-month period (or the full period of services if the Grantee has been providing services for less than 36 months).

2. Grant of Restricted Stock Units. As of the Grant Date, the Company grants to the Grantee [NUMBER] (the "Target Number") of Restricted Stock Units (the "Restricted Stock Units" or "RSUs") listed as "Target" on the Overview page in Morgan Stanley, which will vest and become payable in accordance with the terms and conditions of this Agreement. The Target Number shall be adjusted with respect to Dividend Equivalents as provided in Section 8 below. Each RSU that becomes vested and payable hereunder represents the right of the Grantee to receive one share of FirstEnergy Corp. common stock, $0.10 par value per share (each, a "Share"), subject to the terms and conditions of this Agreement. The RSUs are granted in accordance with, and subject to, all the terms, conditions and restrictions of the Plan, which is hereby incorporated by reference in its entirety. The Grantee irrevocably agrees to, and accepts, the terms, conditions and restrictions of the Plan and this Agreement on the Grantee's own behalf and on behalf of any heirs, successors and assigns.

3. Restrictions on RSUs. Except as otherwise provided herein, the Grantee cannot sell, transfer, assign, hypothecate or otherwise dispose of the RSUs or pledge any RSU as collateral for a loan, other than by will or by the laws of descent and distribution. In no event may any RSU or this Award be transferred for value. In addition, the RSUs, and any payments made with respect to the RSUs, will be subject to such other restrictions as the Committee deems necessary or appropriate, including, without limitation, the Company's Executive Compensation Recoupment Policy, as may be amended from time to time, to the extent applicable.

4. Vesting and Settlement of RSUs.

(a) Vesting. Except as otherwise provided in Sections 6 and 7 below, if and to the extent the performance goals set forth on Exhibit A attached to this Agreement (the "Performance Goals") are achieved during the performance period set forth on Exhibit A (the "Performance Period"), the RSUs will vest on March __, 2022 (the "Vesting Date"), as long as the Grantee remains continuously employed by the Company or a Subsidiary until such Vesting Date. The number of RSUs that shall vest will range from 0% to 200% of the Target Number, as determined by the extent to which the Performance Goals are achieved. The Grantee will have no rights to the Shares underlying the RSUs until the RSUs have vested (each RSU that vests pursuant to this Section 4 or Sections 6 and 7 below, a "Vested RSU"). Prior to settlement, each RSU (whether or not a Vested RSU) represents an unfunded and unsecured obligation of the Company.

(b) Settlement. Except as otherwise provided in Sections 6, 7 and 11 below, the Company shall settle each Vested RSU by delivering one Share per Vested RSU to the Grantee as soon as administratively practicable (and no later than 60 days) after the Vesting Date. Notwithstanding the foregoing or any provision in Sections 6 or 7 to the contrary, if the Grantee elects to defer the settlement of the RSUs pursuant to the Company's Executive Deferred Compensation Plan (or any other non-qualified deferred compensation plan providing for the ability to defer settlement of the RSUs), then the time, form and medium of payment with respect to any deferred RSUs shall be made pursuant to the terms and conditions of the Executive Deferred Compensation Plan (or similar non-qualified deferred compensation plan). Fractional RSUs, if any, will be settled in cash.

5. Forfeiture. Except as otherwise provided in Sections 6 and 7, the Grantee will forfeit his or her interest in the RSUs to the extent the Performance Goals are not achieved during the Performance Period or if the Grantee terminates his or her employment with the Company or any of its Subsidiaries prior to the Vesting Date.

6. Certain Events. Notwithstanding any provision in this Agreement to the contrary and in each case subject to Section 6(g) below,

(a) Death. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee dies, a prorated number of RSUs shall become Vested RSUs. For purposes of this Section 6(a), the number of RSUs that shall become Vested RSUs due to the Grantee's death shall be equal to (i) the Target Number of RSUs *multiplied by* (ii) a fraction, where the numerator is the number of full calendar months the Grantee remained employed after the Grant Date and the denominator is 36. The Company shall settle any RSUs that become Vested RSUs under this Section 6(a) by

delivering to the Grantee's estate one Share for each Vested RSU as soon as administratively practicable after the date of the Grantee's death, but in any event, by March 15th of the year following the year in which the Grantee's death occurred.

(b) Disability. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee's employment is terminated due to the Grantee's Disability, then, after the end of the Performance Period, a Prorated Number of RSUs shall become Vested RSUs (as determined in Section 6(f) below). The Company shall settle any RSUs that become Vested RSUs under this Section 6(b) by delivering to the Grantee one Share for each Vested RSU as soon as administratively practicable after the Vesting Date, but in any event within the short-term deferral period specified in Treasury Regulation § 1.409A-1(b)(4).

(c) Termination without Cause. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee's employment is terminated by the Company or a Subsidiary without Cause, then, after the end of the Performance Period, a Prorated Number of RSUs shall become Vested RSUs (as determined in Section 6(f) below). The Company shall settle any RSUs that become Vested RSUs under this Section 6(c) by delivering to the Grantee one Share for each Vested RSU as soon as administratively practicable after the Vesting Date, but in any event within the short-term deferral period specified in Treasury Regulation § 1.409A-1(b)(4).

(d) Retirement. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee's employment is terminated due to the Grantee's Retirement, then, after the end of the Performance Period, a Prorated Number of RSUs shall become Vested RSUs (as determined in Section 6(f) below). The Company shall settle any RSUs that become Vested RSUs under this Section 6(d) by delivering to the Grantee one Share for each Vested RSU as soon as administratively practicable after the Vesting Date, but in any event within the short-term deferral period specified in Treasury Regulation § 1.409A-1(b)(4).

(e) Change in Position. If, at least one month after the Grant Date but prior to the Vesting Date, the Grantee is transferred to a position with the Company or a Subsidiary that is not an executive position eligible for such an award, then, after the end of the Performance Period, a Prorated Number of RSUs shall become Vested RSUs (as determined in Section 6(f) below). The Company shall settle any RSUs that become Vested RSUs under this Section 6(e) by delivering to the Grantee one Share for each Vested RSU as soon as administratively practicable after the Vesting Date, but in any event within the short-term deferral period specified in Treasury Regulation § 1.409A-1(b)(4).

(f) Prorated Vesting. The Prorated Number of RSUs described in Section 6(b), (c), (d) or (e) above (the "Prorated Number") shall be determined as follows:

The Prorated Number = X *multiplied by* (Y/Z), where

X = the number of RSUs that would have become Vested RSUs based on actual performance against the Performance Goals if the Grantee had remained employed (and in an eligible executive position) until the Vesting Date;

Y = the number of full calendar months the Grantee remained employed (and in an eligible executive position) after the Grant Date; and

Z = 36.

(g) Release Requirement. Notwithstanding any provision herein to the contrary, except as otherwise determined by the Company, in order for the Grantee to receive Shares pursuant to the settlement of Vested RSUs under Section 6(a), (b), (c), (d) or (e) above, the Grantee (or the representative of his or her estate) must execute and deliver to the Company a general release and waiver of claims against the Company, its Subsidiaries and their directors, officers, employees, shareholders and other affiliates in a form that is satisfactory to the Company (the "Release"). The Release must become effective and irrevocable under applicable law no later than 60 days following the date of the Grantee's death, termination of employment or transfer of position, as applicable.

7. Change in Control. If a Change in Control occurs, the RSUs shall generally become subject to the terms and conditions of Article 16 of the Plan; provided that if the RSUs subject to this Agreement are not replaced with a Replacement Award, then a prorated number of the RSUs (as determined by the formula in the following sentence) shall become Vested RSUs as of the date of the Change in Control and shall be settled no later than 60 days after the Change in Control in the manner set forth in Article 16 of the Plan. For purposes of this Section 7, the prorated number of RSUs that may become Vested RSUs upon a Change in Control shall be equal to the Target Number of RSUs granted hereunder times a fraction, in which the numerator is the number of full months completed from the Grant Date to the date of the consummation of the Change in Control and the denominator is 36.

8. Dividend Equivalents. Until the date on which the RSUs are settled for Shares (or cash in the case of RSUs deferred under the Company's Executive Deferred Compensation Plan), and pursuant to the terms and conditions of this Agreement, the Grantee will be credited (in the manner described in the following sentences) on the books and records of the Company with an amount per each RSU equal to the amount per share of any cash dividends declared by the Board of Directors of the Company with a record date on or after the Grant Date on the outstanding common stock of the Company (such amount, a "Dividend Equivalent"). Such Dividend Equivalents will be credited in the form of an additional number of RSUs and the Target Number of RSUs shall be adjusted by each additional RSU credited to the Grantee pursuant to the Dividend Equivalents. The additional number of RSUs will be equal to the aggregate amount of Dividend Equivalents credited under this Agreement on the respective dividend payment date divided by the average of the high and low prices per share of common stock on the respective dividend payment date. The RSUs attributable to the Dividend Equivalents will be either settled or forfeited, as appropriate, under the same terms and conditions that apply to the other RSUs under this Award Agreement, including the achievement of the Performance Goals and any action taken by the Committee. For the avoidance of doubt, if the Grantee defers settlement of any portion of the RSUs pursuant to the Executive Deferred Compensation Plan, then, during the deferral period, the Grantee's stock account under the Executive Deferred Compensation Plan shall

continue to be credited with Dividend Equivalents pursuant to this Section 8 until such deferred RSUs are settled for Shares or cash, as applicable, under the terms of the Executive Deferred Compensation Plan.

9. Continuous Employment. So long as the Grantee continues to be an employee of the Company or any of its Subsidiaries, he or she shall not be considered to have experienced a termination of employment because of: (i) any temporary leave of absence approved in writing by the Company or such Subsidiary; or (ii) any change of duties or position (including transfer from one Subsidiary to another); provided, however, that, in the case of any change of duties or position that results in the Grantee no longer being an executive of the Company or a Subsidiary, the terms of Section 6(e) shall apply.

10. Delivery of Stock. Upon settlement of any RSUs under this Agreement, the Company will deliver to the Grantee (or his or her estate) the Shares to which the Grantee is entitled free and clear of any restrictions (except any restrictions under applicable securities laws or otherwise imposed under the Plan or Section 3 hereof).

11. Withholding. Upon settlement of the RSUs, the Company shall withhold a number of Shares (or amount of cash, if applicable) in an amount sufficient to satisfy all federal, state, and local taxes to be withheld in connection with the settlement of RSUs under this Agreement.

12. No Shareholder Rights. The Grantee shall have no shareholder rights (or rights as a beneficial owner), including no voting rights, with respect to any RSU or the Share underlying the RSU unless and until the Grantee receives the Share upon settlement of the RSU.

13. Recoupment. If the Grantee is or has been deemed to be, or becomes, an "insider" for purposes of Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), this Agreement will be administered in compliance with Section 10D of the Exchange Act, any applicable rules or regulations promulgated by the Securities and Exchange Commission or any national securities exchange or national securities association on which the Shares may be traded, and subject to the Company's Executive Compensation Recoupment Policy, as amended from time to time, or any other Company policy adopted pursuant to such law, rules, or regulations and this Agreement may be amended to further such purpose without the consent of the Grantee.

14. Termination of Agreement. This Agreement will terminate on the earliest of: (i) the date of the Grantee's termination of employment with the Company, except if such termination of employment is due to death, Disability, Retirement, or a termination by the Company without Cause, (ii) the date the RSUs are settled pursuant to the terms of this Agreement, or (iii) if no RSUs have become Vested RSUs as of the Vesting Date, the Vesting Date. Any terms or conditions of this Agreement that the Company determines are reasonably necessary to effectuate its purposes shall survive the termination of this Agreement.

15. Miscellaneous Provisions.

(a) Adjustments. In the event of a corporate event or transaction described in Section 4.5 of the Plan, this Award and the RSUs granted hereunder shall be adjusted as set forth in Section 4.5 of the Plan.

(b) Successors and Legal Representatives. This Agreement will bind and inure to the benefit of the Company and the Grantee, and their respective successors, assigns and legal representatives.

(c) Integration. This Agreement, together with the Plan, constitutes the entire agreement between the Grantee and the Company with respect to the subject matter hereof. Any waiver of any term, condition

or breach thereof will not be a waiver of any other term or condition or of the same term or condition for the future, or of any subsequent breach. To the extent a conflict exists between the terms of this Agreement and the provisions of the Plan, the provisions of the Plan shall govern, except with respect to the Committee's authority to adjust downward the number of RSUs that vest under this Agreement, as provided under Section 15(h) below.

(d) Notice. Any notice relating to this grant must be in writing, which may include an electronic writing.

(e) No Employment Right Created. Nothing in this Agreement will be construed to confer upon the Grantee the right to continue in the employment or service of the Company or any of its Subsidiaries, or to be employed or serve in any particular position therewith, or affect any right which the Company or any of its Subsidiaries may have to terminate the Grantee's employment or service with or without cause.

(f) Severability. In the event of the invalidity of any part or provision of this Agreement, such invalidity will not affect the enforceability of any other part or provision of this Agreement.

(g) Section Headings. The section headings of this Agreement are for convenience of reference only and are not intended to define, extend or limit the contents of the sections.

(h) Amendment. The terms and conditions of this Agreement may be modified by the Committee:

(i) in any case permitted by the terms of the Plan or this Agreement;

(ii) except with respect to an adjustment made pursuant to the last paragraph of this Section 15(h), with the written consent of the Grantee; or

(iii) without the consent of the Grantee if the amendment is either not materially adverse to the interests of the Grantee or is necessary or appropriate in the view of the Committee to conform with, or to take into account, applicable law, including either exemption from or compliance with any applicable tax law.

Notwithstanding any provision in this Agreement or the Plan to the contrary, the Committee shall retain the discretion to adjust the number of RSUs that vest under this Agreement without the Grantee's consent, notwithstanding the Company's actual performance against the Performance Goals, either on a formula or discretionary basis or a combination of the two, as the Committee determines in its sole discretion.

(i) Plan Administration. The Plan is administered by the Committee, which has full and exclusive discretionary power to interpret, implement, construe and adopt rules, forms and guidelines for administering the Plan and this Agreement. All actions, interpretations and determinations made by the Committee, the Board of Directors, or any of their delegates as to the provisions of this Agreement and the Plan shall be final, conclusive, and binding on all persons and the Grantee agrees to be bound by such actions, interpretations and determinations.

(j) Governing Law. Except as may otherwise be provided in the Plan, this Agreement will be governed by, construed and enforced in accordance with the internal laws of the State of Ohio, without giving effect to its principles of conflict of laws. By accepting this Award, the Grantee agrees to the exclusive jurisdiction and venue of the courts of the United States District Court for the Northern District of Ohio or

the Summit County (Ohio) Court of Common Pleas to adjudicate any and all claims brought with respect to this Agreement.

(k) Internal Revenue Code Section 409A. Notwithstanding anything in the Plan or this Agreement to the contrary, the Award of RSUs granted hereunder is intended to meet any applicable requirements for compliance under, or exemption from, Code Section 409A and this Agreement shall be construed and administered accordingly. However, notwithstanding anything in this Agreement to the contrary, the Company makes no representations or warranties as to the tax effects of payments made to the Grantee (or the Grantee's estate) pursuant to this Agreement, and any and all tax consequences incident to such shall solely be the responsibility of the Grantee (or the Grantee's estate).

(l) Data Privacy. In order to implement, administer and manage the Grantee's participation in the Plan, the Company and its affiliates may hold certain personal information about the Grantee, including, but not limited to, the Grantee's name, home address and telephone number, date of birth, social security number or other identification number, salary, nationality, job title, any Shares or directorships held in the Company or any affiliate, details of all Awards or any other entitlement to Shares awarded, canceled, exercised, vested, unvested or outstanding in the Grantee's favor, for the exclusive purpose of implementing, administering and managing the Plan (collectively, the "Personal Data").

The Grantee hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Grantee's Personal Data as described above, as applicable, to the Company and its affiliates for the sole purpose of administering the Plan. The Grantee understands that Personal Data may be transferred to third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in the United States or elsewhere, and that the recipient's country may have different data privacy laws and protections than the United States or the Grantee's state of residence. The Grantee understands that he or she may request a list with the names and addresses of any potential recipients of the Personal Data by contacting the Executive Compensation group of Human Resources. The Grantee authorizes the recipients to receive, possess, use, retain and transfer the Personal Data, in electronic or other form, for the purposes of implementing, administering and managing the Grantee's participation in the Plan, including any requisite transfer of such Personal Data as may be required to a broker or other third party with whom the Grantee may elect to deposit any Shares received upon vesting of the RSUs. The Grantee understands that Personal Data will be held only as long as is necessary to implement, administer and manage the Grantee's participation in the Plan and to comply with SEC and/or NYSE reporting obligations, any other applicable law or regulation and any applicable document retention policies of the Company. The Grantee understands that he or she may, at any time, view Personal Data, request additional information about the storage and processing of Personal Data, require any necessary amendments to Personal Data or refuse or withdraw the consents herein, without cost, by contacting in writing the Executive Compensation group of Human Resources. The Grantee understands that refusal or withdrawal of consent may affect the Grantee's ability to participate in the Plan or to realize benefits from the RSUs. For more information on the consequences of the Grantee's refusal to consent or withdrawal of consent, the Grantee understands that he or she may contact the Executive Compensation group of Human Resources.

(m) Signatures and Electronic Delivery. This Agreement may be executed electronically and in counterparts, each of which shall be deemed to be an original, and when taken together shall constitute one binding agreement. The Company may, in its sole discretion, deliver any documents related to current or future participation in the Plan by electronic means. The Grantee hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

[SIGNATURE ON FOLLOWING PAGE]

The Grantee acknowledges receipt of this Performance-Adjusted Restricted Stock Unit Award Agreement and accepts and agrees with the terms and conditions stated above.

_____

_____ (Signature of the Grantee)

(Date)

EXHIBIT A

Performance Goals

Performance Period

The Performance Period for this Agreement is:

Performance Goals [1]

The annual Performance Goals for the Performance Period are based on:

[1] Notwithstanding any other provision of this Agreement, in addition to any other rights of the Committee under the Plan (as defined in the Agreement), the Committee may, in any evaluation of the Company's level of achievement with respect to the Performance Goals, include or exclude any of the following events that occur during the Performance Period: (a) asset write-downs, (b) litigation or claim judgments or settlements, (c) the effect of changes in tax laws, accounting principles or other laws or provisions affecting reported results, (d) any reorganization and restructuring programs, (e) extraordinary nonrecurring items, (f) acquisitions or divestitures and/or (g) foreign exchange gains and losses.

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Section 11: EX-10.69 (EXHIBIT 10.69)

Exhibit 10.69

FIRSTENERGY CORP.

2015 Incentive Compensation Plan

2019 Restricted Stock Award Agreement

THIS RESTRICTED STOCK AWARD AGREEMENT (the "Agreement"), effective as of _____ (the "Effective Date"), is entered into by and between FirstEnergy Corp., an Ohio corporation, and its successors (the "Company"), and **[NAME]** (the "Grantee").

1. Definitions. Unless otherwise specified in this Agreement, capitalized terms shall have the meanings attributed to them under the FirstEnergy Corp. 2015 Incentive Compensation Plan, as amended from time to time (the "Plan").

2. Grant of Restricted Stock. As of the Effective Date, the Company grants to the Grantee, upon the terms and conditions set forth in this Agreement and subject to the restrictions in Section 3, **[NUMBER]** Shares, par value $0.10 per share, of FirstEnergy Corp. ("Restricted Stock"). The Restricted Stock is granted in accordance with, and subject to, all the terms, conditions and restrictions of the Plan, which is hereby incorporated by reference in its entirety. The Grantee irrevocably agrees to, and accepts, the terms, conditions and restrictions of the Plan and this Agreement on his own behalf and on behalf of any heirs, successors and assigns.

3. Restrictions on Restricted Stock. Except as otherwise provided herein, the Grantee cannot sell, transfer, assign, hypothecate or otherwise dispose of the Restricted Stock or pledge any share of Restricted Stock as collateral for a loan, other than by will or by the laws of descent and distribution. In no event may any share of Restricted Stock or this Award be transferred for value. In addition, the Restricted Stock will be subject to such other restrictions as the Committee deems necessary or appropriate.

4. Lapse of Restrictions on Restricted Stock. Except as otherwise provided in Sections 6 and 7, the restrictions described in Section 3 (the "Restrictions") shall lapse and be of no further force or effect with respect to 100% of the Restricted Stock if Grantee remains in the continuous employ of the Company or any Subsidiary until **[DATE]** (the "Vesting Condition"). So long as the Grantee continues to be an Employee of the Company or any of its Subsidiaries, he or she shall not be considered to have experienced a termination of employment because of: (i) any temporary leave of absence approved in writing by the Company or such Subsidiary; or (ii) any change of duties or position (including transfer from one Subsidiary to another).

5. Forfeiture. Except as otherwise provided in Sections 6 and 7, the Grantee will forfeit any and all interests in the Restricted Stock if (a) the Grantee's employment with the Company or its Subsidiaries terminates prior to the satisfaction of the Vesting Condition set forth in Section 4 or (b) the Grantee attempts to sell, transfer, pledge, assign or otherwise alienate or hypothecate the Restricted Stock or the right to receive the Restricted Stock in violation of this Agreement.

6. Certain Events. Notwithstanding any provision in this Agreement to the contrary,

(a) Death or Disability. If the Grantee dies or incurs a Disability while an Employee of the Company or any of its Subsidiaries at any time prior to **[DATE**], then the Restrictions will immediately lapse and the Grantee (or Grantee's estate in the event of the Grantee's death) will become 100% vested in the Restricted Stock upon such death or Disability.

(b) Termination without Cause. Subject to Section 7, if the Grantee's employment is terminated without Cause by the Company or any of its Subsidiaries at any time prior to **[DATE]**, then the Restrictions shall lapse on a prorated portion of the Restricted Stock upon such termination of employment; provided that the Grantee executes and delivers to the Company (and does not revoke) a general waiver and release of claims in a form approved by the Company. The prorated amount will be calculated by multiplying the number of Shares of Restricted Stock by a fraction, in which the numerator is the number of full calendar months the Grantee remained in the continuous employ of the Company or any of its Subsidiaries from the Effective Date until the date of termination and the denominator is the number of full calendar months between the Effective Date and **[DATE]**. Subject to Section 7, any amount that does not vest pursuant to this Section 6(b) will be forfeited as of the date of the Grantee's termination of employment.

7. Change in Control. If a Change in Control occurs, the Restricted Stock shall become subject to the terms and conditions of Article 16 of the Plan.

8. Issuance of Shares. As soon as practicable after lapse of the Restrictions, as provided under Section 4, 6 or 7, the Company will deliver to the Grantee (or his or her estate) the Shares to which the Grantee is entitled free and clear of any Restrictions (except any applicable securities law restrictions); provided, however, that, no fractional Shares will be delivered and any fractional Shares to which the Grantee would otherwise be entitled will be paid in cash.

9. Withholding. Notwithstanding any other provision of the Plan or this Agreement to the contrary, unless the Committee determines otherwise, the Company shall withhold Shares in an amount not to exceed the maximum amount necessary to satisfy all federal, state, and local taxes to be withheld in connection with the delivery of Shares granted or delivered under this Agreement.

10. Stockholder Rights During Period of Restriction. During the period the Restricted Stock is subject to the Restrictions, the Grantee will be entitled to vote the Restricted Stock and to receive dividends declared and paid by the Company on such Restricted Stock; provided, however, that dividends payable shall be automatically reinvested in additional shares of Restricted Stock that are subject to the same restrictions as the shares of Restricted Stock granted hereunder.

11. Recoupment. If the Grantee is or has been deemed to be, or becomes, an "insider" for purposes of Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), this Agreement will be administered in compliance with Section 10D of the Exchange Act, any applicable rules or regulations promulgated by the Securities and Exchange Commission or any national securities exchange or national securities association on which the Shares may be traded, and subject to the Company's Executive Compensation Recoupment Policy, as amended from time to time, or any other Company policy adopted pursuant to such law, rules, or regulations and this Agreement may be amended to further such purpose without the consent of the Grantee.

12. Code Section 83(b) Elections. The Grantee will not make an election under Section 83(b) of the Code to recognize taxable ordinary income in the year the Restricted Stock is granted (or dividends are reinvested). The Grantee understands that by not making such an election, he or she will recognize taxable ordinary income at the time the Restrictions lapse in an amount equal to the Fair Market Value of the Shares at that time.

13. Non-Transferability and Legends. The Restricted Stock has not been registered for resale under the Securities Act of 1933, as amended (the "Act"), and may not be sold, transferred or otherwise disposed of unless a registration statement under the Act with respect to the Restricted Stock has become effective or unless the Grantee establishes to the satisfaction of the Company that an exemption from such registration is available.

The Restricted Stock shall be registered in the name of the Grantee and shall be placed in a restricted account in book entry form where such Restricted Stock shall remain until either such Restricted Stock is no longer subject to the Restrictions, or such Restricted Stock is forfeited, as provided hereunder. The Company may, in its discretion, register the Restricted Stock in certificate form for the number of shares of Restricted Stock specified above. If the Company registers the Restricted Stock in certificate form, the Company will retain the certificates and each certificate will bear the following legend until the expiration of the period the Restricted Stock is subject to the Restrictions or forfeiture:

> "The sale or other transfer of the shares of stock represented by this certificate, whether voluntary, involuntary, or by operation of law, is subject to certain restrictions on transfer set forth in the FirstEnergy Corp. 2015 Incentive Compensation Plan, in the rules and administrative procedures adopted pursuant to such Plan, and in a Restricted Stock Award Agreement dated with the Award Date. A copy of the Plan, such rules and procedures, and such Restricted Stock Award Agreement may be obtained from the Corporate Secretary of FirstEnergy Corp."

14. Termination of Agreement. This Agreement will terminate on the earliest of: (i) the date of the Grantee's termination of employment with the Company or any of its Subsidiaries prior to the satisfaction of the Vesting Condition, except if such termination is due to death or Disability or a termination by the Company without Cause, or (ii) the date the Restrictions lapse in accordance with the terms of this Agreement. Any terms or conditions of this Agreement that the Company determines are reasonably necessary to effectuate its purposes will survive the termination of this Agreement.

15. Miscellaneous Provisions.

(a) Adjustments. In the event of a corporate event or transaction described in Section 4.5 of the Plan, the Shares of Restricted Stock shall be adjusted as set forth in Section 4.5 of the Plan.

(b) Successors and Legal Representatives. This Agreement will bind and inure to the benefit of the Company and the Grantee, and their respective successors, assigns and legal representatives.

(c) Integration. This Agreement, together with the Plan, constitutes the entire agreement between the Grantee and the Company with respect to the subject matter hereof. Any waiver of any term, condition or breach thereof will not be a waiver of any other term or condition or of the same term or condition for the future, or of any subsequent breach. To the extent a conflict exists between the terms of this Agreement and the provisions of the Plan, the provisions of the Plan shall govern.

(d) Notice. Any notice relating to this grant must be in writing, which may include an electronic writing.

(e) No Employment Right Created. Nothing in this Agreement will be construed to confer upon the Grantee the right to continue in the employment or service of the Company or any of its Subsidiaries, or to be employed or serve in any particular position therewith, or affect any right which the Company or any of its Subsidiaries may have to terminate the Grantee's employment or service with or without Cause.

(f) Severability. In the event of the invalidity of any part or provision of this Agreement, such invalidity will not affect the enforceability of any other part or provision of this Agreement.

(g) Section Headings. The section headings of this Agreement are for convenience and reference only and are not intended to define, extend or limit the contents of the sections.

(h) Amendment. The terms and conditions of this Agreement may be modified by the Committee:

(i) in any case permitted by the terms of the Plan or this Agreement;

(ii) with the written consent of the Grantee; or

(iii) without the consent of the Grantee if the amendment is either not materially adverse to the interests of the Grantee or is necessary or appropriate in the view of the Committee to conform with, or to take into account, applicable law, including either exemption from or compliance with any applicable tax law.

(i) Plan Administration. The Plan is administered by the Committee, which has full and exclusive discretionary power to interpret, implement, construe and adopt rules, forms and guidelines for administering the Plan and this Agreement. All actions, interpretations and determinations made by the Committee, the Board of Directors, or any of their delegates as to the provisions of this Agreement and the Plan shall be final, conclusive, and binding on all persons and the Grantee agrees to be bound by such actions, interpretations and determinations.

(j) Governing Law. Except as may otherwise be provided in the Plan, this Agreement will be governed by, construed and enforced in accordance with the internal laws of the State of Ohio, without giving effect to its principles of conflict of laws. By accepting this Award, the Grantee agrees to the exclusive jurisdiction and venue of the courts of the United States District Court for the Northern District of Ohio or the Summit County (Ohio) Court of Common Pleas to adjudicate any and all claims brought with respect to this Agreement.

(k) Code Section 409A. Notwithstanding anything in the Plan or this Agreement to the contrary, the award of Restricted Stock hereunder is intended to meet any applicable requirements for exclusion from coverage under Code Section 409A and this Agreement shall be construed and administered accordingly. However, notwithstanding anything in this Agreement to the contrary, the Company makes no representations or warranties as to the tax effects of payments made to the Grantee (or the Grantee's estate) pursuant to this Agreement, and any and all tax consequences incident to such shall solely be the responsibility of the Grantee (or the Grantee's estate).

(l) Data Privacy. In order to implement, administer and manage the Grantee's participation in the Plan, the Company and its affiliates may hold certain personal information about the Grantee,

including, but not limited to, the Grantee's name, home address and telephone number, date of birth, social security number or other identification number, salary, nationality, job title, any Shares or directorships held in the Company or any affiliate, details of all Awards or any other entitlement to Shares awarded, canceled, exercised, vested, unvested or outstanding in the Grantee's favor, for the exclusive purpose of implementing, administering and managing the Plan (collectively, the "Personal Data").

The Grantee hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of the Grantee's Personal Data as described above, as applicable, to the Company and its affiliates for the sole purpose of administering the Plan. The Grantee understands that Personal Data may be transferred to third parties assisting in the implementation, administration and management of the Plan, that these recipients may be located in the United States or elsewhere, and that the recipient's country may have different data privacy laws and protections than the United States or the Grantee's state of residence. The Grantee understands that he or she may request a list with the names and addresses of any potential recipients of the Personal Data by contacting the Executive Compensation group of Human Resources. The Grantee authorizes the recipients to receive, possess, use, retain and transfer the Personal Data, in electronic or other form, for the purposes of implementing, administering and managing the Grantee's participation in the Plan, including any requisite transfer of such Personal Data as may be required to a broker or other third party with whom the Grantee may elect to deposit any Shares received upon vesting of the Restricted Stock. The Grantee understands that Personal Data will be held only as long as is necessary to implement, administer and manage the Grantee's participation in the Plan and to comply with SEC and/or NYSE reporting obligations, any other applicable law or regulation and any applicable document retention policies of the Company. The Grantee understands that he or she may, at any time, view Personal Data, request additional information about the storage and processing of Personal Data, require any necessary amendments to Personal Data or refuse or withdraw the consents herein, without cost, by contacting in writing the Executive Compensation group of Human Resources. The Grantee understands that refusal or withdrawal of consent may affect the Grantee's ability to participate in the Plan or to realize benefits from the Restricted Stock. For more information on the consequences of the Grantee's refusal to consent or withdrawal of consent, the Grantee understands that he or she may contact the Executive Compensation group of Human Resources.

(m) Signatures and Electronic Delivery. This Agreement may be executed electronically and in counterparts, each of which shall be deemed to be an original, and when taken together shall constitute one binding agreement. The Company may, in its sole discretion, deliver any documents related to current or future participation in the Plan by electronic means. The Grantee hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

[SIGNATURE ON FOLLOWING PAGE]

The Grantee acknowledges receipt of this Restricted Stock Award Agreement and accepts and agrees with the terms and conditions stated above.

_____

_____ (Signature of the Grantee)

(Date)

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Section 12: EX-21 (EXHIBIT 21)

EXHIBIT 21

FIRSTENERGY CORP.
LIST OF SUBSIDIARIES OF THE REGISTRANT
AT DECEMBER 31, 2018

FirstEnergy Nuclear Operating Company - Incorporated in Ohio[(1)]

FirstEnergy Service Company - Incorporated in Ohio

FirstEnergy Solutions Corp. - Incorporated in Ohio[(1)]

FirstEnergy Transmission, LLC - Organized in Delaware

FirstEnergy Ventures Corp. - Incorporated in Ohio

Jersey Central Power & Light Company - Incorporated in New Jersey

Metropolitan Edison Company - Incorporated in Pennsylvania

Monongahela Power Company - Incorporated in Ohio

Ohio Edison Company - Incorporated in Ohio

Pennsylvania Electric Company - Incorporated in Pennsylvania

The Cleveland Electric Illuminating Company - Incorporated in Ohio

The Potomac Edison Company - Incorporated in Maryland

The Toledo Edison Company - Incorporated in Ohio

West Penn Power Company - Incorporated in Pennsylvania

[(1)] *As of March 31, 2018, the noted subsidiaries no longer consolidated into FE Corp.*

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Section 13: EX-23 (EXHIBIT 23)

EXHIBIT 23

Consent of Independent Registered Public Accounting Firm

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (Nos. 333-204422, 333-213628, and 333-48587), and Form S-8 (Nos. 333-222225, 333-202184, 333-204436, 333-56094, 333-72768, 333-81183, 333-89356, 333-101472, 333-110662, 333-146170, 333-165640, and 333-172464) of FirstEnergy Corp. of our report dated February 20, 2019 relating to the financial statements, financial statement schedule, and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Cleveland, Ohio
February 19, 2019

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Section 14: EX-31.1 (EXHIBIT 31.1)

EXHIBIT 31.1

Certification

I, Charles E. Jones, certify that:

1. I have reviewed this report on Form 10-K of FirstEnergy Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 19, 2019

/s/ Charles E. Jones
Charles E. Jones
President and Chief Executive Officer

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Section 15: EX-31.2 (EXHIBIT 31.2)

EXHIBIT 31.2

Certification

I, Steven E. Strah, certify that:

1. I have reviewed this report on Form 10-K of FirstEnergy Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 19, 2019

/s/ Steven E. Strah

Steven E. Strah

Senior Vice President and Chief Financial Officer

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Section 16: EX-32 (EXHIBIT 32)

EXHIBIT 32

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350

In connection with the Report of FirstEnergy Corp. ("Company") on Form 10-K for the period ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each undersigned officer of the Company does hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Charles E. Jones

Charles E. Jones

President and Chief Executive Officer

/s/ Steven E. Strah

Steven E. Strah

Senior Vice President and Chief Financial Officer

Date: February 19, 2019

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