

### Pictograms

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Kev events



Infrastructure



Exploitation



Market



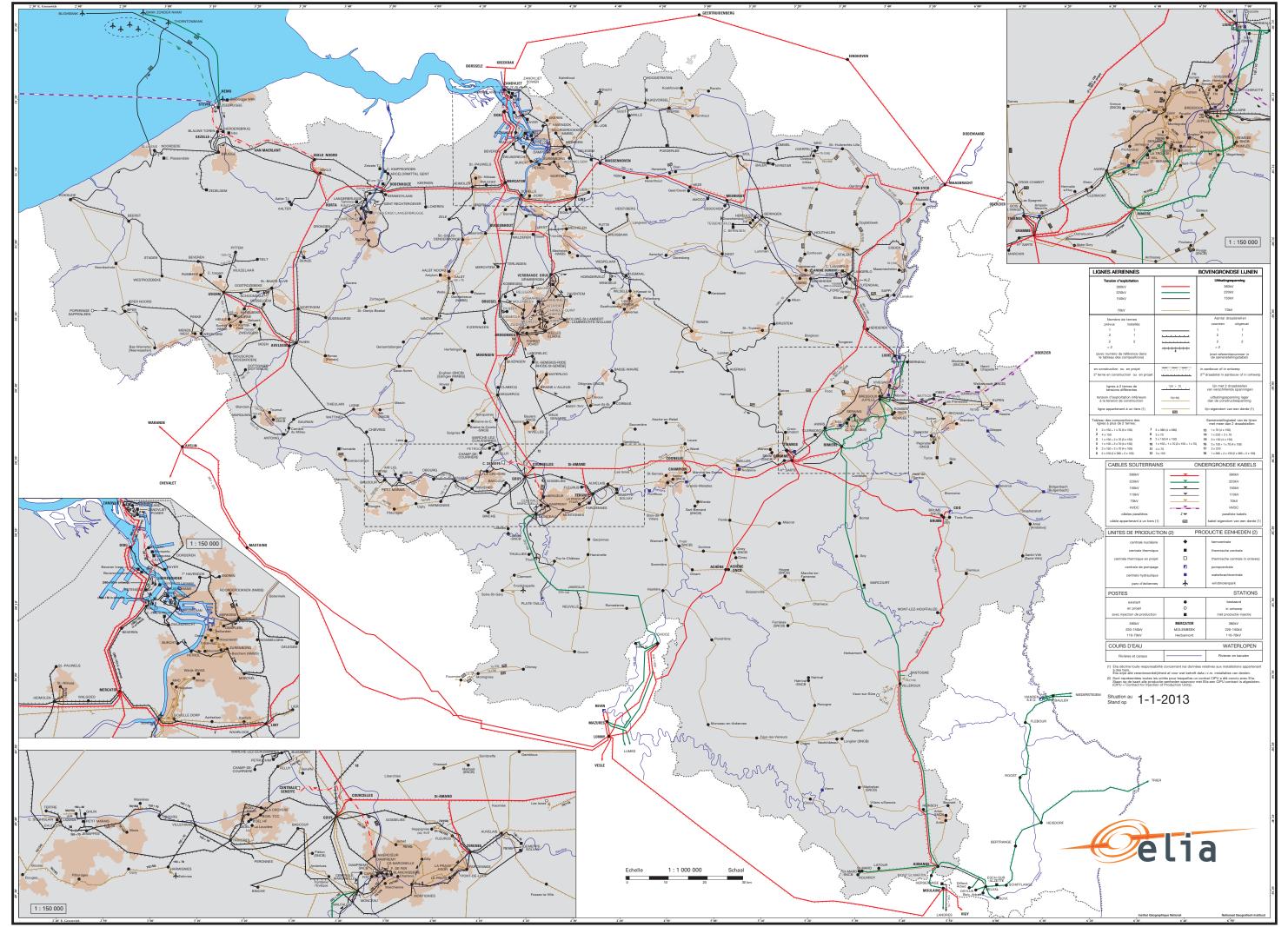
Beyond our borders



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<sup>\*</sup> These chapters form the annual report cf. article 119 of the Belgian company code.







### **About this report**

Elia Group, which includes Elia in Belgium and 50Hertz in northern and eastern Germany, aims to play a key role in the European electricity market. Our employees work day and night to ensure the quality and continuity of the electricity supply to homes and industries in Belgium and Germany. While most people take that for granted, it is nonetheless a huge and relentless challenge given the complexity of an interconnected electricity system that provides power to 550 million consumers in Europe.

The Group's mission involves a number of objectives: continually ensuring balance between energy generated and consumed, contributing to security of supply, and timely updating grid infrastructure in order to facilitate the development of a sustainable and environmentally friendly system that meets economic needs while delivering high-quality service at the best cost.

In a context of constant and rapid change, Elia Group plays a leading role by operating a European high-voltage electricity system and consolidating a trading platform to ensure a more fluid and efficient market.

The Elia Group aims to develop and pursue its plans while actively taking account of the opinions of its customers, regulators, the public authorities and other system operators. The aim is to strike a balance between fair profit for shareholders, employee welfare, stakeholder satisfaction and respect for the environment.

### How to read this report?

The 2013 annual report looks at what our 1,996 employees have been doing in Belgium and Germany in their ongoing efforts to meet the needs of customers, expand our expertise and constantly take initiatives.

This year, the Group launched a diagnostic process designed to assess its ability to shoulder its responsibilities to society and meet the expectations of its stakeholders, inspired by the guidelines set out in ISO 26000.

The content of this report was devised on the basis of the initial conclusions and offers readers a more cross-cutting approach based on the relationship between the Group's businesses (Part 1, p.14) and the main challenges we face (Part 2, p.58). The sections on projects, key events and initiatives taken in 2013 illustrate the narrative part and enable readers to better understand the objectives and resources deployed by the Group so that it can play a role in the energy transition. Graphs, illustrations and references throughout the report give curious readers a more comprehensive overview of Elia's activities and the challenges it faces in its efforts to develop a high-quality energy future for future generations.

# Foreword by the Chairman of the Board of Directors



The Elia Group's commitment to major grid development projects, both onshore and offshore, is quite simply our response to the needs of our customers, the expectations of the citizens and the commitment of the EU and its Member States to achieving environmental objectives for 2020.

The year 2013 ended on a positive operational performance with excellent financial results. This was the result of the combined efforts of some 1,900 Elia Group employees working day and night, winter and summer, to ensure a high-quality electricity supply for more than 30 million consumers. And yet, today, few people realise just how complex the electric system is, especially in view of just how much we all need continuity of supply in our everyday lives.

The challenges facing the energy sector fuel numerous debates: the planned elimination of nuclear power, the closure of gas-fired power stations, the increase in electricity needs, the construction of the single market and, lastly, the growing share of renewable energy generation, which is by nature variable and unpredictable. In addressing all of these challenges together, we need to

not only show greater flexibility, but we must radically change how we manage the electricity system.

However, when it comes to achieving ongoing balance between energy generated and energy consumed, the priority is still grid development. The grid infrastructure must be proactively upgraded so it can contribute to better security of supply, facilitate the transition to a sustainable electricity system that respects the environment, and offer a high quality service at the best cost. Accordingly, the collective needs and the needs of individuals must converge. This inevitably means taking account of all stakeholders concerned within a spirit of collaboration. Now more than ever, efforts to seek consensus require a stable and favourable framework in financial, regulatory, legislative and societal terms.

With my tenure as Chairman of the Board drawing to an end, I am also pleased to see that the collaboration and dialogue between Elia and 50Hertz growing and intensifying, resulting in a company that can more effectively and efficiently serve its customers while continuing to grow and develop. The Elia Group's commitment to excelling on a daily basis no longer has to be proven. It is a source of inestimable pride.

Luc Van Nevel, Chairman of the Board of Directors

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# Foreword by the Chairman of the Management Committee

To continue ensuring the reliability of the electricity supply at a fair price, the Elia Group will endeavour to play a leading role in the energy revolution. This position as facilitator and initiator aims to enable the development of diversified, sustainable, competitive and reliable energy systems, both onshore and offshore.

I am extremely proud of the results the Elia Group has achieved - through the efforts of all our employees - in terms of continuity of supply, safety and the development of our investment portfolio. But every day we face two challenges: continuing to manage a grid developed over the last 100 years and laying the groundwork for the grid of the future. The energy revolution is not some vacuous expression, but a daily challenge requiring each Elia Group employee to adapt to profound changes in our businesses so we are prepared to meet the challenges we face.

Three of these challenges are critical: ensuring continuity of supply, actively taking part in the creation of a single European electricity market, and – again, with a view to meeting European commitments – integrating renewable energy generation. The role of sys-

tem operator is gradually becoming essential, requiring close cooperation between the Member States, regulators, market players, energy markets and all system operators. To that end, new mechanisms and partnerships have been conceived, developed and deployed in order to, among other things, encourage the more dynamic demand management and take part in the integration of the European market.

Now more than ever, the Elia Group intends to continue its development and assert its role at the heart of the energy sector. This will involve taking part in projects that anticipate the future of our businesses and increasing internationalisation of our business activities. In 2014, a joint entity will be set up by Elia and 50Hertz to bolster the Group's position internationally. The objective is to leverage and develop the skills we have

acquired over the years and continue enhancing them by taking part in innovative, development-oriented projects designed to enhance the company's performance.

Through the activities it pursued in 2013, Elia Group clearly played an active part in the energy transition. I am confident that 2014 will see new initiatives take shape to continue providing concrete answers so it can pursue its mission on behalf of the community.

Jacques Vandermeiren, Chairman of the Management Committee



### 12 key events for 2013

The 12 key events listed in the calendar below illustrate the Elia Group's desire to be a key player in the energy transition. This list is not exhaustive since throughout the report you will find a "Key Events for 2013" section enabling you to identify those actions, projects and initiatives that were actually part of the development of grids, the construction of the single market and the growing integration of renewables.

1





### January

#### 50HERTZ AND DANISH TRANSMISSION SYSTEM OPERATOR ENERGINET.DK PURSUE DEVELOPMENT OF OFFSHORE GRID IN BALTIC SEA

The two transmission system operators concluded a cooperation agreement on the *Kriegers Flak Combined Grid Solution* (CGS), a project combining the connection of future Danish and German offshore wind farms with a new offshore interconnector connecting the two countries. This decision is an important stage in favour of renewable energies, international electricity trading and security of supply.

### February

#### FLOW-BASED MARKET COUPLING PROJECT MOVES FORWARD

This was a milestone for the flowbased market coupling project in the CWE (Central West Europe) region, because throughout 2013 the market players were able to compare exchange capacities and the prices that would be obtained with a flow-based mechanism, itemised with those calculated on the basis of the current ATC (Available Transmission Capacity) mechanism. This publication was made possible thanks to the daily simulations carried out at CWE region level by the various control centres, Coreso and the energy exchanges.

### March

#### SUCCESSFUL €750 MILLION BOND ISSUE IN CONNEC-TION WITH ELIA'S €3 BIL-LION EMTN PROGRAMME

In early February, Elia announced the launch of a €3 billion Euro Medium Term Note (EMTN) programme making it possible to issue, when appropriate, securities in the form of series or tranches denominated in euro. An initial €750 million issue was successfully carried out on 26 March. Elia thus confirmed its financial strategy with respect to debt management through a combination of shortterm, medium-term and longterm debts. The bond issue will enable Elia to develop its activities and pursue its contribution to the opening up of the Belgian and European markets and the integration of energy generated from renewable sources.







The first section of subsea cable has been connected to the Baltic 1 wind farm.

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### Apri

#### INSTALLATION OF THE FIRST SECTION OF SUBSEA CABLE FOR BALTIC 2

50Hertz connected EnBW Baltic 2 - the second offshore wind farm in the Baltic Sea, with a capacity of up to 288 MW - to the grid. On 20 April 2013, the first section of subsea cable was connected to the Baltic 1 wind farm, via which the electricity generated by Baltic 2 will also be transmitted to the coast. A total of 60 km of subsea cable will be installed in the months ahead. A second subsea cable is being installed between the Baltic 1 platform and the Markgrafenheide landfall near Rostock, after which it will be connected to the Bentwisch substation as part of the Baltic 2 connection.

### Vlay

#### LAUNCH OF PROCEDURE FOR FUTURE BELGIUM-GERMANY INTERCONNECTION

The sector plan review application was submitted to the 14 municipal authorities affected by the route of the future direct interconnection between Belgium and Germany. It comprises two aspects: the registration of a public service and community equipment zone for receiving the AC/DC conversion station in Lixhe (Visé) and the registration of a reservation zone (a corridor) where the cables will be installed. Located at the heart of the Central West Europe grid, this new interconnection is part of the future development of the European super grid (overlay grid) that is essential for transmitting the energy generated by renewable sources that are increasingly remote from consumption centres.

### June

### START OF THE MASSIVE 500 KV LAUCHSTÄDT-MEITINGEN "SOUTH-EAST DIRECT CURRENT TRANSITION" ENERGY TRANSITION PROJECT

50Hertz and Amprion launched a joint project to build one of the high-capacity north-south highvoltage lines linking Saxony-Anhalt and Bavaria using high-voltage direct current (HVDC) technology. The need for a new line between the Halle region and the Augsburg region, known as Corridor D (from Bad Lauchstädt to Meitingen) in the 2012 German grid development plan, was included in the law via the adoption of the Federal Requirement Plan. 50Hertz will be responsible for the permitting procedure in Saxony-Anhalt, Saxony and Thuringia, while Amprion will be responsible for Bavaria and potentially Baden-Württemberg.





The annual conference on grid security in Berlin has become a major event in recent years. Jacques Vandermeiren brought together experts discussing "The Big Transformation".

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### 8



### July

### ELIA DRAWS UP REPORT ON MAINTAINING BALANCE

In accordance with Article 8. section 1, paragraph 15 of the Electricity Act, Elia produced a report setting out the milestones and defining the operating rules needed for maintaining balance in its control area. The aim of the plan is to have an overview of how balance is maintained in the control area. The conclusion of the report contains a series of suggested changes that could be envisaged strategically. Elia asked the market players to formulate their comments on the report by next 30 August. These comments will be published in the final report, which will be submitted to the State Secretary for Energy, CREG and FEBEG.

### August

#### CONFERENCE ON SECURITY: GRID OPERATION IN THE NEW ENERGY ERA

50Hertz held its annual conference on grid security in Berlin. In recent years, this has become the major national event focusing on the integration of renewable energies into the grid and grid security. All of the stakeholders came to discuss the current situation in Germany and Europe following the radical change in connection with the "Energiewende", the German energy transition. The points raised included interruptible loads, as well as improved coordination and improved data exchange in real time between distribution system operations and transmission system operators.

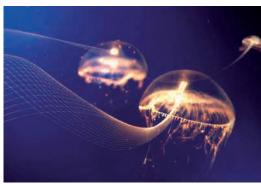
### September

# JACQUES VANDERMEIREN HOSTS THREE EVENING SESSIONS ATTENDED BY EXPERTS DISCUSSING "THE BIG TRANSFORMATION"

The sessions brought together European representatives from the energy sector, NGOs, politics, business and think tanks. Each session focused on a different topic. The issues on the agenda were: "Energy: evolution or revolution?", "Smart Power" and "Energy without Borders". The third topic drove the debate on the Energiewende in Germany, a key player in the move into the new energy era. Through these kinds of events, Elia aims to bolster its leadership position and open up a dialogue.

The "Beyond 2020" report presented during Stakeholders' Day in November sums up the content of these three sessions and advocates a longer term energy pact.







### ctober

#### EUROPEAN COMMISSION CLOS-ES FIRST EU LIST COMPRISING 250 ENERGY INFRASTRUC-TURE PROJECTS, OTHERWISE KNOWN AS "PROJECTS OF COMMON INTEREST (PCI)"

Five 50Hertz projects are on the list: Kriegers Flak Combined Grid Solution, the Krajnik-Vierraden line with the installation of phase-shifting transformers, the third line between Poland and Germany, the southwest line (Thuringian Bridge) as well as the direct current passage in the southeast (Lauchstädt-Meitingen).

Elia projects are also listed:
ALEGrO, Nemo, BOG and the Luxembourg interconnection project.
The Commission still has to submit this list of projects to the European Parliament and the European Council. The list will take effect if no objections are lodged within two months following publication.

### November

#### GROUP INTENDS TO CONTINUE DEVELOPMENT AND STRENGTHEN LEADING ROLE IN EUROPEAN ELECTRICITY SECTOR

This ambition will entail involvement in projects that anticipate the future of our businesses, increased internationalisation of our businesses and enhanced cooperation, something which is already well advanced between Elia and 50Hertz. A Group management structure is being set up and six business activities pursued at Elia Group level are being defined. This dynamic will be supplemented in early 2014 by a more linear organisation in order to go even further in the drive towards efficiency.

### December

### THE AMOUNT OF INVESTMENTS APPROVED IN 2013 APPEARS SIGNIFICANT IN TERMS OF BOTH OFFSHORE AND ONSHORE PROJECTS

The reasons are replacement requirements in the Belgian grid which will be pursued in the years ahead, and major infrastructure projects in Germany to integrate renewable generation supported by a favourable regulatory model.



Throughout the report you will find a "Key Events for 2013" section, identified by this pictogram, enabling you to identify those actions, projects and initiatives that were actually part of the development of grids, the construction of the single market and the growing integration of renewables.



### The Elia share in 2013

2013 was another excellent year on the European stock markets. In Belgium, the BEL20 index rose a solid 18%, while the BEL MID was up 10%. For the Elia share, 2013 was relatively stable, with a slight downturn late in the year.

**56%** 

The contribution of Germany to the Group's IFRS results

After a discouraging first half that saw the share price drop 10%, mainly due to the payment of a dividend in early June, the Elia share rebounded in the second half thanks to the gradual upturn in regulated activities in Germany following the publication of the half-yearly results.

The Elia share hit an all-time high in the first few months of 2013.

However, the publication of the 2012 results and the stable dividend of €1.47 triggered a downward movement that was further aggravated by the payment of the dividend in early June.

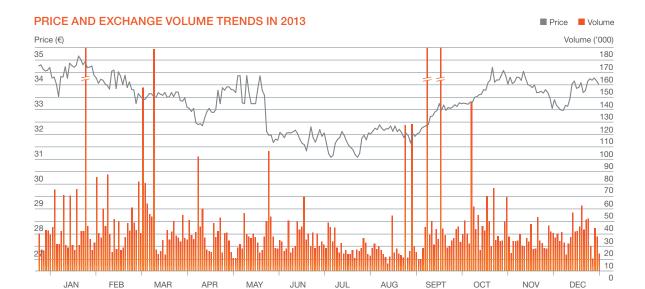
Following the publication of the first-half results, the Elia share once again rebounded, thanks mainly to the confirmation of the good results posted by regulated activities in Germany. The relative contribution of regulated activities in Germany to the Group's IFRS results, up 50% compared to 2012, continued to rise, reaching 56%, compared to 45% in 2012. But this is also a result of the change in compensation for regulated activities in Belgium, which are currently at an all-time low due to the stubbornly low ten-year rate.

The Elia share's closing price at the end of 2013 was €33.70, compared with €34.20 at the end of 2012, a drop of 1.46%.

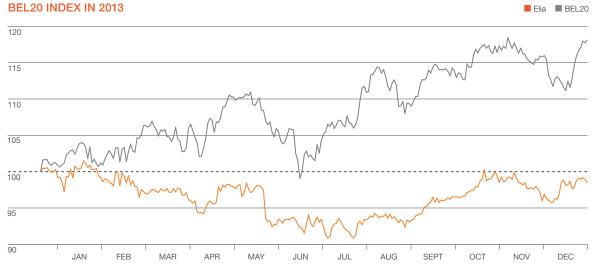
Taking into account the dividend of €1.54, the share price fell 5.96% year on year.

The lowest price in 2013 was €30.97 on 12 July, while the highest price was €34.89 on 30 January.

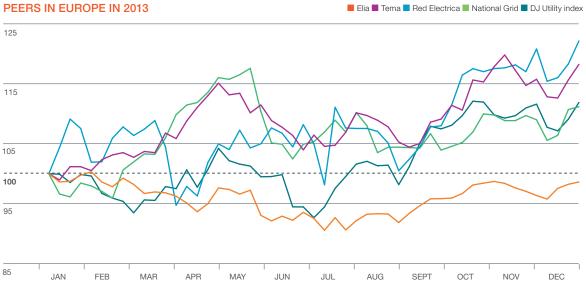
The liquidity of the share rose by 38.01% (from 27,637 shares per day on average in 2012 to 38,142 in 2013). This is mainly the result of the Belfius Insurance transaction in late January 2013 to acquire a 5.41% stake in Elia.















After several years of very good performance, the results of the Elia share are trailing behind those of other listed system operators, such as National Grid in the UK (up 11.18%), Red Electrica in Spain (up 22.15%) and Terna in Italy (up 18.24%).

The electricity sector grew by 11.89%.

With 60,568,229 shares issued, the market capitalisation was €2,041,149,317 at the end of December. In 2013, 9,650,007 Elia shares were traded on the Euronext Brussels market, i.e. 35.4% of the free float.

The table below gives an overview of the monthly statistics for the Elia share on Euronext Brussels in 2013.

Month	Volume	Closing price	Price		Free float turnover	Market capitalisation
	(day average)		Highest	Lowest	Rate (%)	in € m
January	96,926	34.40	34.89	32.9	7.83	2,082.82
February	33,753	33.58	34.75	33.515	2.48	2,033.16
May	48,991	33.40	33.94	32.91	3.61	2,022.98
April	33,111	33.48	33.90	32.1	2.55	2,027.82
May	27,275	32.00	33.79	31.7	2.20	1,938.18
June	27,904	32.17	32.39	31.155	2.05	1,948.48
July	20,998	31.76	32.14	30.965	1.77	1,923.65
August	25,495	31.59	32.26	31.55	2.06	1,913.35
September	44,423	32.90	33.00	31.8	3.42	1,992.69
October	39,608	33.70	34.30	32.6	3.34	2041.15
November	25,282	33.14	34.16	32.66	1.95	2,007.23
December	29,533	33.70	34.09	32.655	2.17	2,041.15
2013	38,142	33.70	34.89	30.965	35.43	2,041.15





The Elia share has been certified by multiple institutions for corporate social responsibility.

#### Elia share on the market

Stock exchange	Euronext Brussels
Index	BEL20
Ticker	ELI
ISIN	BE 0003822393
Bloomberg code	ELI BB
Reuters code	ELIBR

### **Appointment of two liquidity providers for the Elia share**

In late 2009 Elia concluded a liquidity provider contract with KBC Securities and Bank Degroof, both of which are officially recognised by NYSE Euronext. These two financial institutions have been continually present in the order book for the Elia share since 1 December 2009 and are involved in both sales and purchases.

### The Elia share and its codes

#### SHARE INDEX

On 31 December 2013, the Elia share was included in the BEL20 index. On that date, the Elia share accounted for 1.12%, ranking it 17th in the index.

### A sustainable and socially responsible company

Elia was rated by Vigeo, an extra-financial agency which analyses every company according to six criteria:

- business behaviour;
- human rights;
- · environment;
- · community involvement;
- corporate governance;
- · human resources.

Elia was also certified by ECPI, a ratings company specialising in corporate social responsibility (ESG (Environmental, Social & Governance) research) and obtained the ECPI Ethical EMU Equity label.



#### Shareholder structure

The shareholder structure of Elia System Operator SA as at 31 December 2013 is given below. (See chart above).

#### SHAREHOLDER STRUCTURE

	Shares	% Shares	% Voting rights
Publi -T	27,383,507	45.21	45.21
Publipart	1,526,756	2.52	2.52
Belfius Insurance	3,276,497	5.41	5.41
Other free float	28,381,469	46.86	46.86
Total	60,568,229	100	100

### **Transparency regulations** and disclosure of interests

Under Belgian legislation on transparency, shareholdings of at least 5% (or a multiple of 5%) must be reported to the FSMA and to the company in question. In 2013, the Belfius Insurance transparency report was sent to Elia. It indicated that Belfius Insurance had acquired a stake of 3,276,497 shares on 30 January.

#### **Dividend**

On 28 February 2014, the Elia Board of Directors decided to propose to the general meeting of shareholders of 20 May 2014, in accordance with the dividend policy and subject to approval of the profit appropriation by the annual general meeting of shareholders, a normal dividend of €93.28 million or €1.54 per share (gross).

This gives a net result of €1.155 per share.

The following paying agents will pay out dividends to shareholders: BNP Paribas Fortis, ING Belgique, CBC and Belfius. Dividend payouts for shares held in a stock account will be settled automatically by the bank or stockbroker. Elia will

pay out dividends on registered shares directly to shareholders.

### **Dividend policy**

Elia is obliged by its articles of association to pay out at least 85% of profits earned in Belgium, after retaining 5% for the legal reserve. This represents a payout ratio of 53.1% of the IFRS profit stated in the report.

Following the introduction of multi-year tariffs, part of the net profit derived from offsetting decommissioning gains in the tariffs must be reserved under equity.



#### **Investors**

For any questions regarding the Elia share, please contact:

Elia Investor Relations Department Boulevard de l'Empereur 20 1000 Brussels Belgium

Tel.: +32 2 546 75 79 Fax: +32 2 546 71 80

E-mail: investor.relations@elia.be

Information about the Group (press releases, annual reports, share prices, disclosures, etc.) can be found on the Elia website www.elia.be in three languages (French, Dutch and English).

### > Financial calendar

28 February 2014 Publication of the 2013 annual results
Early April 2014 2013 annual report available on the website
Interim statement for Q1 2014

20 May 2014 Interim statement for Q1 2014
20 May 2014 General meeting of shareholders
Early June 2014 Payment of 2013 dividend

29 August 2014 Publication of half-yearly results for 2014

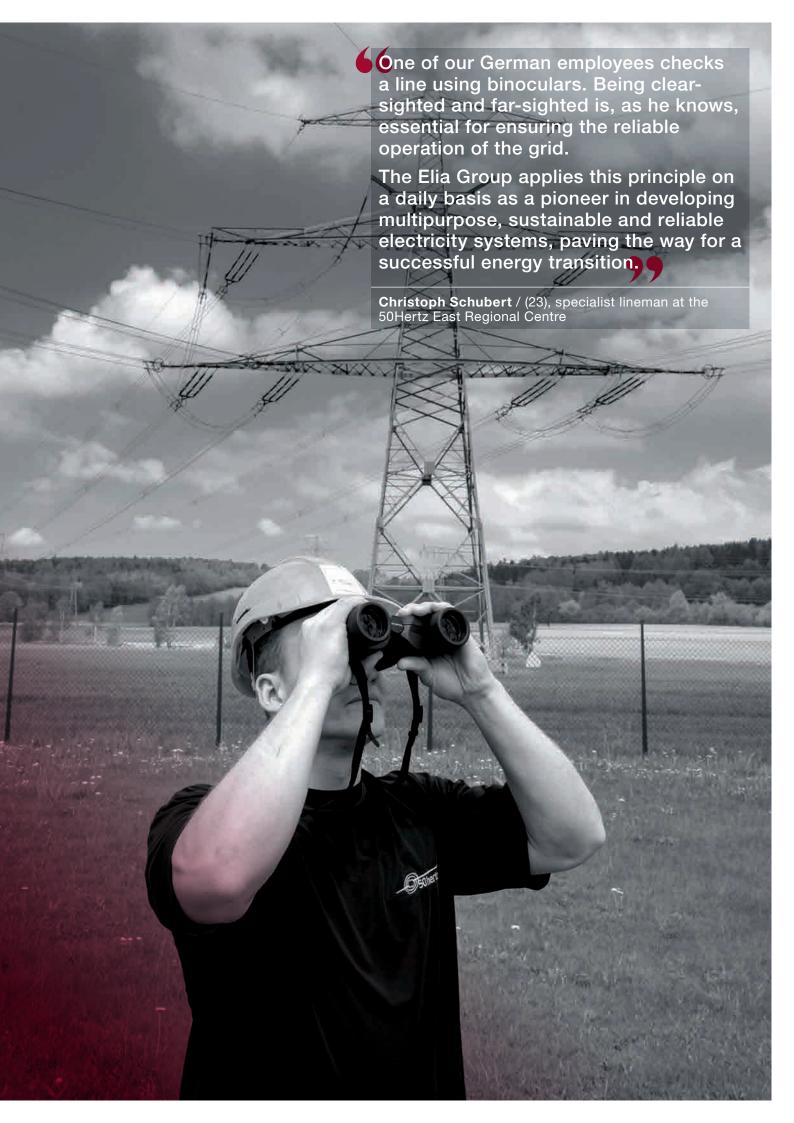
14 November 2014 Interim statement for Q3 2014

# The Elia Group

Day in and day out, in both Belgium and Germany, the employees of the Elia Group, comprising Elia System Operator and 50Hertz, share the same passion for the business in order to ensure a reliable, high-quality electricity supply for the community. As the transmission system operator in Belgium and Germany, the Elia Group has three key, interdependent missions.

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1,996

employees help to ensure security of supply for 30 million consumers in Belgium and Germany

## Two system operators, one European group

The Elia Group is organised around its two transmission system operators: Elia in Belgium and 50Hertz in Germany.



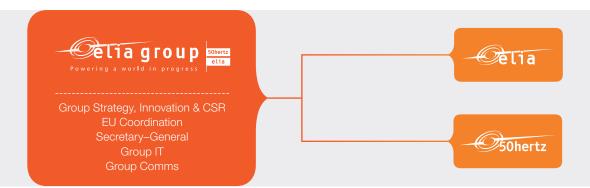
Elia, the Belgian transmission system operator, holds licences for its 380 kV to 150 kV national grid and for its 70 kV to 30 kV grids in Belgium's three regions.

50Hertz, one of Germany's four transmission system operators and active in the north-eastern part of the country, is held jointly by Elia (60%) and Industry Funds Management (40%).

The Elia Group is one of the top five transmission system operators in Europe and one of the top 15 in the world. It actively sets an example as a driving force behind the development of the European market and through its commitment to ensuring reliability and security of supply and its efforts to promote the integration of renewable energies.

Their certifications as fully unbundled transmission system operators in Belgium and Germany prove their ability to operate completely independently from electricity generators and suppliers. This is an essential prerequisite for the creation of a properly integrated European market.

Given its strategic position at the cross-roads between electricity markets in western, eastern and northern Europe, the Elia Group securely manages imports, exports and transits of electrical energy over its grids. It also plays a key role in integrating European electricity markets by participating directly and indirectly in the shareholder structure of Eurogrid International, the regional cross-border flow monitoring centre Coreso, the APX-ENDEX-Belpex and EPEX Spot power exchanges, the CASC.EU and EMCC capacity auction offices and the Gridlab training centre.



Elia System Operator is listed on the Brussels stock exchange (with a free float of 52.10%) whose core shareholder is Publi-T, a municipal holding company. Elia holds a 60% stake in Eurogrid, created in 2010 in order to acquire German system operator 50Hertz, together with IFM Investors, an international infrastructure fund manager which holds the remaining 40%. Elia System Operator has been quoted on the regulated Brussels Euronext market since June 2005 and joined the BEL20 index in March 2012, pursuing its strategy and growth in Europe with the support of its shareholders and the financial markets.

The Group's management has set objectives in four key areas:

- Implement the Group's strategic choices
- Pursue organic growth in our core businesses
- Anticipate future technological developments
- Intensify the Group's dynamics

To successfully deploy this strategy, the Group's management is based on the following solid fundamentals:

- Support the business continuity of each system operator
- Improve organisational efficiency
- Train employees in change and development

The deployment of a Strategy, Innovation & CSR division at Group level aims to stimulate the taking on board of strategic challenges within the system operator business. This approach dovetails with our policy on corporate social responsibility.

Communication is bolstered at Group level in order to intensify its role and further enhance its reputation internationally.

### Deployment of a new initiative between Elia and 50Hertz

In the first half of 2014, Elia System Operator and 50Hertz will jointly found a new company to bolster the Elia Group's position in its quest to acquire assets and in the development of two businesses: Consulting & Services projects and EPC/EPCM (Engineering, Procurement & Construction) projects.

### Innovation as a driver of development

The system operator's mission is to ensure a reliable, sustainable system at a price that is affordable to the community. Through its central position, the Group wants to bring together market players to enable them to develop new production and demand management models (including storage). As a socially responsible player, the Group intends to take a leading position in the revolution. In fact, innovation will drive the appearance of more effective and creative solutions - in products, processes, services, technologies and ideas - acceptable to the market, the public authorities and civil society. In the innovation cycle, the Elia Group is targeting applied research, development and demonstration of new solutions while incorporating the resulting knowledge in order to generate new competences for employees (see p.66, 70 and 76).







### **Operating grid infrastructure**

We maintain and develop high-voltage installations: lines, cables, transformers, etc. In line with market demands and requirements for the secure management of the electricity system, we are modernising and developing our grid using advanced technologies.

#### LENGTH OF THE HIGH-VOLTAGE GRID IN BELGIUM

Voltage (kV)	Undergroun	d cables (km)	Overhead	l lines (km)	Tota	l (km)
Elia	2014	2013	2014	2013	2014	2013
380	-	-	891	891	891	891
220	5	5	297	297	302	302
150	465	434	1,997	2,007	2,462	2,441
70	283	294	2,346	2,356	2,629	2,650
36	1,932	1,923	8	8	1,940	1,931
30	124	127	22	22	146	149
Total Elia	2,809	2,783	5,561	5,581	8,370	8,364

#### LENGTH OF THE HIGH-VOLTAGE GRID IN GERMANY

Voltage (kV)	Underground	d cables (km)	Overhead	l lines (km)	Tota	l (km)
50Hertz	2014	2013	2014	2013	2014	2013
AC 380	55	55	6,980	6,970	7,035	7,025
AC 220	3	3	2,867	2,862	2,870	2,865
AC 150	75	75	-	-	75	75
DC 400	14	14	-	-	14	14
Total 50Hertz	147	147	9,847	9,832	9,995	9,980

#### STAGES IN THE INFRASTRUCTURE LIFE CYCLE



Grid maintenance is gradually transforming into infrastructure management. Methods for monitoring infrastructure components will be implemented to better plan work requirements. In Belgium, we have to maintain an ageing infrastructure and design a grid capable of addressing new needs. In 2013, a programme was initiated to analyse indepth the various stages in the grid life cycle. The objective is to be able to establish the priority of investment needs for equipment in the electricity system.

The programme was pursued throughout 2013 and made it possible to map out the various areas for improvement via concrete action plans. To that end, it was necessary to focus on four key areas: aligning the company's vision with the actions it takes day in and day out, bolstering and understanding processes, defining roles and responsibilities in terms of managing equipment and

risk, and ensuring the link to the data observed and IT tools.

In parallel with this project, another programme - People & Technical Skills - was launched. This programme seeks to bolster the skills our employees already have or to ensure they can be acquired by all. This should make it possible to meet the new maintenance requirements of future grid (see Elia from the Inside p.45).

The objective is PAS 55 (Public Available Standard) certification, which aims to improve the processes for managing strategic infrastructure to align the company's vision with technical activities in the field, to better manage these assets/equipment throughout their life cycle (i.e. from purchase to replacement, as well as maintenance and repair) and to identify and control risks.

This expertise can be disseminated within the Group. Indeed, 50Hertz has a much more recent grid that may benefit in the medium term from this knowledge acquired within the Group when any change in the management of their assets has to be implemented. This approach is also part of the Group's determination to be an internationally recognised player for its skill and expertise in grid management (see "Beyond our borders", p.42).

#### Table caption (on the left)

The figures do not include networks not owned by Elia.

For the overhead lines, the figures shown are geographical lengths, i.e. the sum of the geographical lengths of the overhead lines (whether or not they were in operation). Parallel circuits are counted only once.

For the underground cables, the figures shown are electrical lengths, i.e. the sum of the lengths of the connecting circuits in operation. Parallel circuits are counted only once.

The total length of the Elia transmission grid was 8,370 km on 1 January 2014 (compared with 8,364 km at 1 January 2013).
The total length of the 50Hertz transmission grid was 9,995 km on 1 January 2014 (compared to 9,980 km on 1 January 2013).

### ▶ PAS 55 an international standard for optimisation and excellence in the management of critical assets

PAS 55 certification must enable us to be recognised as a Leading Professional Asset Manager. We regularly take part in international technical exchanges and focus groups in Asset Management. High-level exchanges are organised with other leading TSOs, both in Europe, such as RTE (F), Terna (I), Red Electrica de España (E), FinGrid (Fi), and outside Europe, such as BC Hydro in Canada, Eskom in South Africa, Transco in Abu Dhabi, etc. These exchanges provide an opportunity to study up close what is being done to learn about and also to create cohesion within our Group.

### A new way of managing infrastructure for both Elia and 50Hertz

### DEVELOPMENT OF THE CONCEPT OF THE MOBILE SUBSTATION IN DHANIS (36 KV) TO FACILITATE PROJECT IMPLEMENTATION

Any infrastructure ages. In Belgium it is gradually becoming necessary to completely overhaul many 36 and 70 kV substations. The solution is recourse to the mobile substation enabling the partial or full transfer from the old substation to the mobile substation, which reduces the complexity of the scenario and entails a positive, not-insignificant impact on safety and security. This method is less expensive since it makes it possible to save time in project management. In addition, the mobile substation is also an Emergency Restoration System (ERS). It can be used to supply critical installations in emergencies (e.g. damage caused to one or more bays by a fire). This technique was used at the Dhanis 36,000 volt substation (Brussels).

#### FRAMEWORK CONTRACT FOR THE PURCHASE OF PHASE-SHIFTING TRANSFORMERS (PSTS)

The massive development of wind farms in northern Germany generates very high power flows on the 400 kV grid to the south at certain times of the year that have consequences for grids outside Germany. To better control these flows and increase the available capacity of the European electricity market, 50Hertz and the Polish and Czech system operators informed the authorities that a common solution had to be found. This consists of installing phase-shifting transformers on the German-Polish and German-Czech borders and to operate them by mutual agreement. Firstly, the expertise acquired by Elia in the deployment of phase-shifting transformers in Van Eyck and Zandvliet on Belgium's northern border may be disseminated at Group level. In addition, the implementation of a common process for acquiring phase-shifting transformers by Elia and 50Hertz will enable the Group to benefit from joint purchasing synergies.

In January, 50Hertz and Polish system operator PSE launched the use of an international process called 'virtual phase shifters' to improve the coordination of unplanned energy flows on the German-Polish border. This increases the management security of the system, faster integration of renewable energy sources and brings more capacity that can be used by European electricity market players.

#### In Belgium

### Preventive grid maintenance

For lines, cables and pylons, preventive maintenance encompasses a number of types of inspections, such as infrared and/or camera inspection of all of the more than 20,000 or so pylons, which are inspected several times a year. As regards high-voltage substations, preventive maintenance is scheduled for more than 11,000 primary systems and nearly 1,500 secondary systems across Belgium.





From left to right: Phase-shifting transformer Mobile substation

## **≥** Collaboration between Elia, RTE and the European Space Agency (ESA) to improve the maintenance of the high-voltage overhead network

Independently but in a highly synchronous manner, RTE and Elia recently began a procedure to analyse the possibilities that could be offered by modern technologies in order to optimise the management of the transmission system (sensors onboard helicopters, use of drones, etc.).

#### The research areas are:

- Post climate event analysis: the objective here is to be in a position to draw up
  a rapid (less than 24 hours) and accurate survey of the damage caused to the
  system by a major climate event. If such procedures exist in other industrial
  sectors, the ESA suggests studying the possibility of adapting them to the activity
  of monitoring overhead lines location and number of damaged/ruined pylons,
  analysis of the magnitude of damage, etc. by the currently unprecedented use in
  Europe of radar satellites.
- Search for lightweight sensors to be fitted onto helicopters or drones (LIDAR, cameras, built-in recognition systems, etc.) to improve our analysis and automatically pinpoint faults and anomalies in structures.

In 2013, nearly 18,500 operations were carried out by teams in the field (more than 50 a day), covering preventive maintenance, inspections and legal checks on our primary and secondary installations and systems.

As far as investments in replacements are concerned, synergies are sought between investments in upgrading, replacement and worker safety. In 2013, some €87 million was invested in renewing end-of-life equipment. Many projects were carried out, including the replacement, at all voltage levels, on

**400** 

employees in the field





18.500

operations were carried out in the field, i.e. 50 a day circuit breakers, isolators, bus bars and line sets, voltage and current transformers, lightning arresters, meter boxes, protection relays and remote monitoring systems.

Maintenance and replacement activities are performed by around 600 Elia staff, of whom two-thirds work in the field and one-third provide technical and administrative support.

### Physical security of facilities

### OPTIMISATION OF PHYSICAL SECURITY

Following involvement in working groups and identification of specific security needs for projects such as Nemo and Belgian offshore Grid, the Security department endeavours to develop a standard model in favour of physical protection. This should lead to an increase in the level of requirements for all sites. This multidisciplinary approach has made it possible to establish standards for, for example, anti-theft doors and strategic fences.

#### **GRID SECURITY**

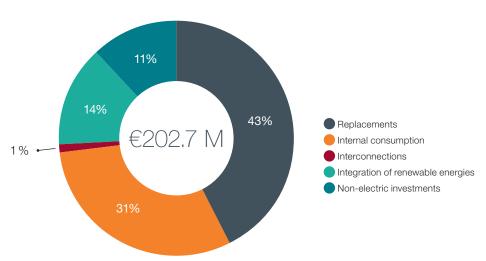
Copper theft is a cross-border problem. Accordingly, involvement in PolPrimett (Police-Private Partnership to Tackle Metal Theft) gave rise to a supra-national approach enabling local and national police forces to cooperate. In addition, following the initiative of Infrabel/SNCB-Holding, a new national working group for marking cables was deployed in which Elia plays an active role.



### **Investments**

Generated electricity must be available wherever it is consumed. That is why the power grid investment policy is so essential. It is about ensuring continuity of supply for current customers while also anticipating future needs in order to construct safe, reliable and sustainable grids to transmit the electricity of tomorrow (see "Security of supply", p.62).

#### **INVESTMENTS IN 2013 / ELIA**



### In Belgium

Investment projects are submitted for the approval of the federal or regional authorities via various investment plans. As a system operator, Elia has to draw up four different investment plans for the development of its power grids:

- the transmission system development plan, which covers the whole of Belgium for all voltage levels from 380 kV to 150 kV at federal level;
- the investment and adaptation plans in the Flemish, Brussels Capital and Walloon regions, which cover the other voltage levels where Elia operates.

The capital expenditure for 2013 set out in these plans forms part of the 2012-2015 tariff proposal approved by the regulator and then reflected in the Elia grid access tariffs applying during that period.

Year	Number of requests	Total capacity (MW)	% conventional connection
2011	90	811	95%
2012	128	1170	84%
2013	142	1110	82%

There are many requests to connect decentralised generation, mainly on the distribution grid. A database was deployed for connection requests for generating units with a capacity greater than 400 MW. The total number of requests represents a capacity of 2996 MW. At the same time, requests for conventional connections are falling.

Capital expenditure in 2013 totalled €202 million. Capital expenditure is set to increase significantly in the coming years in line with the investment plans and access tariffs approved for the period 2012-2015.

The growth in investment volume is driven by the integration of decentralised generation, the increase in European transit flows, the need to accommodate new conventional generation units, and the need for replacement investments.

Replacement investments relate mainly to the upgrading of existing obsolete equipment, whose function has to be retained in order to meet the needs of grid users. Such upgrades do not necessarily increase transmission capacity. However, the security, reliability and efficiency of the grid are preserved and in some cases enhanced.

Elia examined around 30 connection requests from industrial customers, generators and renewable energy promoters.

#### In Germany

#### **ONSHORE INVESTMENTS**

50Hertz invested approximately €400 million in 2013. These investments in the grid were motivated mainly by the development of new sources of renewable energy that must be integrated safely and securely into the transmission system and the generation of which must be transmitted to consumption centres in southern and eastern Germany. The major grid projects experienced a high level of progress.

#### GERMAN GRID DEVELOPMENT PLANS

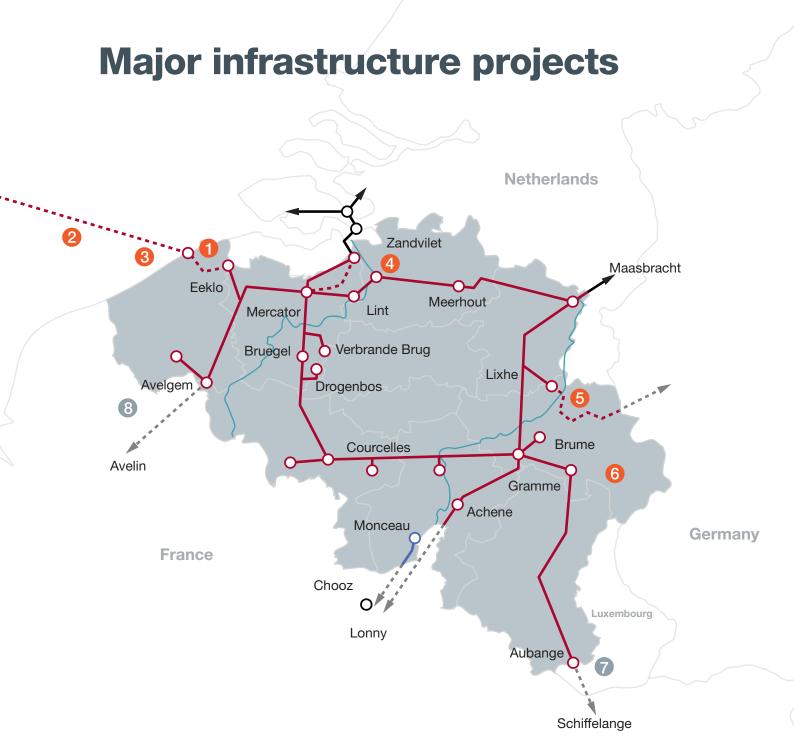
The first German transmission grid development plan was submitted in 2012. In 2013, the German TSOs analysed the plans in the light of the last 12 months passed and also published, for the first time, an offshore grid development plan. To that end, they defined all the necessary development measures for stage-by-stage expansion - in accordance with needs and manageable in terms of costs - of the offshore grid in the next ten years. The TSOs drew up a list of criteria with a view to developing, in stages, the necessary connection systems. The offshore grid development plan enables better coordination of the expansion plans for generators' wind farms and systems for connection to the grid in the Baltic Sea (with 50Hertz as responsible TSO) and in the North Sea (with TenneT TSO as the responsible TSO). Citizens, the German federal states, associations, NGOs, generators and industry adopted positions and took part in the consultation process on both

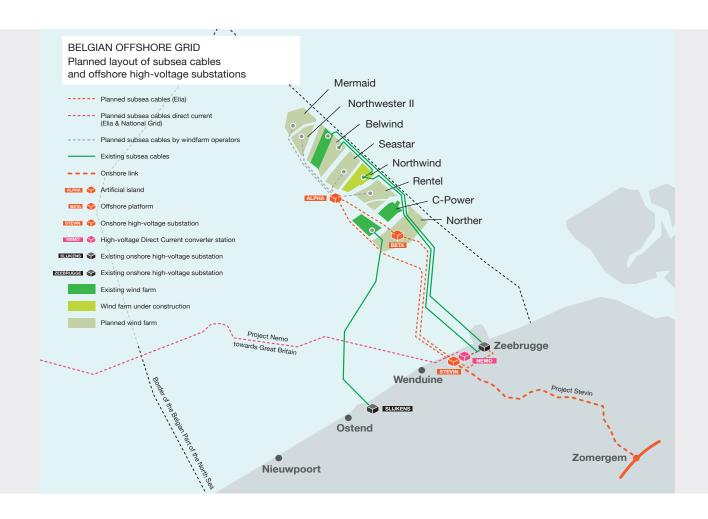
the onshore and offshore development plans. Following adaptations to take account of remarks made, the reports were submitted for confirmation to the Federal Network Agency (BNetzA) in the summer (see "Integration of renewable energies", p.71).

In July 2013, a new instrument for coordinating the development of the grid took effect: the Federal Requirements Plan (Bundesbeddarfsplan). With the adoption of this law, the urgent need for development projects of lines for the transmission and supply of reliable electricity are today firmly rooted in the German legal system. Nearly two thirds of grid development requirements identified by the TSOs by 2022 in the German grid development plan were included in this new law. The approval procedure specifying the route for corridors for projects crossing multiple German federal states was reviewed and currently falls under the purview of the Federal Network Agency. The aim of this federal plan is to simplify and accelerate permitting procedures and guarantee better and advisable involvement by the various stakeholders (see "Licence to operate", p.77).

#### Caption

- O Power station
- O HV-station 380 kV
- - Planning procedure
- = = Being studied
- Other companies Line 380 kV
  - Other companies 380 / 220 kV
- Extension 380 kV to the coast Windparks + Zeebrugge (Stevin)
- 2 Belgian Offshore Grid
- 3 HVDC connection UK (Nemo)
- Reinforcement 380 kV Antwerp port area (Brabo)
- 5 Interconnection HVDC Belgium-Germany (Alegro)
- 6 Reinforcement East loop (wind power decentralized power units)
- 8 Reinforcement Avelgem-Avelinbeing studied





### Belgian Offshore Grid (BOG) in the North Sea

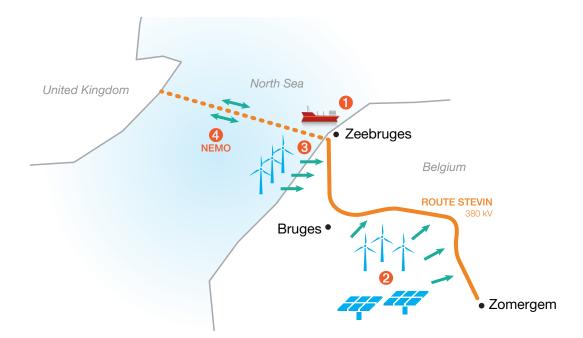
Elia's sphere of activity has been expanded to include the North Sea grid in Belgian territorial waters. At the request of the federal government, Elia suggested creating a 'power plug in the sea'. This was approved in 2012 by the Minister for Energy. The project calls for the installation of two platforms, Alpha and Beta, which are connected to each other and to the coast, to which the offshore wind farms can be connected. Elia is pursuing the preparation of this technical project and has submitted the relevant offshore and onshore permit applications. The tender procedure for cables and platforms was also launched. The construction of an offshore grid and the bundling of connections from five wind farms via two interconnected platforms offers multiple economic, environmental and reliability-related benefits. This is also a

first step towards a North Sea grid that will enable interconnections with other North Sea countries. The project was recognised by Europe as a project of common interest.

This project, which is important to Belgium and Europe, will only succeed if the regulatory and legal frameworks are modified appropriately. Talks are underway.

13%

renewable energy in electricity consumption in Belgium by 2020





### Interconnection with the United Kingdom: Nemo project

2012 saw Elia and its UK counterpart National Grid jointly launch the European call for tenders for the purchase of two converter stations (one at Richborough in the south of England and the other in Zeebrugge) and a 130 km subsea cable link.

- On 26 February, the application to obtain offshore cable and environmental permits was submitted to FPS Economy and the minister responsible for the North Sea.
- Discussion under way with their national regulatory authorities (CREG and OFGEM) to define the relevant regulatory framework for the interconnection's management or ownership structure.
- Work should start in 2015, with commissioning planned for 2019.

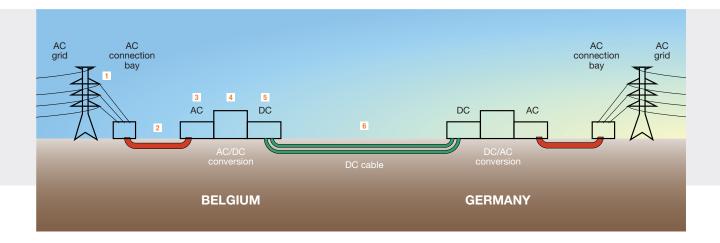
### Connection of offshore wind farms: Stevin project

In summer 2012, the Flemish government definitively approved the amendment of the regional land-use plan (GRUP) for the installation of a new 45 km 380 kV line between Zomergem and Zeebrugge (Stevin project). The permit application for the necessary high-voltage line and high-voltage substations was submitted on 30 November 2013.

Various towns (Damme, Maldegem, Bruges), the province of West Flanders and several private individuals submitted procedures with the Council of State to overturn the Flemish government decision. The auditor returned several negative opinions. These opinions are not binding. The case will be heard in 2014 by the Council of State, which will hand down its ruling (summer 2014).

A Constitutional Court judgment from July 2013 found the procedure based on the creation of the GRUP for Stevin to be unconstitutional.

The Stevin project is essential for connecting offshore wind farms and decentralised renewable energy generation in West Flanders and plays a crucial role in achieving the objective of 13% renewable energy in energy consumption in Belgium by 2020. The project is also vital to the economic development of West Flanders and sea ports. Lastly, the project is essential to the interconnection with the UK, which will play a key role in security of supply in Belgium.





### Interconnection with Germany: ALEGrO project

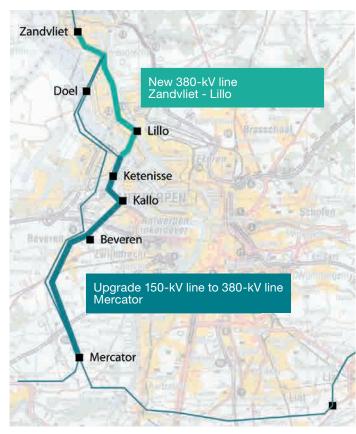
Early 2012, Elia and Amprion - the German transmission system operator operating the cross-border grid adjacent to Elia's - signed a Memorandum of Understanding confirming the two companies' commitment to creating the first interconnection between Belgium and Germany. The project, which has been given the name ALEGrO (Aachen Liège Electric Grid Overlay), will consist of a very-high-voltage DC cable of around 1,000 MW, running for some 100 km between the Lixhe substation in Belgium and the Oberzier substation in Germany.

- 2 May: public information meeting in Soumagne.
- 17 December: adoption by the Walloon government of a draft revision of the sector plan.
- In 2014, the Walloon government will define the content of the impact study to be carried out by an approved consultancy.
- Work will start in 2017, with commissioning planned for 2019.

On November 20th, the Commission awarded PCI (Project of Common Interest) status to the ALEGrO, Nemo, BOG and Luxembourg interconnection projects under the new European Energy Infrastructure Package regulation.



Route of the Brabo project.



### Grid upgrade in port of Antwerp region and interconnection with the Netherlands: Brabo project

The Brabo project has two main parts: the construction of a new 380 kV line between the Zandvliet and Lillo substations on the right bank of the river Scheldt. This link will cross the Scheldt at Liefkenshoek. On the left bank, the existing 150 kV line between Liefkenshoek and the Mercator high-voltage substation will be upgraded to 380 kV. These projects will enhance security of supply for residents and businesses in the region and in the port of Antwerp. They will also enable the connection of new units and strengthen the interconnection with the Netherlands, which will not only enhance security of supply, but also improve market functioning. This involves installing an additional phase-shifting transformer (PST) and upgrading the existing 150 kV line between Zandvliet and Doel to 380 kV.

The Flemish government gave its agreement in principle in July 2012. Elia began the initial consultations for the environmental impact study (Plan-MER) on the basis of which the minister responsible for regional development will prepare a regional land-use plan (GRUP).

### Interconnection with France

The studies carried out jointly over the past few years by Elia and French transmission system operator RTE, as well as those conducted as part of ENTSO-E's Ten-Year Network Development Plan (TYNDP), identified a need to strengthen transmission capacity between Belgium and France by 2020.

The current results all agree that upgrading the Avelgem-Avelin line is the best option, replacing existing conductors with high-performance conductors up to the new Horta 380 kV substation near Zomergem.

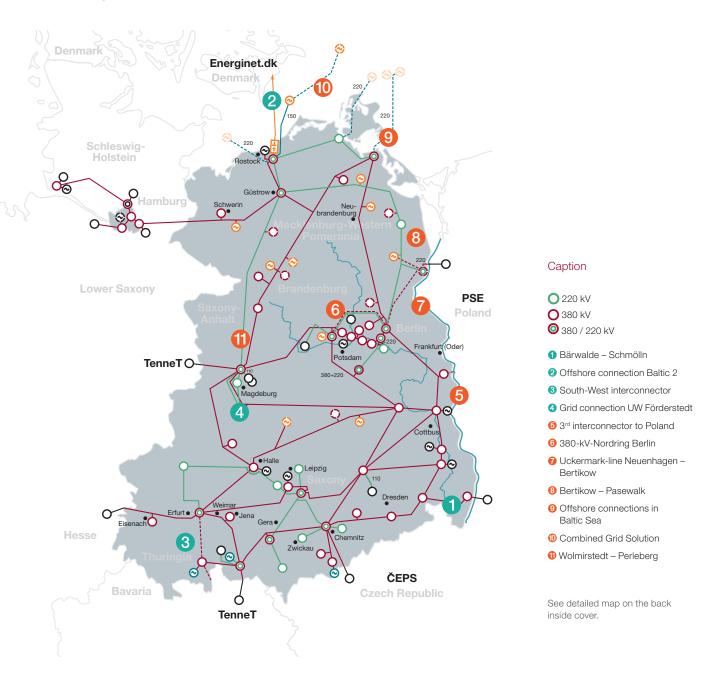
Validation still must be subject to a joint study by RTE and Elia within ENTSO-E, the findings of which should be ready in mid-2014.

### Interconnection with Luxembourg

Since 2009, Elia and the relevant system operators in Luxembourg (CREOS), France (RTE) and Germany (Amprion) have been developing a shared vision for further integrating the Luxembourg grid.

The joint studies carried out show that it is necessary to upgrade the 220 kV network with Belgium. This scenario was formalised in a memorandum of understanding signed on 25 June between Elia and CREOS:

- In the short term (2015), a PST (phase shifter) should be installed in the Luxembourg grid in the Schifflange substation.
- In parallel, various long-term solutions are considered with commissioning planned for 2020.



#### In Germany

### South-West connexion – Thuringian Bridge project

In its final ruling handed down on 18 July 2013, the federal administrative court dismissed the action against the construction of the second section of the "south-west connection" brought by a group of stakeholders led by the town of Großbreitenbach. In the first and last instance, and on the basis of the process defined in the law on the development of the electricity grid (Energieleitungsausbaugesetz – En-LAG), the court confirmed the need for a transmission line for the adequate

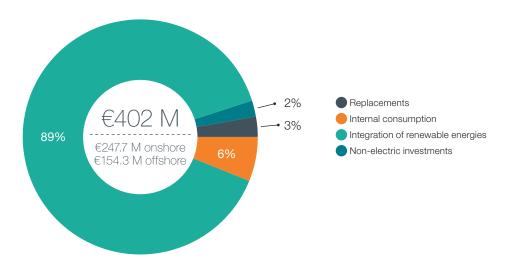
development of German and European transmission systems and ruled that the required planning procedures had been complied with. The ruling confirmed the quality of the permitting approval work done by 50Hertz. The construction work was therefore able to continue according to plan.

For the third and final section of the "South-West connection", the planning approval process was launched on 17 September by the relevant Thuringia authorities.

### 500 kV South-East Direct Current Transition project - Lauchstädt-Meitingen

In 2013, the operators of the German transmission system reached an agreement on the distribution of responsibilities regarding the development of the HVDC corridors included in the national grid development plan. Under the agreement, 50Hertz and Amprion were made responsible for developing corridor "D" from Lauchstädt (near Halle in Saxony-Anhalt) to Meitingen (near Augsburg in Bavaria). The analysis of territorial resilience for the planned route

#### **INVESTMENTS IN 2013 / 50HERTZ**



With regard to projects in the Baltic Sea, 50Hertz manages the connection of the first offshore wind farm, Baltic 1, and is preparing to connect the second wind farm, Baltic 2. 50Hertz also began developing the first component in an offshore grid with Denmark, combining direct current and alternating current links ultimately connecting both countries' offshore wind farms. These initiatives are part of the 10-year plan to develop Germany's grid, which, since 2013, also includes future connections planned in the next 10 years for connecting offshore wind farms to the transmission grid.

was carried out and led to the identification of a preferential corridor option in December 2013. Three meetings between the representatives of the federal states and the Federal Network Agency (BNetzA), Amprion and 50Hertz were held in 2013 to discuss and obtain information about the progress of planning. A series of meetings with the local and regional authorities, journalists and two major information and dialogue sessions with the public were organised by 50Hertz from this early stage in the planning in order to ensure transparent information for the stakeholders and to collect their opinions in order to enrich the analysis done by planning experts.

#### Bärwalde-Schmölln 380 kV line

The implementation of the first system in the Bärwalde-Schmölln line was begun on 25 October 2013 using an innovative new construction method that called for the construction of the line in the immediate vicinity of the existing line, by means of a step-by-step dismantling process coupled with the construction work. This made it possible to minimise the project's impact on the landscape while ensuring a high level of availability of transmission capacity throughout the construction phase. The former line and the new line ensure full supply capacity for the Boxberg power station during the winter season. Construction of the Bärwalde-Schmölln line is planned for completion in late 2014.

#### 380 kV Berlin Northern Ring

On 20 August 2013, 50Hertz received authorisation to build the western part of the 380 kV Berlin Northern Ring project.

### 380 kV Uckermark connection

The Brandenburg authorities are analysing the 50Hertz application submitted in connection with the regional development procedure.





### **Operating electricity grids**

The Elia Group's grids are part of the European continental interconnected system, from Portugal to Bulgaria and from Norway to Italy. Elia and 50Hertz constantly oversee and ensure balance in their control area. Since electrical energy cannot be stored on a large scale, balance must be maintained continually and in real time between the quantity of electricity injected into the system and the quantities drawn off or consumed. The control centres manage an instantaneous balance and coordinate energy flows on their grids in close collaboration with international coordination centres, such as Coreso, and transmission system operators from neighbouring countries. The reliability of the country's electricity system and its security of supply depend on this (see "Security of supply", p.62).

#### **Grid operation**

In recent years, the energy landscape, and grids in particular, have been undergoing a radical transformation. Some are even calling it a revolution. This transformation is having an ever bigger impact on the role of control centres, requiring increasingly sophisticated tools and expertise and more and more real-time coordination across national borders.

A number of factors are contributing to this change, including the increase in international exchanges, the variability of flows due to the growing share of energy generated by variable renewable sources and the reduction of conventional generation capacity owing to the gradual elimination of nuclear power in most European countries coupled with delays in the construction of new generation units due to permitting difficulties and the uncertainties associated, among other things, with the financial

and economic crisis and with the market's price signals.

#### **Continuity of supply**

Continuity of supply in Belgium remained at a high level in 2013, among the best in Europe.

The average number of interruptions on the Elia grid per consumer (Average Interruption Frequency¹) was 0.0891, equivalent to one interruption per customer every 11.2 years (see table p.33).

For 2013, the average duration of interruptions was 27 minutes and 50 seconds.

Across all customers, the average duration of interruptions was 2 minutes and 29 seconds per customer (Average Interruption Time), equivalent to an average availability of more than 99.999%, which is higher than the average for the last decade. Belgium thereby emerg-

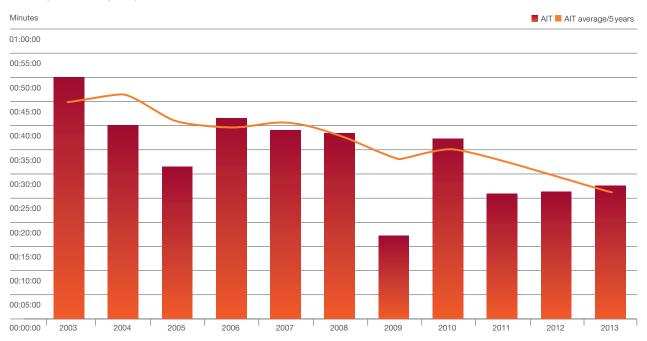
es, year on year, as one of the best countries in Europe in terms of quality of electricity supply.

#### Consumption

Electricity consumption as recorded in transmission systems is a good indicator of economic vitality. It has been scrutinised very closely since the start of the economic crisis in October 2008, not only by the Elia Group but also by external observers looking for signs of an economic recovery in Europe. However, whereas in the past the load recorded on the Elia grid was a fairly accurate reflection of electricity

<sup>1</sup> The AIF is an indicator that can vary widely from year to year depending on the location and complexity of the incidents and the time at which they occur. Customers may experience very different power interruptions. As the number of incidents entailing interruptions is very limited, the annual overall figures cannot really be considered as valid statistics on which to base conclusions about the observed frends.

#### **AVERAGE INTERRUPTION TIME**



consumption in Belgium, this is no longer the case owing to the growth in decentralised generation injected into and consumed via distribution systems (mainly onshore wind and photovoltaic). Consequently, Elia provides thus figures for the load on its grid. This load covers two categories of consumption or offtake:

- First, consumption by industrial customers directly connected to the Elia grid (i.e. their offtake plus their local generation), and
- Second, offtake by distribution

system operators. DSOs distribute energy drawn from the Elia grid, plus energy generated within their own networks, to customers connected to their grids (industries, businesses, authorities and residential customers).

### Grid load

Load on the Elia grid fell by 1.6%, from 81.8 TWh in 2012 to 80.5 TWh in 2013. On an annual basis, this load reached its highest value in 2005 (89.5 TWh).

Overall, in 2013, consumption by industrial customers directly connected to the Elia grid fell by 2.3% and offtake by distribution system operators fell by 0.8% compared with 2012.

#### Load peaks

The maximum load on the Elia grid was reached on 17 January 2013 between 5.45 p.m. and 6 p.m. This was 13,385 MW, i.e. 4.6% lower than the all-time record set on 17 December



From summer 2012 to summer 2013, the Doel 3 and Tihange 2 power stations were unavailable. As a result, during the winter of 2012-13, Belgium was dependent on electricity imports. The import values were on average 2000 to 2500 MW, with peaks of up to 3500 MW. For 29 days between November 2012 and January 2013, more than 3000 MW were imported, corresponding to more or less one quarter

of the maximum winter load on the Elia grid. This energy was available in Europe due to the relatively low load and the high level of availability of French generating facilities. The energy was imported via the northern and southern borders thanks to the fact that France was generally in an export situation during that period. Efforts to inform and foster awareness among national and international players led to maximum

availability of resources and grids in the CWE (Central West Europe) region. During a cold spell, on certain days in January, such as the 17th, the margins were even more limited. An additional incident on the grid would probably have triggered Elia's load-shedding plan.

#### LOAD ON THE BELGIAN GRID



2007 (14,033 MW) but 0.2% higher than the maximum value recorded in 2012 (13,362 MW on 8 February). The lowest load level (5,922 MW) was recorded on 28 July 2013, between 3.45 p.m. and 4 p.m. This was 1.3% higher than the minimum value recorded in 2012 (5,845 MW on 22 July).

## Imports and exports

Pln the case of Belgium, physical imports and exports (measured on interconnection lines) consist of, on the one hand, imports and exports between the Elia control area and neighbouring control areas (France and the Netherlands) and, on the other hand, imports and exports within the Elia control area, between Belgium and the Sotel/Twinerg grid in Luxembourg.

The import trend fell by 3.0%, with a net import balance of 9.64 TWh compared

to 9.99 TWh in 2012. Imports increased slightly in 2013 (up 2.3%), mainly from France (up 17.8%). After a downturn in 2012, exports were up 10.0%, mainly to the Netherlands (up 18.7%). Physical exchanges of electricity with neighbouring countries totalled 24.8 TWh in 2013, up 4.6% from 23.8 TWh in 2012.

In Germany, 50Hertz imported 12.0 TWh of electricity in 2013 (15.5 TWh in 2012) from neighbouring control areas, mainly from TenneT TSO, and exported 38.2 TWh (38.7 TWh in



## INCOMPRESSIBILITY OF GENERATION IN SPRING AND SUMMER: MORE GENERATION OF ELECTRICITY THAN PLANNED BY THE MARKET

The sunny and windy weather on Easter Monday (1 April 2013) led to significant generation of electricity by wind farms and solar panels. Accordingly, 500 MW for one and nearly 2 000 MW for the other were injected into the grid, and covered nearly 30% of the electricity load. The market players did not take full account of such generation in their

forecasts and therefore in their transactions with the market. Accordingly, Elia had to intervene in real time to restore the balance between generation and consumption. To do that, more than 800 MW had to be adjusted by Elia. Some units had to reduce their generation level and the Coo power station was taken offline. A call was also made to system operators in neighbouring countries (Inter TSO) in order to reduce initially forecast imports from France. With the unavailability of Doel 3 and

Tihange 2, Belgium continued to import, even under such circumstances.

## INCIDENT AT THE MACHELEN HIGH-VOLTAGE SUBSTATION

On 24 October, during commissioning operations, a technical incident triggered an explosion at the Machelen 3 150 kV substation. This led to a short-circuit and a sudden and momentary voltage dip across the entire grid. Supply on the Elia grid was restored immediately, but some customers (such





2012), mainly to Poland and TenneT TSO. Net exports of electricity were up 13.3%, from 23.2 TWh in 2012 to 26.3 TWh.

#### **Grid losses**

The transmission of electrical energy generates losses due to the heating of conductor materials when a current passes through them. 'Joule' losses, as they are technically known, are proportional to the square of the current. In other words, the bigger the current the greater the loss.

For example, a line loaded at 50% of its capacity generates losses four times smaller than the same line loaded at

100% of its capacity. Grid losses vary according to the load. Line losses can be reduced by increasing the transmission voltage, but only to a certain degree because any increase in voltage is limited by the risks of premature equipment ageing. Reducing losses is an important objective but also a delicate balancing act in operational terms.

As far as transformers are concerned, two types of losses occur: 'iron losses', which are constant depending on the type and power of the transformer, and 'copper losses' (Joules), which are proportional to the square of the current passing through the transformer (see "Integration of renewable energies", p.71).

as SNCB, Belgacom) experienced difficulties due to the triggering of protection relays which led to a momentary cut in their electricity supply.

## FREQUENCY FLUCTUATIONS ON THE EUROPEAN GRID

At around 5.30 p.m. on 28 October, the European frequency dropped to 49.86 Hz following major deviations with respect to the market players programme. The market players did not anticipate a shift in consumption during the transition to winter time. Thanks to coordinated action at European level, frequency was restored to 50 Hz.

## DISCONNECTION OF OFFSHORE WIND FARMS DURING STORM

During the storm on 28 October, winds on the sea rose above the offshore wind farm disconnection threshold, triggering the full shutdown of 450 MW in generating capacity. On 31 October, a similar phenomenon arose following a sudden change in wind, offshore wind generation suddenly dropped by 350 MW. The two fluctuations were offset by internal control systems and processes established by Elia.





# Preventive management of critical grid situations

The transmission system operator takes a series of preventive measures aimed at maintaining balance on the grid and contributes to security of electricity supply.

## Managing the balance between generation and consumption

As electricity cannot be stored in any great quantity (except by means of pumped storage hydro units), generation must be tailored at all times to consumption in this large grid – consumption that is the result of the actions

and needs of more than 550 million European citizens.

Transmission system operators such as Elia and 50Hertz maintain this balance in their respective control area within strict limits and in compliance with common rules set by ENTSO-E.

## Black-start: gradual restoration of the grid

In the event of an interruption in the power supply across a wide geographical area, the system operator concerned must use generation units known as 'black-start' units which, in the event of a collapse of the electricity system, serve to gradually resupply the transmission system and



## SUCCESSFUL BLACK-START TEST FOR COO POWER STATION WITH START-UP OF TIHANGE 2 AUXILIARY SERVICES

A full test was carried out at Electrabel's Coo-Trois-Ponts hydropower station on 5 January. On that occasion, an isolated network was created, supplied by two Coo turbines, with the consumers being the Tihange 2 auxiliary services and a pump serving the other Coo reservoir.

Following the success of this isolated operation test, the part of the grid

supplied by Coo was connected to the European grid at the Gramme 380 kV substation.

## BLACK-START TEST AT THE DROGENBOS CCGT STATION

On 19 October, the black start solution, which contractually links various energy generators to Elia, was tested in the Drogenbos CCGT (combined cycle gas turbine) station. During the exercise, Elia blacked out the power station at 9 a.m. Current was restored successfully around four hours later. The capability of

the Drogenbos power station to restart without power from the Elia grid was successfully tested.

## CRISIS SIMULATION: TEST VIGILANCE AND IMPROVE PROCESSES

From the outset, Elia has had an emergency plan setting out the roles and responsibilities of the various players in the event of a major problem in the electricity transmission system.

On 20 November, the teams took part in a two-phase drill. The morning following a storm, various pylons had



On 20 November, all of the teams were brought together to test their knowledge and process management.

In the event of a total blackout on the Elia grid, certain generation units are capable, despite everything, of restarting their equipment in order to gradually restore power to the grid.

This is called a black start.

so supply power to the other generation units so that they can be restarted in their turn. For this delicate operation, during which it is essential to maintain balance between generation and consumption, power is restored to more and more consumers. Each system operator has contracts for black-start services with

generators in its area and regularly checks whether these units can start up upon request without any power from the grid.

fallen, leading to the loss of substations and limiting the ability to restore supply on the transmission grid. Elia had to consult with ORES on the possibilities of restoring load via the distribution grid in order to establish a strategy for restoring supply. The afternoon drill was the follow-up to the morning scenario: restoring supply to all customers was not possible before several days, so the teams had to face a situation of local power shortages.

## PROCEDURE IN CASE OF SHORTAGE

Despite all the preventive measures taken, extreme situations resulting from a substantial shortage of power generation remain a possibility. In such cases, Access Responsible Parties (suppliers) are no longer able to supply a large number of their customers, to such an extent that the system operator cannot offset the imbalance in its control area. Since the winter of 2012-13, coordination with FPS Economy and the government crisis centre (CGCCR) continued and made it possible to

finalise the procedures to implement with the parties in question in the event of a power shortage. On 21 February, the 'disclosure' part was included in the procedures involving the players in question during the Notelx crisis drill conducted by CGCCR.

The 'ready for winter' website was also put online again on 1 December.

## **10.0 GW**

Load peak on the 50Hertz grid at 5.15 p.m. on 11 November 2013



## In Germany

## SYSTEM SECURITY AND GRID OPERATION

In 2013, the integration of a rapidly growing share of electricity generated from renewable energy sources was also a major challenge for operational security (see "Integration of renewable energies", p.71). Special measures, stipulated by German legislation (Article 13 of the Energy Industry Act (EnWG)), had to be applied more frequently by 50Hertz when renewable generation (mainly wind and photovoltaic) was particularly substantial. No interruption in the electricity supply resulting from an incident on the transmission grid was recorded in the region covered by 50Hertz in 2013, despite a brief interruption in supply to steelmaker Brandenburger Elektrostahlwerk on 5 December

2013 following multiple transmission line failures caused by storm Xaver.

Based on an analysis performed by the German transmission system operators, the Federal Network Agency (BNetzA) officially made the request to establish reserve generating capacity needed to adequately meet critical situations on the grid at 2,540 MW during winter periods.

The maximum injection of wind energy set new records: 11,064 MW at 8 p.m. on 6 December 2013. And for solar: 5,346 MW at 1.30 p.m. on 5 June 2013 in the region served by 50Hertz.

For Germany as a whole, the maximum injection of wind energy was 26.221 MW at 17.15 p.m. on 5 December 2013. And for solar: 25.395 MW at 1.15 p.m. on 21 July 2013.

In 2013, the grid load in the 50Hertz control area was 58.1 TWh (58,2 TWh in 2012). The maximum load in the 50Hertz control area was 15.6 GW, recorded on 4 November, with the minimum load of 8.2 GW being recorded on 26 December.

The maximum vertical grid load in the 50Hertz control area was 10.0 GW, recorded at 17.15 p.m. on 11 November 2013, compared with 10.1 GW on 27 September 2012.



## MAIN OPERATIONAL CHALLENGE: STORM XAVER ON 5 AND 6 DECEMBER 2013

Storm Xaver severely affected northern Europe. Due to the good general condition of the facilities and the competence of the personnel, the impact of this winter storm were limited and no major

disruption materialised in the region covered by 50Hertz. In total, more than 50 lines and other grid components were disconnected as a result of the storm. The lines were quickly reconnected, either manually or automatically. 50Hertz was well prepared to cope with this tense situation for the two days in

question. Many operations were carried out in how conventional power stations are managed and, to a more limited extent, in the management of wind power generation, in order to avoid overloading the grid.







## **Facilitating the market**

The Group holds a unique, central position on the electricity market. Accordingly, it plays a role as market facilitator and deploys services and mechanisms enabling market development.

Following liberalisation of the internal electricity market, the role of market facilitator has become a vital part of the transmission system operator's mission.

## Integration of European markets

As in previous years, the Elia Group continued its drive to integrate the Belgian and German electricity markets with their neighbouring markets and thus contributed to efforts to meet the European Commission's target of achieving an integrated market (see "Construction of the single market", p.67).

## Long-term markets

In 2011, transmission system operators of the Central West Europe (CWE) region, in collaboration with the TSOs of Central South Europe (CSE) and the Swiss TSO, drew up a shared set of harmonised rules governing explicit capacity auctions covering 12 borders. In 2012, these rules were implemented for the allocation of long-term physical capacity by CASC.EU, which acts as the inter-regional auctioneer for the market players.

In 2013, the rules were amended slightly to incorporate the functionalities of a bulletin board trading tool, made available to market parties with a view to facilitating the secondary market.

## **Day-ahead markets**

## THREE YEARS OF CWE AND ITVC MARKET COUPLING

"Market coupling" enables the volumes of electricity traded and market prices to be calculated on the basis of the information provided by the transmission system operators (transmission capacities available at the borders) and the power exchanges (purchase and sale bids). The mechanism was initially set up in October 2006 to couple together Belgian, French and Dutch prices and immediately resulted in an increase in the use of import and export capacities made available by Elia. It uses an algorithm developed by Belpex, Elia and N-Side.

In late 2010, this market coupling was extended to the whole Central West Europe area, including Germany and Luxembourg, and then, based on slightly different technical arrangements, to Scandinavia. This mechanism enables good use of interconnection capacity between the various national grids and greater price harmonisation across an area that accounts for over 70% of Europe's electricity consumption (see "Security of supply", p.62).

In 2013, the prices of the four coupled day-ahead markets in CWE converged some 14.66% of the time (with a maximum of 32.92% in September and a minimum of 1.53% in June). In addition, prices in Belgium and France were the same 71.56% of the time, while in Belgium and the Netherlands they were the same 59.38% of the time.





# The coupling of CWE markets has resulted in lower prices for Belgium than would have been the case without market coupling.

Overall price convergence in CWE was significantly lower in 2013 than in the two previous years, due to:

- the unavailability of Doel 3 and Tihange 2 until the summer, which led to an increase in the average Belgian price and made Belgium a net importer of energy on these two borders during that period.
- the energy mix differences between the countries in the CWE zone, with Belgian average wholesale prices converging during the first half of the year with wholesale prices in the Netherlands (higher because they are based on gas), before disconnecting from these higher Dutch prices and converging with lower French prices (because they are based on nuclear) after the return of these two units. Low German wholesale prices caused by renewables supplement the price divergence table in the CWE zone.
- congestion maintained on the border between Germany and the Netherlands due to the latter importing (much) cheaper German energy up to the capacity of its borders, thus inducing congestion and therefore

reducing complete convergence in prices in CWE.

The coupling of CWE markets has resulted in lower prices than would have been the case without market coupling. This positive effect for consumers is due to the reduced price volatility created by combining the liquidity of the region's day-ahead markets while avoiding negative prices at times when consumption is low and renewable generation is high.

Market coupling has also led to an improvement in the use of import/export capacities at Belgium's borders on a day-to-day basis, with volumes of 18.47 TWh for imports and 8.56 TWh for exports (net import balance: 9.97 TWh for 2013), and more specifically if account is taken of import requirements linked to the unavailability of two nuclear power stations during winter and until summer 2013.

#### THE BELPEX SPOT MARKET

In late 2013, 42 members – generators, suppliers, traders, banks and industrial consumers – were registered and operating on Belpex.

#### DAY-AHEAD MARKET

The growth in volumes on the dayahead market stayed level in 2013, with 4.15%, representing 21.35% of the Belgian load. The volume traded was also up, from a daily average of 44,988 MWh in 2012 to 47,950 MWh in 2013 – i.e. an increase of 6.2%.

The record volume, recorded on 23 January 2013, was 80,531 MWh, i.e. 35.86% of the daily consumption.
The average price on the Belpex dayahead market was €47.45/MWh, slightly lower than the average for the Netherlands (€51.95/MWh) and slightly higher than the averages for Germany (€37.78/MWh) and France (€43.24/MWh).





## Increasing market transparency

Following on from previous years, Elia improved its publications. First of all, with regard to renewable energies, the publication of photovoltaic energy generation was supplemented. Indeed, this publication was already presenting the short-term forecasts and it now presents an estimate of energy actually generated. In addition, the capacity used for calculating wind energy in Belgium was reviewed in 2013, increasing the precision of forecasts for the publication.

Moreover, the publication of data linked to imbalance was improved using a more detailed classification of control energy available and control energy used. In addition, Elia provides information on infeed in the distribution substations. These nearly real-time data offer a new source of information to market parties active in the balancing market.

Elia is also active in transparency at European level. A project to create a transparency platform for meeting the requirements of Regulation No 543/2013 is in progress at ENTSO-E, of which Elia is an active member. In addition, in parallel with the development of the future flow-based allocation mechanism, information on the grid parameters and on the simulated market coupling results is made available on the CASC website at the initiative of the transmission system operators in the CWE region (see "Construction of the single market", p.67).

47.45 €/MWh

Average price on the day-ahead Belpex market





## **Beyond our borders**

The Elia Group emerged from the acquisition of 50Hertz, one of the four German system operators located in northern and eastern Germany. Since 2010, Elia has shown its determination to look beyond its borders and has been on a growing curve. The Group's strategy is to anticipate the changes that will occur in the next 10 years and to play a pioneering role in a constantly changing energy sector.

Today, European market mechanisms are perceived as a benchmark for other markets. Europe is also perceived as a pioneer in the integration of renewables. The Group seeks to share its expertise and acknowledged competence in these areas. The Middle East countries want to benefit from this European expertise to develop their networks and regulatory systems while taking advantage of tried-and-tested best practices developed in Europe. On the other side of the world, in post-Fukushima Japan, policies in favour of renewables are being studied closely as are the tech-

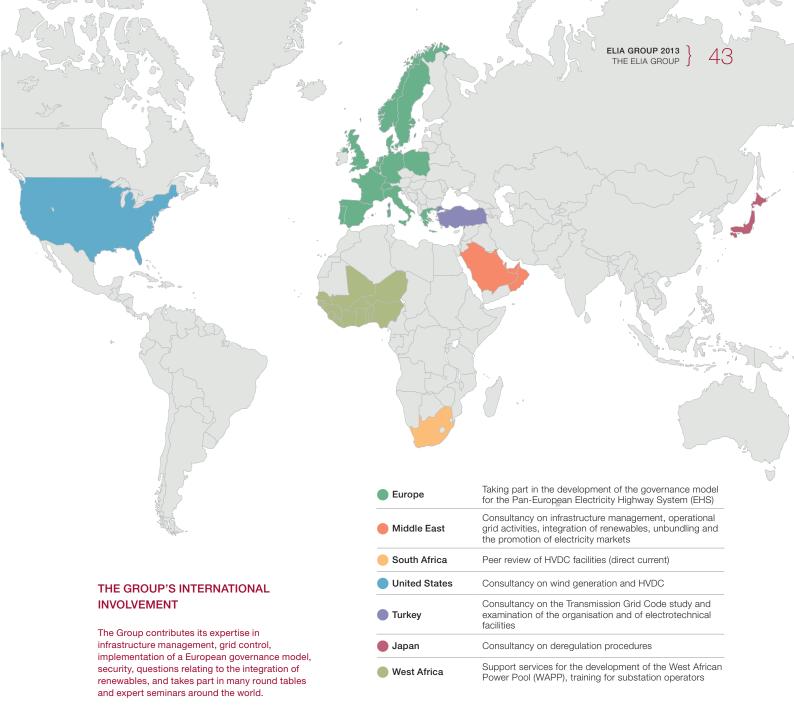
nologies needed to integrate these new sources of energy. Like other European transmission system operators that are also players in European integration, the Group wants to share its know-how and wants to be recognised as a key benchmark in the industry.

The Group's reach outside our borders should enable us to develop our business activities, but this position also aims to attract talent. In fact, it makes it possible to offer Group employees the possibility of dealing with other methods and approaches. Involvement in

international projects directly contributes new knowledge to our Group, further bolstering our expertise. Organising competitive tender procedures for suppliers operating internationally enables us to define a better quality/price ratio for purchasing equipment. Such optimisation indirectly benefits the community.

## **▶** Deployment of a new initiative between Elia and 50Hertz

In the first half of 2014, Elia System Operator and 50Hertz will jointly found a new company to reinforce the Elia Group's position in its quest to acquire assets and in the development of two businesses: Consulting & Services projects and EPC/EPCM (Engineering, Procurement & Construction) projects.





## BJA MEMBERSHIP: ELIA GROUP EXPANDS INTERNATIONAL DIMENSION

Elia continues to support its international dimension by becoming an official member of the Belgium-Japan Association Chamber of Commerce (BJA). This will make it possible to enhance collaboration and create new opportunities with its Japanese partners. Japan's interest in the Group is not new: the Elia Group is regularly visited by Japanese representatives interested in Elia's

expertise in the integration of renewable energy sources, unbundling (i.e. the separation of generation, transmission, distribution and supply businesses) and the development of a European electricity market.

#### **ELIA AND GCCIA**

GCCIA, created by six members of the GCC (Gulf Cooperation Council), is the 'supra-TSO' of the Persian Gulf, physically interconnecting Saudi Arabia, Qatar, Kuwait, the United Arab Emirates and Bahrain. In December 2012, Elia and GCCIA signed a cooperation agreement covering a wide range of areas, such as the development of a regional electricity market, the co-deployment of consultancy services and the sharing of knowledge about HVDC (High Voltage Direct Current) technology. This collaboration was celebrated on the occasion of the second Regional Power Trade Forum organised in Dubai on 28 and 29 May by GCCIA with the support of Elia.

The expertise and skills acquired in the Atlantic Wind Connection project are being used to design and develop future offshore grids in the North Sea and Baltic Sea.

## Atlantic Wind Connection: developing expertise internationally to better serve our communities in Europe

In 2011, the Elia Group, via its subsidiary Eurogrid International, acquired a shareholding in the Atlantic Wind Connection project to develop the first high-voltage direct current offshore grid off the East Coast of the United States.

The project, which is backed by some big names – Google, Marubeni, Bregal-Energy (formerly Good Energies) and Atlantic Grid Development – makes it possible to develop know-how that is now being implemented to develop offshore grids in the North Sea and Baltic Sea. The Elia Group also concluded a long-term consultancy contract with the AWC project developer, Atlantic Grid Development.





Voluntary initiative of the 16 largest system operators, accounting for 70% of electricity demand and providing energy for 3.4 billion people on six continents – www.go15.org



European Network of Transmission System Operators for Electricity – www.entsoe.eu



European Association for Storage of Energy - www.ease-storage.eu



#### TEIAS

In late September, members of TEIAS, the Turkish transmission company, paid a study visit to Elia and RTE. The visit is part of a consultancy mission carried out by RTE and Elia on the premises of the Turkish system operator, which aims to improve their working methods with a view to connecting the Turkish grid to the European grid. This partnership between Elia and RTE for consultancy at TEIAS focuses on four major topics:

live work, safety, human resources and information technology.

## THE ELIA GROUP CONCLUDED THE CONTRACT WITH THE TURKISH TSO FOR THE TEIAS GRID CODE REVIEW PROJECT

On 17 December, Elia signed the contract for the TEIAS Grid Code Review project. Starting in early 2014, the TEIAS (Turkish Electricity Transmission Corporation) Grid Code will be completely reviewed as part of this project.

Elia was selected from among a group of major European players that submitted applications. To that end, we will collaborate with the subsidiary of French TSO RTE International and Fichtner, a German engineering and consultancy company. The project is financed by the European Union. The Grid Code must be completely reviewed by the end of 2014.



Tesla training programme.



## Elia viewed from the inside

The Group plays a major role at the heart of the electricity market, and wants to play a key role in the debates in order to drive the sector's development. The policies established with regard to personnel, involvement in civic life and open relations the Group maintains with respect to all of its internal and external stakeholders, are evidence of its commitment.

In carrying out its missions, the Elia Group relies on the expertise and enthusiasm of some 1,996 staff, including 1,204 in Belgium and 796 in Germany.

#### 50HERTZ

Average seniority and average age stood at 16.6 and 42.4 respectively. Women account for 23.5% of staff. 3.1% of 50Hertz staff have a disability.

#### ELIA

The proportion of employees with more than 10 years' seniority fell from 68% in 2012 to 58.22% in 2013.

Women account for 18.11% of staff and are present in jobs critical to the Group's strategy and future. Two women have been on the Management Committee since 1 January 2014.

The Elia Group faces a variety of human resource challenges in a constantly changing energy environment. To anticipate the company's HR needs and proactively expand its skills base, various activities and programmes were created in 2013.

#### COMPOSITION OF THE ELIA GROUP ON 31/12/2013

	Men		Women		Total		FTE	
	Elia	50Hertz	Elia	50Hertz	Elia	50Hertz	Elia	50Hertz
Management	4	4	1	0	5	4	5.00	4
Executives	338	73	85	14	423	87	417.75	86.3
Employees	644	533	132	172	776	705	753.93	701.9
Total	986	610	218	186	1204	796	1176.68	792.2







## IDEG, Learn-Innovate-Experiment-Collaborate

A new training programme comprising four modules, dubbed IDEG, was developed at Group level.

The name given to each module is reminiscent of a scientist renown for crucial discoveries in electrical energy.

#### **TESLA**

For young recruits and employees who have been in their career for two or three years, across all departments. This programme is divided into four modules taking part alternatively in Germany and Belgium. Learning takes place via project management, with a focus on 'intrapreneurship'. The second strength of the programme is based on the creation of an internal network of Group employees in order to bolster sharing.

- 16 employees (10 in Belgium, 6 in Germany)
- The programme ended with the projects being presented to Group management. It will be renewed starting in April 2014.

#### **FARADAY**

For employees who will be playing a leadership role. The programme is divided into six modules, three of which took place this year. The focus is on leadership and change.

The first module took place in Romania with the organisation streetwiZe. The participants collaborated on the 'mobile school' project and developed new teaching tools intended for street kids in an effort to help them discover

their talents. The 'street skills' model is divided into four areas: Positive Focus; Agility and Resilience; Cooperative Competition; Proactive Creativity. This way of understanding team management should enable our (future) leaders to better manage their teams in order to guide them towards success. Two other modules, 'Leadership' and 'Change', were organised in 2013, making it possible to introduce the Elia Group Change Methodology, with rollout scheduled for 2014.

In October, four members of the Ways2Energy project taking part in the Tesla training course flew off for two weeks to Togo to help Solar Without Borders to build a Solar Kiosk, i.e. a battery operating on solar energy and used to provide lighting for a village. This association aims to provide 400 villages in Togo with solar batteries within three years. The operation enjoyed the support of the Human Resources department and Elia's executives association, and enabled:

- support for the construction of a Kiosk;
- analysis and improvement of processes such as the 'value chain' and logistics in general;
- studies into existing projects and other solar energy requirements for villages in Togo.

## **EVP (Employer Value Proposition)**

The Elia Group is perceived by its employees as a solid, dynamic and innovative employer with a long-term societal vision for conscientious and motivated professionals wishing to build a bold career in the rapidly changing energy sector. Find out more on www.elia jobs.be



#### WESTINGHOUSE

Designed for middle management, this programme focuses on 'responsibility and networking'. The 'Impulse Session' modules enable employees to challenge their expertise through discussion and comparison with other experiences or working methods. These moments, known as 'food for thought', are supplemented with lectures that also enable the participants to, in turn, develop and grow their own networks.

In 2014, an 'open learning' session will bring together 12 employees responsible for the organisation of their own training. Together, they will specify needs, validate the necessary resources, both inside and outside the group, and achieve the objective set jointly.

#### **THALES**

Planned for 2014 and intended for senior managers, this programme is like a think tank, a breeding ground for thinking about and discussing the challenges of the future.

## **Knowledge Management**

The Group's 'Knowledge Management' policy was developed by defining a framework and rules of good practice. It is based on internal and external cases, as well as on Knowledge Management pilot projects in four areas started in 2012.

- NCC (National Control Centre): maintenance and sharing of knowledge, introduction of a spoke, use of the 'After Action Reviews' tool and deployment of a wiki for operational feedback.
- Safety: deployment of a Corporate Safety community of practice and management of grid maintenance (Grid Operational maintenance)
- R&D (Research & Development):
   maintenance and sharing of experience acquired during R&D projects
   by developing a methodology; enhancing collaboration and sharing via
   the use of social media, such as Wiki,
   Sharepoint and Yammer.
- TCC E&SM (Technical Competences Catalogue for Energy & System Management): catalogue of technical competences for seven areas of activity with 32 competences.

At 50Hertz, objectives were defined: the transfer of knowledge is essential for creating and maintaining knowledge in a context of strong demographic growth, strenghtening the sharing of knowledge between 50Hertz and Elia, the launch of a 'Tandem Concept' pilot with a view to structuring transfers between juniors and seniors.

### **Employer Branding**

In line with the new Group vision, the Employer Branding campaign also adopted a new style. The challenges facing the sector are leading to the emergence of new businesses and the company must gradually attract specific profiles to meet these challenges. The Group's international growth enhances the need to share knowledge and good practices within the Group. The recruitment challenges are huge but also offer numerous opportunities. Indeed, we need employees who are competent in managing existing infrastructure while paving the way for future infrastructure. Flexibility in how employees approach their jobs with a view to increasing knowledge is becoming a key asset within the Group.

## Figures

16 internship applications2 dissertations92 recruitments

Average number of hours of training per employee

2011: 37.90 hours 2012: 39.88 hours 2013: 43.13 hours

## Learning coverage

(at least one day of training)

2011 : 74.23% 2012 : 74.69% 2013 : 81.55%

## In Belgium

#### INVOLVEMENT IN JOB FAIRS

Elia takes part in meetings organised in the form of job fairs with students completing their studies (15 fairs in 2013). This year, Elia decided to go out and meet younger people, and to attend the SIEP fair for primary and secondary school pupils. A way of giving them a taste for technical jobs for which competences and know-how will undoubtedly be necessary in the years ahead.

This dovetails with the approach taken by the 'Technical Education Trophy', which, since 2010, has been organised during wEXPOsciences at Tour & Taxi (Brussels) and which aims to inform secondary school pupils about pursuing scientific and technical studies.

#### STOP & DEVELOP!

The catalogue of competences enables employees, with the agreement of their line management, to select one or more training courses needed or advised in connection with their development. In parallel, a new programme was deployed to offer ad hoc content on topics linked to current events and developments in the sector. Informed by e-mail, the employee decides to register for the 'Stop & Develop' session if he or she so wishes. The success of this approach shows just how determined employ-

ees are to keep proactively abreast of current events.

#### **TECHNICAL SKILLS**

Within the Asset Management division, a programme organised in 5 areas supports employees in connection with changes in our infrastructure (see "Operating grid infrastructure", p.18).

- 1. New technologies
- 2. Quality / Pass 55
- 3. Asset Control Center
- 4. People and technical skills
- 5. External orientation



The Solar Team rcomprises students from GROEP T- Internationale Hogeschool Leuven who are working to design a solar-powered vehicle. To encourage other young people, they organise a Solar Olympics every year to challenge secondary school pupils to design and build a solar-powered gadget. During the finals on 8 May, 30 teams from around Flanders met in Leuven to present their gadgets (designed with a maximum budget of €100 and a solar panel capable of generating 7.5 watts)

to the judges. Elia sponsors this competition and handed out the audience award, a flight in the Elia hot air balloon at the Koninklijk Atheneum high school in Zottegem for its 'Pour le Tour' project.

The fifth year students (accounting option) reproduced the route of the Tour de France with small solar-powered LEDs. They collected autographs from high-level bicycle racers such as Tom Boonen and Zdenek Stybar which they will then auction off. The proceeds will

be donated to the Kinderkankerfonds (Childhood Cancer Fund).

The Shape your Future competition was organised for the first time, in collaboration with SIA and weekly economic magazine Trends-Tendances and targets university students, mainly from engineering and business schools. The challenge for students consists of writing a paper on the future development of the energy sector and, more specifically, the topic of 'Renewables, a



Awarding the prize to the winner of the Shape Your Future competition

The People & Technical Skills area aims to ensure that knowledge and expertise are available at the right time and right place. In this context, an initial group (acquisition of competences) worked on a first series of 11 'critical activities' (new activities or changing activities) for which it was estimated that certain competences still had to be developed. For example, further to the integration of renewable energies in the grid, dispatchers must acquire additional competences in order to be able to cope with variable situations on the grid. Trainings were given in the second half, following an innovative programme focusing on both substance and form. The second part (continuous

development) analysed various learning methods while considering the balance needed between theory and practice during trainings: a new method of learning was incorporated in the employee development path, with 70% practice, 20% coaching and 10% theory.

The objective is to have trainings which correspond to current and future needs, and also to encourage sharing and internal stimulation.

#### SKILLS MANAGEMENT

Elia bases its skills management policy on a catalogue which has five generic skills defined for all Elia staff in line with the company's values. Skills are generally identified at various stages in an employee's career: in the appraisal when an employee is hired or changes jobs, in the development interviews for executives (the Midyear Review held each summer) and employees (the annual Jobdate), as well as in the training provided to develop specific skills, and so on.

European luxury?'. In addition to taking home a €2,000 prize, the winner will see his article published in Trends-Tendances. More than 120 registrations were received and more than 60 articles were submitted by students. 25 of them benefitted from SIA coaching to improve their articles. Vincent Graré, a 20-year-old civil engineering student at KUL (Catholic University of Leuven), won the first prize with his article entitled Hernieuwbare energie, toch nog niet voor morgen (Renewable Energy,

But Not Tomorrow). In the article he examines the possibilities and limits of using biomass as a source of renewable energy.

"Discover your talent" 2013 at the Caves de Cureghem venue (Brussels). This project organised by Business & Society Belgium aims to help young dropouts in their quest to find a job.

With volunteers from other companies, 69 Elia employees organised and at-

tended workshops to teach unemployed young people about recruitment techniques and to help them exploit their innate potential. How to write a good CV? How to get through a job interview with flying colours? How to best use social media when looking for a job? In addition to the companies present, a local NGO called MAKS supports the project.







**796** 

employees, 24 apprentices and 10 trainees work at 50Hertz

### In Germany

To support the many challenges linked to the market, system management, investment programme, and to anticipate demographic development among its employees, the priority objective of human resources at 50Hertz is to ensure the transfer of skills between seniors and new arrivals. A significant number of apprentices and interns take the training programme with a view to taking over in future years.

In addition to a new site dedicated to career options and the 'tell your friend' programme, recruitment within 50Hertz also benefitted from the deployment of a new Assessment Centre for management positions within the company.

## PARTNERSHIPS WITH UNIVERSITIES AND RESEARCH CENTRES

50Hertz continues to work closely with its network of academic institutions in order to stimulate knowledge transfer and attract attention to the need for innovation while encouraging internships in the company. These activities are overseen by a Scientific Council for Energy Infrastructure run by 50Hertz. Within this context, students from these universities meet regularly with experts from the company to discuss energy-related topics.

## The Elia Group is moving into the Smart Way of Working (SWOW) era

The world is changing and companies have to change too in order to improve their interactions with stakeholders and incorporate emerging new tools. With that in mind, the Elia Group entered the SWOW era!

The fitting out of the building at Quai Monnoyer in Brussels was an opportunity to launch the transformation that dovetails with the company's new vision. The new remodelling of spaces is the visible part of the iceberg. More deeply, the aim is to change working relations, review hierarchical relationships in order to encourage collaboration, and to accordingly facilitate the development of projects in order to achieve the company's objectives. The technology available today enables greater flexibility and the widespread implementation of

teleworking, apart from jobs where the execution of tasks is linked to a defined place (control centres, for example) or to operations taking place in the field.

In the years ahead, other sites will be remodelled accordingly, such as the Group's headquarters located at Boulevard de l'Empereur in Brussels and the new headquarters of 50Hertz in Berlin.

### **Social Business**

In December 2012, Elia validated the implementation of a social media strategy, concretely implementing its desire to position itself as a driver of change and innovation. The objective is nothing other than to engage in a dialogue with all stakeholders and to move towards a collaborative, less fragmented model. Many initiatives were taken in 2013: a presence on the main social media networks, both external (Facebook Linkedin, Twitter) and internal (Yammer). A hub & spoke model was deployed to support the advent of social media: a series of experts (spokes) handle communication in their area of expertise and a central hub (managed by the communication department) drives strategy and provides support and monitoring. The spoke has advanced knowledge of the domain in question and can therefore provide a more complete response. The objective is to answer better and more quickly to the questions which arise about our activities, projects, energy challenges and more - and which come through via a growing number of channels.



## Monnoyer building officially inaugurated on 13 December

The site was officially inaugurated on Friday, 13 December 2013 in the presence of Céline Fremault, the Brussels Capital regional government minister responsible for Economy, Employment, Scientific Research and Foreign Trade, and BECI President Thierry Willemarck. The building also obtained 'exemplary building' status from the Brussels Institute for Environmental Management (IBGE/BIM) and a 'Very Good' BREEAM rating.

## Policies on waste management and mobility

#### SELECTIVE SORTING

In April 2013, Elia improved its selective sorting by adding in the PMC fraction (plastic bottles, metal cans and drink cartons), which represents a major proportion of the volume of waste produced by the company. To deploy efficient selective sorting, the entire isolated and individual sorting system was eliminated. The sites in the three regions are equipped exclusively with centralised sorting islands with a standard colour code. Since September 2013, organic waste in the new company canteen and selective sorting have been handled at source by staff.

In addition to the less paper policy, the use of glass bottles with a deposit on them, drinking fountains, etc., a project to reduce excessive packaging resulted in the total elimination of small individual packagings in the canteens and the elimination of plastic cups in coffee machines and at drinking fountains. By the end of the year, each member of internal and external staff was using a reusable cup and glass.

## INTEGRATED MOBILITY MANAGEMENT

60% of staff work at Elia's three sites in Brussels.

The problems of road congestion and the resulting loss of time made it even more important to raise awareness of employees and support commuting personnel to help them change their habits.

Some of the actions taken:

- Deployment of a shuttle service between Schaerbeek train station and the sites at Avenue de Vilvorde and Quai Monnoyer. This pilot project will be assessed in 2014.
- 'Tous vélos actifs', a scheme operated in the Walloon region that aims to get companies to promote bicycle
- A pool of vehicles at working premises in Brussels for daytime journeys made by staff who use public transport to get to work. These are 100% electric and plug-in hybrid vehicles, which means that they emit zero CO<sub>2</sub> when running on electricity.
- The Elia Car Policy provides young executives with hybrid vehicles (79 g of CO<sub>2</sub>). In 2013, a broader, more flexible offering was provided for executives, who could opt for a hybrid, a plug-in hybrid or an electric vehicle, a petrol vehicle, which are less pollutant in terms of emissions of fine particulates and NOX when they travel less than 15,000 km per year. More flexible combinations were also added: a leased vehicle and bicycle,

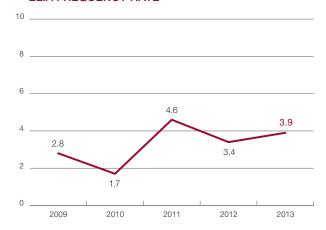
- or a choice of cars depending on the needs of the moment, such as holiday periods.
- 50 executives and employees took courses in ecodriving over a period of 12 months.

All of this information is available on the company's intranet.

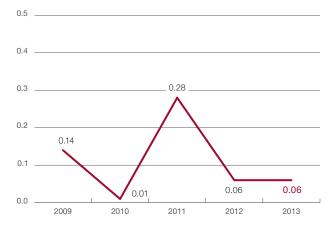
## Health and safety of and by employees

The Elia Group prioritises the health and safety not only of its staff and the personnel of companies with which it works but also of its customers and the public as a whole. The company continually makes sure that its facilities are as safe and reliable as possible. Elia has set a target of zero accidents or incidents, which means avoiding any injury to people, as people are - now more than ever - the focus of its concerns.

#### **ELIA FREQUENCY RATE**



#### **ELIA SEVERITY RATE**



## > Health activities in 2013

An information campaign on how to correctly handle loads manually was launched during safety week in May. The campaign focused on the ergonomic aspects of lifting and setting down loads, and contributed greater knowledge about the risks involved in these everyday operations. Raising awareness of the importance of a good diet continued, with an emphasis on eating seasonal fruits and vegetables. At various sites, seasonal fruits are provided daily and the canteens offer vegetarian dishes.

## In Belgium

In 2013, 140 36 kV substations and 300 high-voltage substations underwent a risk analysis with a view to making structural improvements designed to reduce risks.

Training, educating and continuously involving staff in operational safety risks and corporate risks help to support and consolidate the establishment of constant risk awareness as part of the corporate culture.

Informal learning is increasingly being encouraged at the workplace, resulting in efforts at more interaction in order to convey the necessary knowledge. It also helps to identify strengths and weaknesses, which can then be taken into account in the efforts to prevent accidents and incidents.

Involvement at all levels of the company (management, line management, foremen, committees and employees), as well compliance with work methods, procedures and instructions and the notions of order and cleanliness are still required. To make health and safety more visible and increase individual involvement, sharing between all operational technicians took place in 2013, leading to the development of a Health & Safety Charter.

Safe conduct is also integrated into the Performance Management of management, line management and all employees. It constitutes an important dimension of personal development and career advancement.

## **Results: graphs**

In 2013, four accidents out of seven resulted in work incapacity (falling and tripping). Only two accidents were directly linked to the performance of our technical activities, out of a total of nearly 20,000 operations in the field. Some accidents took place during the long and hard winter period at the start of the year.

These accidents, as well as various other events in 2013, once again demonstrated that excelling in safety must be earned every day and requires ongoing efforts to correctly apply the safety rules, procedures and instructions and to modify behaviour to constantly changing situations.





16,000

man-hours of safety training for technicians

With an average frequency rate of 3.3 over the last five years, Elia's performance is seven times better than the Belgian average, placing the company on a par with companies with limited or nearly no risks, such as those in the banking and insurance sectors.

#### SAFETY AND SUBCONTRACTORS

Between 500 and 800 subcontractor technicians work every day at our facilities. The health and safety of this group of employees is just as important to the company as the health and safety of its own staff.

In 2013, more than 2,800 contractor employees were trained in the risks and dangers they might face in our industrial facilities. These trainings all end with a knowledge test. In total, nearly 3,600 certificates were granted.

To encourage the safety reflex among our subcontractors and reward their good safety results, objective safety and quality parameters are used to prepare for the work and to carry it out in the field, when it comes to selecting contractors and allocating them assignments. The results are evaluated and discussed in an open dialogue with subcontractors. This approach takes priority for existing subcontractors and for new applicants. They are both audited regularly to check their quality and safety approach.

More than 200 quality and safety assessments are carried out each year. If necessary, an action plan is defined in order to boost their operation and results to the level sought by Elia. Elia ends the collaboration if they are not sufficiently committed to the safety policy or if they fail to reach the level required for the safety parameters and results.

#### In Germany

50Hertz had no serious accidents at the workplace during the reference period. Incapacities caused by accidents at the workplace are very low. Internal audits revealed no violation of the law or other commitments made by 50Hertz. The Health & Safety department cooperated with other companies to develop other measures and values for improving workplace safety on high-voltage sites. 50Hertz improved the offshore rescue service by basing a search and rescue helicopter carrying an emergency physician on the island of Rügen. In addition, 50Hertz laid down basic rules and had the health and safety management system certified for the first time in accordance with OHSAS 18001:2007 (Occupational Health and Safety Assessment Series) by the German technical inspection agency (TÜV).

## Social commitment to safety

It is not just Elia Group employees and subcontractors who have to take account of the potential high-voltage risks, but anyone who comes into the vicinity of our facilities. Accordingly, at the request of a number of fire brigades, Elia organised sessions on the specific risks and safety measures that should be deployed during emergency operations in the vicinity of our facilities. Elia also regularly makes its infrastructure available to the first-aid teams of the emergency services so that they can carry out drills in a setting that is as realistic as possible. Groups of students in technical studies are regularly invited to learn more about our operations, including safety aspects.





# Relations with our stakeholders

The Elia Group maintains an open and transparent dialogue with its customers, suppliers, shareholders, potential investors, government bodies and the population as a whole, as well as with its own personnel (see "Licence to operate", p.77).

## **Our suppliers**

The purchasing department covers nearly all purchases that have to be made by Elia, with regard to both controllable and non-controllable components. The department covers:

- purchases made in connection with grid investment projects (contractors for works, engineering contractors, turnkey projects and high- and low-voltage equipment);
- general purchases (including IT equipment and service contracts for the corporate departments);
- energy purchases.

These purchases are made in the context of a policy and code of ethics that aim to preserve confidentiality, promote transparency and avoid any discrimination or conflicts of interest. Moreover, above a certain ceiling, procurement is subject to European legislation on tender procedures, which can be consulted on Tenders Electronic Daily.

Elia aims to reduce the overall cost of goods and services for the community and to contract out goods and services in a way that maximises quality, reliability and safety, while protecting the environment. In this context, Elia gives preference to suppliers that implement a safety improvement policy and offer green solutions at an acceptable price. Certificates and certifications such as SCC, BeSaCC, ISO 9001 and ISO 14000 are definitely an advantage.

Elia aims to develop a long-term partnership with its suppliers and has accordingly set out a clear vision of such a partnership. The deployment of framework contracts establishing a multi-year relationship with suppliers is one concrete example of this approach. At the same time, Elia uses a supplier evaluation system that specifically takes account of safety, quality of work, compliance with specifications, prices and compliance with contractual conditions.

The current context and market development are perceived as opportunities that should be seized. The new suppliers make it possible to challenge past habits and to provide alternative solutions offering the same quality and safety benefits as those provided by purchases made in the past. The Group wants to encourage synergies in purchasing by sharing experiences in order to purchase better and have the community benefit from the savings made.





#### **Investors**

The Elia Group ensures communication and transparent dialogue with financial analysts and current and potential investors. Two-way communication between investors and management has been established to comment on the company's results, strategy and decisions and to understand the concerns of shareholders and analysts as well as the perception of the market.

More than ten roadshows were organised with the CEO and CFO for the benefit of the hundred or so institutional investors in Europe's major financial centres. The Group also once again took part in the Benelux Conference co-organised by NYSE and ING in New York.

In between roadshows, investors and analysts had a chance to talk to the CEO or CFO, either in person or by video conference. In addition, the Elia Group attended many national and international investment conferences as well as the annual events organised by the Vlaamse Federatie van Beleggingsclubs en Beleggers (VFB).

As the full owner of and sole lender to 50Hertz, Eurogrid GmbH must provide a reliable and stable long-term relationship with financial analysts and ratings agencies, as well as with current and potential investors and financial donors. Stable communication channels between investors and the management of Eurogrid GmbH and 50Hertz were established to comment on the compa-

ny's results, strategy and decisions and to understand the concerns of analysts and investors, as well as the perception of the market.

## **Employees**

## EN BELGIUM: INDUSTRIAL RELATIONS AT SECTORAL LEVEL

To fulfil its role in Joint Committee 326, Synergrid (federation of employers of which Elia is a member) provides various support and consulting services on social issues for its members, including:

- support for employers' organisations to prepare for the social dialogue;
- assistance for members in finding solutions to industrial disputes;
- · management of sectoral joint bodies.

## 

The green procurement principle has been applied to various purchases since it was deployed in 2012. The criteria for assessing environmental impact were expanded and encompass, for example, the contractor's environmental policy and energy consumption throughout the entire life cycle of the product. In addition, a score of at least 5% of the weight in selection decisions must be allocated to environmental criteria. Respect for the environment is therefore a factor in supplier selection, alongside price and safety. In this context, Elia strongly encourages its contractors to obtain ISO14001 or EMAS certification.



The establishment of a European Works Council supports the integration of the two organisations and contributes to the further development of a joint culture.

During the budget talks in late 2012, the government decided to limit wage costs for Belgian companies in 2013 and 2014, and to advocate wage restraint. A 0% standard was tabled: this means that for the two years in question, no room is planned for a wage increase apart from indexation and increments.

During the IPA negotiations between the social partners at national level, no consensus was reached on the imposed wage standard, which is why the wage standard was set out in a royal decree.

On 29 November 2013, a 2013-2014 branch agreement was negotiated within the Supplementary National Joint Committee (PC 218) for employees (AN-PCB) or Joint Committee 218 (of which Elia Engineering is a member), following difficult negotiations.

The negotiations on the 2013-2014 social programme within Joint Committee 326 began, but had not resulted in an agreement by the end of 2013.

## INDUSTRIAL RELATIONS WITHIN ELIA ASSET AND ELIA SYSTEM OPERATOR

On 23 April 2013, a collective agreement for Elia employees was concluded on certification of operational skills.

### INDUSTRIAL RELATIONS AT GROUP LEVEL

Company labour agreements were concluded for the transposition of collective labour agreement 90 (bonus linked to achievement of a set of collective results) at Elia and Elia Engineering. The joint works council met regularly in 2013. At these meetings, and the annual extraordinary works council meeting, it was given detailed information on the financial and economic situation of the Elia Group.

The Committee for Prevention and Protection at Work met regularly, especially to discuss the induction of new staff and the 2013 annual occupational safety plan.

The dialogue with employee representatives was constructive, and no social conflicts arose.

## CREATION OF A EUROPEAN WORKS COUNCIL AT ELIA GROUP LEVEL

The first meeting of the Group's European Works Council was held on 5 September in Brussels. The representatives discussed the following items: the development of 50Hertz, regulation in Belgium and Germany, the Group's figures until the end of June 2013 and EGI. The establishment of a European Works Council is an opportunity to support the integration of the two organisations and contributes to the further development of a Group culture.

## IN GERMANY: INDUSTRIAL **RELATIONS AT 50HERTZ**

50Hertz Transmission maintains close and constructive relations with employee representation bodies through the 'Mitbestimmung' (co-decision) system. Staff representatives are closely involved in the company's initiatives and are also kept abreast of changes in the financial and economic situation via the Economic Committee.





Animated discussion panel at the Stakeholder Day in Brussel (on the left).

Elia Group employees have the opportunity to take part in many sportive activities.

## Customers, authorities, local residents and the general public

Elia takes care to inform the relevant administrative bodies and authorities and the people living near its facilities about what its activities (whether it be investment, maintenance or emergency intervention projects) and how this may affect their daily lives, especially during works carried out by subcontractors or maintenance teams (see "Licence to operate", p.77).

#### THE ELIA FUND

Since its establishment, Elia has ensured that its mission to promote security of supply and the electricity market has been reflected on the social front, by creating the Elia Fund in cooperation with specialists from the King Baudouin Foundation. The Foundation – an ideal partner for such a project – independently and transparently manages the Fund in keeping with the company's values.

The Elia Fund is aimed at people with disabilities in the broad sense of the term (people with a mental, physical or sensory disability, older people, families with young children, and so on) and supports projects that offer these individuals transparent and non-discriminatory access to tourist, cultural and sporting facilities, in the same way as everybody else. The Fund, which has an annual budget of some €250,000, places an emphasis on 'wonder and discovery'.

In that spirit, Elia takes part, through the involvement of its employees, in other sporting and cultural initiatives. If an employee also takes part in a social project on a personal basis, he may submit an application for support, which will be paid directly to the association in question.

In 2013, 50Hertz supported, for the third year in a row, the traditional Rennsteig Special Cross. Over 400 runners, including many sports enthusiasts from 50Hertz, took part in the half marathon that winds its way through the

enchanting Thuringian Forest. 50Hertz supported for the first time the young biathletes from the Schorfheide sports club in Groß Schönebeck in southern Uckermark (Brandeburg). 50Hertz helps young biathletes to learn and master this Nordic sport in the local hill country so they can one day become champions in their discipline.

For the third year in a row, 50Hertz supported the Artist in Residence programme at the Konzerthaus Berlin, which features a different artist every season.



## ELIA ORGANISES STAKEHOLDERS' DAY ON 22 NOVEMBER, A LOGICAL FOLLOW-UP TO PREVIOUS CUSTOMER DAYS

The event gathered some 250 stakeholders with which Elia works on a daily basis: industrial customers, distribution system operators, traders, generators, public authorities, regulators, etc. The participants were informed about the latest developments in Elia's products and services (demand side management, flexibility products, developments on European markets, etc.), initiatives in the integration of the European market and innovation, and the development of major projects. They also shared valuable information during panels featuring key personalities from the industry.



# Challenges and prospects

In its role as operator of the high-voltage transmission system, Elia has to manage numerous challenges in order to cope with the energy revolution currently under way. European integration, market liberalisation, the fight against climate change and the advent of often decentralised renewable energy generation are all challenges that are upsetting what were long considered conventional activities.

## In this chapter

- **60** | Social responsibility of the Elia Group: introduction to the challenges
- 62 | Challenge 1: Security of supply
- 67 | Challenge 2: Construction of the single market
- 71 | Challenge 3: Integration of renewable energies
- 77 | Licence to operate, the meeting point between collective and individual needs





# Social responsibility of the Elia Group

Since the liberalisation of the electricity market, which sought a clear separation between the various energy market players, the Elia Group has constantly taken initiatives to better carry out its missions.

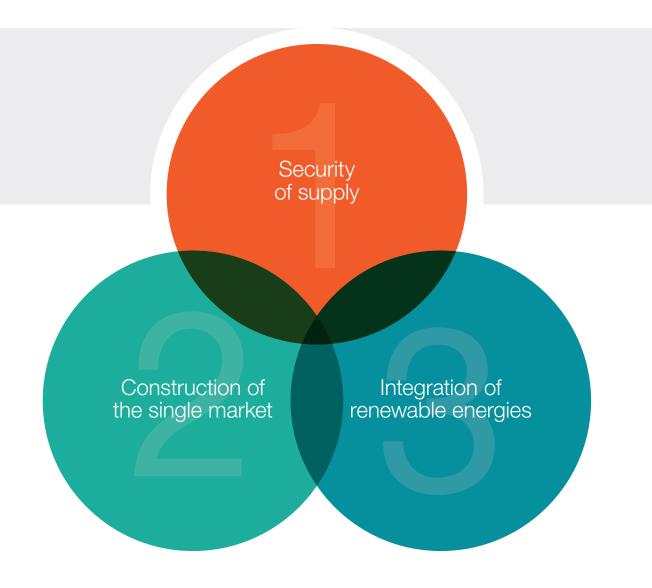
In 2013, Elia audited its internal performance with respect to these challenges in order to be better organised. Drawing inspiration from the guidelines of ISO26000 on social responsibility, Elia evaluated the performance of its businesses with respect to seven key issues: governance, respect for human rights, industrial relations, respect for the environment, fair business practices, respect for consumers and relations with communities. This project was carried out with the involvement of a number of Elia employees concerned by these topics and capable of evaluating the company's strengths and weaknesses. The result is a list of the most important action items for each business. These action items have already been discussed in part with Elia's stakeholders in order to evaluate and objectify internal perception. The next step will be to construct a materiality matrix - in accordance with the recommendations of the Global Reporting Initiative and

ISO26000 – in order to prioritise these action items for both Elia and its stakeholders. On this basis, a strategy will be defined and then deployed. The general management of the Elia Group is closely following and guiding the process in order to gradually integrate a response to each challenge in line with its strategy, and then to make it operational (project 2014).

Of the challenges Elia is facing, three are critical: ensuring the security of the electricity supply, actively taking part in the construction of a single European electricity market, and integrating new renewable energy generation sources. In responding to these challenges, Elia fully plays its role as a responsible player in respect of its stakeholders. Innovation is already part of the process.

## Security of supply

Our society is consuming increasing volumes of electricity. Given this constantly growing demand, Elia must play its role as an interface between electricity supply and demand. The deployment of reserve mechanisms pursues this objective. Since storage is not possible and since it does not have its own generating facilities, Elia must maintain balance on the grid while take into account multiple major factors: the ageing of conventional generating facilities, the political willingness to ultimately eliminate nuclear energy generation, the increase in 'small-scale' decentralised renewable energy generation (photovoltaic, biomass, cogeneration, etc.) which are sometimes very remote from the consumption sites (for example, offshore wind power).



## **2** Construction of a single European market

Following a European policy decision in the early years of the new millennium, high-voltage transmission infrastructure must physically and economically support the development of the single market. 'Physically' means upgrading electricity transmission capacity between neighbouring countries. 'Economically' means making it possible to reconcile electricity supply and demand within a liberalised market system in order to make prices more transparent and competitive for consumers.

## **3** Integration of renewable energies

The commitments made by Europe and the Member States to reduce greenhouse gas emissions are having an influence on the energy industry. Renewable energies are encouraged in investment policies with relative control over the effects induced: technical challenges, financial impact, etc. It is virtually certain, this move towards decarbonisation leads to an increase in electricity consumption. On the generation side, there are multiple challenges: intermittence and dependence on weather conditions; with offshore wind power, the wind farms are far removed from consumption sites; with photovoltaic, biomass and cogeneration, generation is marginal and increasingly decentralised. Elia must adapt its grid and system operation in line with multi-player, multi-source generation.

## Licence to operate, the meeting point between collective and individual needs

All of these challenges encourage Elia to maintain, modernise and upgrade its high-voltage and medium-voltage transmission infrastructure. An infrastructure which criss-crosses the territory and must be managed in close collaboration with stakeholders: inhabitants, local authorities, industries, electricity generators, residents and environmentalists. A vital electricity grid, which aims to be discrete even though some people will think it an eyesore even though they too consume just as much electricity. The obtainment and renewal of operating or upgrade permits are therefore key factors and a prerequisite for the success of Elia's missions and better public service.





## CHALLENGE 1

## **Security of Supply**

Security of supply is a major challenge for the years ahead. The ageing of conventional generating facilities, the elimination of nuclear power and the integration of renewable energy are fundamentally changing the configuration of Europe's energy supply. New generating units are built far from the cities (offshore wind farms) and decentralised units (photovoltaic, biomass, cogeneration, etc.) are being deployed on a massive scale, thus influencing the management of the electricity system (see "Integration of renewable energies", p.71). In addition, energy requirements - which are at the very heart of our everyday life (information and communication technologies, domestic appliances, electric vehicles, etc.) - are constantly on the rise.

Ensuring security of supply is the shared responsibility of generators, suppliers, transmission and distribution system operators, public authorities and, increasingly in the future, consumers (through demand management).

The **federal authorities** define general policy on energy supply.

Transmission system operators provide market players with robust and reliable power infrastructure and ensure an instantaneous balance between generation and demand, 24 hours a day.

They work round the clock.

**Suppliers** undertake to supply their customers with electricity in accordance with their needs. They can rely on our grids and the services that we provide them in order to transmit this electricity, whether it is generated at home or abroad.

To this end, system operators continue to develop their interconnections with neighbouring countries (see Projects, p.25) and work with power exchanges and other system operators to create electricity markets that extend well beyond national borders (see "Construction of the single market", p.67).

#### In Belgium

## BALANCING GENERATION AND CONSUMPTION TO MEET THE NEEDS OF THE MARKET

Balancing generation and consumption is primarily the responsibility of market players, in particular Access Responsible Parties (ARPs). ARPs are expected to ensure the best possible balance between their supply sources and their offtake sources. To this end, each ARP must inform Elia, one day ahead, of all the energy exchanges it will perform, on a quarter-hourly basis for each point on

the grid. This applies to injections and offtakes, exchanges between ARPs, imports and exports. The residual imbalance for the Belgian control area is offset in real time by Elia using energy reserves available under contract with generators and industrial customers in Belgium.

To this end, the volume of energy activated by Elia for the Belgian area was 113 GWh in 2013, compared with 1260 GWh in 2012.





Transmission system operators provide market players with robust and reliable power infrastructure and ensure an instantaneous balance between generation and demand (see "Operating grid infrastructure", p.18).

#### THE WATHELET PLAN

The State Secretary initiates a Plan with a view to guaranteeing Belgium's security of supply for upcoming years. In July 2013, the government confirmed: the elimination of nuclear power and the 10-year service extension for the Tihange 1 power station, the deploy-

ment of a call for tenders for new units that could be decommissioned in 2014 and measures to bolster the competitiveness of Belgian generating units. The government also confirmed the importance of interconnections and their contribution towards ensuring security of supply (see Projects, p.25).

Throughout 2013, Elia contributed its support to the government and national regulator to establish this Plan and initiated actions to guarantee balance (see below FEBELIEC-ENERGYVILLE Survey).



## ELIA EXPANDS DEMAND MANAGEMENT SERVICES TO BALANCE ITS SYSTEM

In addition to the load-shedding service (temporary interruption) contracted with industrial companies connected to the transmission grid, Elia is giving aggregators (groups of companies sharing the same production profile) and generation units connected to distribution grids the option of offering load-shedding in order to ensure balance in the electricity system. First of all, the 'primary reserve', which requires an extremely short

response time, was opened to aggregators for their customers connected to the transmission system. Around one third of primary capacity used to mitigate frequency dips is currently provided via load-shedding offers.

Elia also created a new product called Tertiary Reserve Dynamic Profile (R3DP), for which customers connected to the distribution system can make load-shedding offers via aggregators. A call for tenders, of approximately 50 MW, was launched in September

and was a great success.

This type of reserve requires capacity to be activated within 15 minutes. The product designed by Elia stipulates no more than 40 activations per year. The duration of interruption is limited to two hours and there must be an interval of at least 12 hours between two activations. The participation threshold is 5 MW.

In this mechanism, the aggregator is remunerated for providing capacity at a set price per MW. In addition, during each activation, the energy which is no



Pieter-Jan Mermans and Jan-Willem Rombouts CO-FOUNDERS OF RESTORE

Renewable sources of energy account for a growing share of electricity generation, which means that continually maintaining balance between supply and demand is becoming increasingly complex. That is why the concept of Demand Response, which consists of limiting demand from industrial and business users during imbalances, is becoming more important. REstore comprises the available and interruptible capacity of multiple industrial and business users in the form of a virtual power station we make available to Elia as a reserve. Together with Elia, we are - with this innovative technology - concretely encouraging renewable energies, the balance on the grid can be restored more rapidly and CO<sub>2</sub> emissions drop.

In December, the government confirmed the decision to deploy a strategic reserves mechanism in the Belgian control area, and this in addition to the resources used to maintain balance. Based on an analysis of the situation and risks, a call for tenders aimed at power stations that have announced their closure and those that are temporarily closed and at industrial companies that can temporarily suspend their consumption will be launched. The objective is to guarantee the maintenance of balance in the area in exceptional situations (see "Operating electricity grids", p.32).

The system operator will play a key role in deploying such a mechanism as soon as the regulatory and legal framework is defined, so as to enable the deployment of this concept. If Elia must, in the future, play an active and efficient role in managing these strategic reserves linked to security of supply, this could lead to its missions being redefined.



longer purchased by the interrupted consumer must continue to be generated in order to ensure balance in the system. It is automatically invoiced to the balance responsible party at the real-time marginal price via the imbalance tariff. The expansion of range of services available to manage balance in the area was made possible by CREG's support for these initiatives.

## DEMAND RESPONSE: JOINT STUDY BY FEBELIEC, ELIA AND ENERGYVILLE

Industrial electricity consumers which are connected to Elia's grid have additional potential to offset consumption peaks. That is the conclusion of a study that Elia, Febeliec and EnergyVille carried out in the summer of 2013 and in which 29 industrial consumers accounting for 13.6% of Belgian electricity consumption in 2012 took part. Both industry and homes can contribute to grid stability by being flexible in their energy consumption and reacting in a planned fashion to any shortages at

times of consumption peaks. This is the principle of demand management or demand response. Certain very large consumers already have access to this via the market and/or via interruptibility contracts with Elia. Accordingly, not only can they transform their flexibility into an economic benefit, but at the same time they contribute to security of supply.

According to the survey, the companies that responded have flexible capacity of 631 MW, of which 134 MW is not yet being used 'intelligently' to lower energy costs. Around two thirds of this flexible





## **In Germany**

## DEPLOYMENT OF A STRATEGIC RESERVE

A new mechanism for ensuring the security of the electricity system in the form of a strategic reserve was established in Germany in 2013 in order to ensure the availability of sufficient generation capacity in all foreseeable generation scenarios. The need to establish such a mechanism appeared following the withdrawal of a growing number of unprofitable production units on the market. For the winter of 2013/2014, generating capacity of 518 MW was contracted by the German transmission system operators under this new mechanism. Recent calculations show

that the volume of generating capacity to be contracted will increase in the years ahead. This mechanism is not based on the market and aims only to maintain the security of the electricity system. This mechanism should end in late 2017. The new German government announced in its coalition treaty that it would attentively analyse the medium-term security of supply needs and that it would develop a targeted and appropriate capacity mechanism.

## INSTALLATION OF 380 KV BERLIN CABLE AS BACKBONE FOR SECU-RITY OF ELECTRICITY SUPPLY FOR GERMAN CAPITAL

During his visit on 28 August, Dr Philipp Rösler stressed the importance of the system operator's work to ensure the security and reliability of electricity supply for Berlin. He stressed the excellence of the work done during this period of energy transition, sources of major challenges for the security of the system.

capacity can be called on very quickly (within 15 minutes) by the system operator in case of imminent shortage, and this capacity generally already participates inthe market. The remaining third can only be activated after a 'longer' reaction time (a few hours), and the lion's share of such capacity is still not being used today.

## FIRST MONTHLY AUCTION FOR ANCILLARY SERVICES AT ELIA

The first monthly ancillary services auction was held in December 2013, on 10 (first round of bidding) and 12 December (second round). Previously, Elia had always purchased its ancillary services via an annual or multiannual procedure. The evolution towards shorter-term contractualisation desired by generators had also been identified in the plan by State Secretary Wathelet as a measure for improving market efficiency.

Based on a proposal by Elia in early 2013, CREG approved early in the summer, on a trial basis, the principle of monthly purchases for part of the reserves for generation units. At the end of the session on performance for the month of January 2014, Elia purchased 27 MW of primary control and 20 MW of secondary control via the STAR auction platform (Short-Term Auctioning of Reserves).



# Involvement in innovative projects making it possible to respond to future energy challenges

Storage technologies can represent a potential resource for the supply of ancillary services and the management of congestion in a system where the share of renewable energies continues to rise. Elia is taking part in the eStorage project, which aims to demonstrate the technical and economic feasibility of variable-speed pumped-storage units and new market mechanisms enabling their deployment across Europe. 50Hertz is taking part in the **SDL-Batt** and ADELE-ING projects, which aim to carry out a design study and analyses for the future construction of the first demonstration of an adiabatic compressed air energy storage system.

#### SDL-BATT

The purpose of this project is to highlight ancillary services that are most appropriate for economic involvement of battery storage systems in the following time-frames: currently, 2020 and 2050. The extent to which battery storage could help to maintain system stability will also be examined. The project could help to guarantee the security of the system thanks to its large-scale storage systems with respect to volatile generation from renewable energy sources. 50Hertz will benefit from a large-scale battery that will help to ensure system security with respect to volatile generation from renewable energy sources.

#### **TWENTIES**

The TWENTIES project, involving 50Hertz, Elia and 24 other partners, came to a successful conclusion. The project demonstrated that:

- a wind farm can be controlled in such a way as to provide ancillary services to the TSO and that downward regulation is especially useful while the costs of upward regulation are much too high to be attractive;
- a virtual power station can also provide ancillary services and be used to balance an isolated grid;
- a solution based on a direct current circuit breaker is possible and that the challenge of such a grid will be how to protect it;
- a new wind farm control tool can reduce the impact of storms on grid balance, thus reducing the need to use ancillary services;
- reliable capacity can be provided by using dynamic line limit forecasting tools (Dynamic Line Rating) and by improving the level of coordination between European flow control tools, such as phase-shifting transformers (demonstration performed by the Elia Group);
- Real Time Thermal Rating is a reliable operational management technique and that a very simple overload detection tool can be deployed to control flows in a way that is more economical than existing PSTs;

We are currently concentrating on the use of these results whether they were obtained by the Group or by other participants:

- Increasing capacity along critical arteries in Belgium thanks to Ampacimon and the forecasting tool
- Integrating wind farms in the balancing/reserves market to provide downward regulation
- Promoting the use of smart wind farm control tools to limit the impact of storms on wind farms and the grid.







## CHALLENGE 2

## **Construction of the single market**

The optimum provision of transmission capacity between different countries for market players creates economic added value for the entire community. The electricity markets are more competitive and less concentrated on their national markets, which has a positive impact on electricity prices in Europe. Consumers can have access to the lowest cost energy wherever it is available (see "Facilitating the market", p.39). All improvements to these mechanisms lead to multiple positive effects.

In 2011, the 27 heads of state confirmed the need for the single energy market to be completed by 2014.

Three major legislative packages were adopted to achieve that by the desired date. The third package was the major stage towards completing the single market by imposing on ACER and ENTSO-E (two authorities from the third package) the obligation to:

- Define a framework for delivering common rules for grids and markets;
- Encourage the emergence of an independent grid enabling producers and suppliers to meet the needs of consumers, cope with weather challenges (integration of renewables) and ensure security of supply. Various plans and programmes were established, such as the Environmental Infrastructure Package, the Ten Year Network Development plan (TYNDP), Projects of Common Interest (PCI)), to name a few of the best known.

## Projects in progress: network codes

Since the adoption of the third package, the network of transmission system operators, ENTSO-E, has been working to draw up various Network Codes.

As an active member of the European Network of Transmission System Operators for Electricity (ENTSO-E), Elia took part in various working groups on drafting codes: Connection Codes, Operational Codes, Market Codes. Of these, the proposal for a Network Code on Capacity Allocation and Congestion Management was submitted to the Agency for the Cooperation of European Regulators (ACER) in September 2012. Its objective is to make border capacity available to the day-ahead and intraday markets in an optimum and harmonised fashion while avoiding congestion on the grid. This code arrived in late November 2013 in the Member States for the final phase of the process before

being adopted permanently. In September 2013, the Forward Capacity Allocation Network Code (FCANC) was submitted to ACER. Its objective is to allocate, in an optimal and harmonised fashion, border trading capacity for the long-term market (annual, monthly and others if relevant).

For more information: http://network-codes.entsoe.eu



Klaus Kleinekorte
CHIEF EXECUTIVE
OFFICER, AMPRION GMBH,
DORTMUND

Working together on visionary projects such as the "DC Passage South-East" between northern and southern Germany and "ALEGrO", the first interconnector between Germany and Belgium, the Elia Group and Amprion are forerunners in the realisation of important projects for system security, the safe integration of renewables and the development of the European internal energy market.

In addition, Elia is an active member within projects related to the CACM network code, such as the Bidding Zones Configuration Study projected for 2014.

The associated preliminary Technical Report was delivered in late 2013. The adoption of these rules must make it possible to further bolster European integration and reduce the discrimination and advantages inherent in a closed market. Indeed, the more open the market is, the more access there will be to cheap energy for more people, to the benefit of the entire community.

## **Intraday markets**

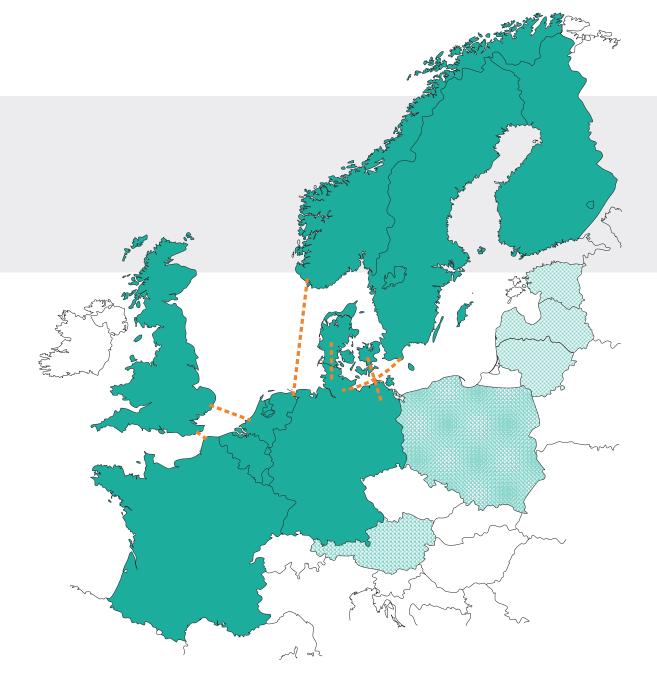
The intraday markets are becoming increasingly important, particularly given the growing share of variable energy sources (wind and solar power) in the energy mix, because they allow suppliers to adjust their actual generation according to their customers' consumption in near-real time (see "Integration of renewable energies", p.71). The intraday market in Belgium is operated by Belpex. In 2013, it maintained its strong growth; trading volume was up 25.3% to 643 GWh, compared with 513.3 GWh in 2012. In total, 17,415 contracts were concluded, compared with 9,915 in 2012.

The record of 88,180 MWh reached on 30 October 2012 was not beaten.

## CWE Flow Based Market Coupling

This (day-ahead/intraday) market coupling model aims to increase price convergence in Central West Europe while ensuring the same level of security of supply, optimising the way in which transmission system capacity is allocated to the market. It seeks to maximise price harmonisation in the CWE region when the capacity of these networks so permits (see Projects, p.25), using a more complex and detailed model for describing the network.

The results of simulations carried out in 2013 (Parallel Run) confirm the increase in economic prosperity and price convergence in the CWE region with respect to the market results observed with the current market coupling method (ATC). The methodology has been submitted to the regulators for approval. Commitments to the market players were made on the basis of the conclusions of the public consultation. The schedule calls for roll-out after the summer of 2014.



## Partners:

- 13 transmission system operators
- 4 power exchanges

This full coupling performs just a single allocation calculation for the entire NWE region with the United Kingdom and the Nordic region. Accordingly, the market price and the import/export levels per country are calculated using the same algorithm.

## **NWE Day-Ahead Price Coupling**

This project was initiated by the system operators and exchanges in the North West Europe (NWE) region and aims to implement the coupling of market prices in this region. The principle is as follows: on the basis of offers received via the market and available cross-border capacity, a price can be established using the same algorithm.

The market players were informed during two forums organised in 2013.

The NWE Day-Ahead Market Coupling project was launched on 4 February 2014 and involves 75% (more than 2000 TWh) of European electricity consumption.





This full coupling performs just a single allocation calculation for the entire NWE region with the United Kingdom. Accordingly, a single price will be calculated using the same calculation method.

## Involvement in innovative projects to respond to energy challenges

The transmission of energy - from the place where it is generated to the place where it will be consumed - is one of our absolute priorities, especially in view of the growing number of sources of renewable energy connected directly to our networks or to the distribution network. New modes of grid planning, maintenance and operation - both onshore and offshore - will have to be developed.

#### E-HIGHWAY2050

Elia and 50Hertz are taking part in this project, the aim of which is to develop planning methods and tools for the future European Highway System (EHS). Elia is also leading the way in developing a governance model for the EHS, covering the regulatory, governmental and financial aspects, as well as issues linked to permits and financing.

#### **BEST PATHS**

Comprising five demonstration projects, Best Paths aims to demonstrate the benefits of new technologies (direct current and alternating current) using innovative approaches to integration. 50Hertz runs the iRock.eu (innovative repowering of corridors) demonstration focusing on the installation and use of technologies to improve the efficiency of overhead alternating current lines. In connection with this demonstration, Elia is responsible for one of the pilot projects and contributes actively to the exploration of HVDC VSC interoperable multi-terminal control systems.





## CHALLENGE 3

## Integration of renewable energies

The variable nature of renewable energy (generation varies from one day to the next depending on the presence of wind, sun, etc.) requires greater flexibility in the management of the electricity system as well as a new way of managing the grid and preparing for fluctuations in injections typical of this type of generation (see "Security of supply", p.62). Since such generation takes priority, it is essential to transmit this electricity to where it is needed and to do so when it is needed (see "Construction of the single market", p.67).

In addition, to ensure that this energy can circulate from north to south and from east to west, it is imperative to develop the grid so that it is capable of obtaining this new energy where it is generated and transmitting it to consumption centres (see Projects, p.25). All of the stakeholders concerned by this challenge must be involved and informed regarding the objectives and resources that need to be deployed to ensure the success of the energy transition (see "Licence to operate", p.77).

## Support for renewable energy

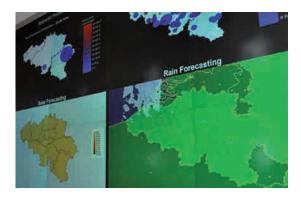
### INTEGRATION OF RENEWABLE GENERATION

The share of renewable energy - primarily from wind and solar - is constantly rising in Belgium, reaching 1500 MW and 2500 MW respectively in 2013. These two sources are both variable

and directly related to weather conditions. The amount of energy injected into the grid depends on light or wind levels. The difference with respect to consumption needs must be provided by other sources of energy or by imports. This also means that at certain times the level of output from conventional units must be reduced or that a proportion of output must be exported abroad via interconnectors (see Projects, p.25).

Elia made available to the market players efficient forecasting tools to evaluate wind and solar power output. If generation outstrips demand, this surplus can be traded on the intraday market. If the difference between forecasts and reality is too large or if the market players fail to forecast adequately, that can have an impact - in real time - on the balance between available generation and consumption. But the balance between the two has to be constant

(at the risk of seeing the frequency of 50 Hz fluctuate until the grid collapses), which is why Elia has reserve capacity. If generation is insufficient, Elia calls on contracted reserves or backup contracts with neighbouring TSOs. If there is too much generation, it must be possible to reduce it or export it abroad. Such generation cannot always be reduced because the generation of renewable energy takes priority on the grid and nuclear generation is not flexible. This means that in a period of low consumption, we do not have sufficient flexible generation, a situation known as 'incompressibility'.





Elia developed a Renewable Dispatching Centre (wind, solar, biomass) with specific tools and indicators that help operational managers operate the grid



Stephan Singer DIRECTOR GLOBAL ENERGY POLICY AT WWF

WWF appreciates the good and constructive work jointly undertaken with ELIA and 50Hertz in the context of our common Renewables Grid Initiative (RGI). WWF is campaigning for 100% clean, affordable and reliable renewable energy by 2050 worldwide and though we fully understand that not all of our partners fully share this ambitious long-term objective, we deeply enjoy our present common activities to pave the way for a decarbonised electricity system in Europe. We share the need to advocate for and implement a sustainable grid system for most economic and efficient supply of power to all consumers by an increasing amount of more remote, more variable electricity from renewables, mainly solar and wind. WWF is happy that we all can learn from each other and jointly develop pathways that allow timely grid enhancement and development in line with nature conservation and increased renewable energy supply objectives.

## THE NEW RENEWABLE DISPATCHING CENTRE

Given the development of renewable generation, Elia developed a Renewable Dispatching Centre (wind, solar, biomass) with specific tools and indicators that help operational managers operate the grid. Located next to the National Control Centre (NCC), it has screens where personnel can track problems on the grid, such as incompressibility, shortages, weather situations (e.g. a storm), etc. In effect, the integration of renewables influences all players and various operational processes, methodologies, market mechanisms, etc. must be adapted so it can be done quickly and correctly.

## **ENTSO-E** introduces surveillance system

To improve surveillance and international coordination in the event of gaps or major fluctuations on the grid, ENTSO-E introduced the Early Awareness System to system operators. This tool gives the NCC snapshots of frequency, system imbalance and system status for all system operators. Using this overview, Elia can - in the event of an incident on the European grid - take part in and deploy the appropriate measures.

#### The voltage issue

Elia is increasingly facing problems with high voltage, which, during low-load periods such as the weekend, sometimes approaches the operating limits. This issue is shared by other European TSOs that noted a change in the voltage dynamics. It is attributable to changes in grid infrastructure and the advent of special generating resources as well as the evolution of consumption equipment towards electronics (e.g. from conventional lamp to LED lamp; from conventional engine to variable control engine).

The trend towards underground cables in the grid and the growing proportion of injections of renewable energy into the grid bolster the need to be able to con-





trol voltage, but reduce the management resources available. The deployment of specific compensation on the grid (both rotary and static) as well as the involvement of sources of renewable generation specific to voltage regulation can serve as corrective measures. Programmes and studies were launched

## Integration of offshore wind farms

For current offshore wind farms in the North Sea and those under construction, Elia is helping to finance subsea connection cables to the tune of €25 million per connection, applying special measures to deal with the generation fluctuations. In accordance with the relevant legislation, Elia purchases the green certificates awarded in proportion to the power generated by those units . This obligation is covered by a levy applied above the transmission tariff.

#### **Green certificates**

Federal and regional legislators have developed market mechanisms aimed at encouraging investment in facilities for generating electricity from renewable sources. These include the 'green certificates' awarded to generators by the regulators in proportion to electricity generated. Suppliers produce volumes of certificates annually in proportion to their sales, with the proportion set by law (quota).

As the operator of the transmission system or the operator of the local transmission system, Elia complies with these public service obligations and is therefore required to buy green certificates or cogeneration certificates granted by various Belgian regulators from those green electricity generators who so request. Elia returns these certificates to the market by holding auctions. The balance between the price at which Elia purchases the certificates and the price at which they are sold at auction is passed on to consumers via transmission tariffs.

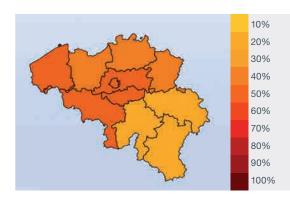
#### IN WALLONIA

Under the mechanism supporting renewable energy in Wallonia, the Walloon parliament obliged Elia to buy back - at a regulated price - certificates offered by green generators who wish to do so. Under Walloon regulations, the certificates bought by Elia cannot subsequently be put back on the market. The huge increase in the number of green certificates has led to market saturation, and thus an exponential increase in the sale to Elia at the minimum guaranteed price. This situation should have led to an increase in the levy charged in Wallonia. Pursuant to various factors, including the Walloon Parliament's adoption of regulatory provisions enabling a reserve mechanism - which should still be confirmed by the adoption of a permanent decree in early 2014 - Elia proposed to CREG, which agreed, to suspend the increase pending the actual deployment of a reserve. If that is impossible, Elia will resubmit an application to increase the levy.

#### Grid losses influenced by the integration of renewable energy

The transmission of electrical energy generates losses due to the heating of conductor materials when a current passes through them. 'Joule' losses, as they are technically known, are proportional to the square of the current. In other words, the bigger the current the greater the loss.

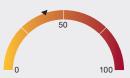
The massive advent of decentralised renewable generation increases the volatility of flows. When the energy generated is consumed locally, the transmission system is unloaded and 'transmission' losses decrease. On the other hand, if the energy generated locally is not consumed locally, it must be transmitted to consumption areas, which can lead to additional, not insignificant losses. In addition, if local loads are fully supplied via local generation, the transmission system may be underloaded and under the influence of the Ferranti effect<sup>2</sup>. We then see a voltage increase that is hard to control.



Monitored capacity	2211MWp
Forecast	825 MW
Upscaled measurement	845 MW
Name	Antwerp
Monitored capacity	439,56 MWp
Forecast	154,52 MW
Upscaled measurement	136,59 MW
RT Loadfactor	31,07%

Belgium

11:45 -12:00



Belgium FC load factor: 37%

Elia publishes real-time forecasts and estimates for solar generation from photovoltaic installations.

A new factor also influencing losses is the high price of gas compared to the price of electricity. Indeed, the CCGT power stations spread across the territory are gradually closing down or operating less and less. They are offset by imports. Since electricity must be transmitted over longer distances, this generates new losses.

The management of 'grid' losses is an ongoing action item for the system operator and must be part of the general management of other operating constraints: operational security, international flows, electricity markets, voltage management, dynamic stability.

Today, 2.6% of the electricity supply comes from wind power. By 2050, the share of wind power should rise to 15% or even 18%. This is what the International Energy Agency (IEA) forecasts in its report entitled Technology Roadmap – Wind Energy. In 2009, the forecasts were still just 12%.



# IN SEPTEMBER, THE CWAPE INITIATED A NEW FORUM CALLED REFLEX, BRINGING TOGETHER GENERATORS AND SYSTEM OPERATORS TO DISCUSS ISSUES LINKED TO THE CONNECTION OF DECENTRALISED GENERATING FACILITIES

This forum is pursuing the process of sectoral consultation carried out by the REDI think-tank and seeks to define the framework and methods for compensating decentralised generating units connected to the grid under a flexible access arrangement. Flexible generating units will be required to limit their power level at the request of the system operator, subject to financial compensation. The regulator wants to define methods for deploying such compensation, as set out in the draft version of the new Walloon 'electricity' decree. The compensation will be financed by a levy in the transmission tariff.

In this connection, Elia proposed a post hoc evaluation method for energy

not generated during the flexibility call as well as methods for evaluating the forecast volume of non-generated energy. The work done by the forum should continue in 2014 with a value assigned to any such non-generated energy. Other subjects, mainly regarding distribution system operators, will also be tackled.







	2000 (MW)	2006 (MW)	2012 (MW)
<ul><li>wind</li></ul>	5.892	20.472	31.290
photovoltaics	62	2.405	31.451
<ul><li>biomass</li></ul>	510	3.010	6.465

Integration of renewable energies in Germany.

Losses trended upward in 2013. For the entire year, electrical energy transformed into heat and thus 'lost' during transmission on the Elia grid was approximately 1.46 TWh, accounting for 1.8% of national consumption.

## Integration of renewable generation in Germany

The share of renewable energy - primarily wind and solar - is constantly rising in Germany, with the 50Hertz region having the densest wind energy output in the world. In late 2013, wind farm capacity accounted for around 41% of German facilities, or 13,360 MW.

For photovoltaic, generating capacity was 7,435 MW. These two sources are both variable and directly related to weather conditions. The maximum injection of wind energy set a new record at 11,064 MW on 6 December.

The maximum injection of solar energy was 5,346 MW on 5 June 2013. Renewable energies increasingly cover the entire load in the 50Hertz region, which poses a real challenge in terms of the reliability of forecasts and the speed with which wind or solar electricity generation can vary.

#### 2 The Ferranti effect:

In an alternating current grid, certain components such as motors exhibit a self-inductive behaviour, causing voltage to drop. Other components exhibit capacitive behaviour, causing voltage to rise.

Accordingly, high-voltage lines can exhibit two behaviours:
- capacitive when they are disconnected or under very low load, thus causing voltage to rise;

- self-inductive, especially under heavy loads.
- 3 Estimation of the total installed capacity in Belgium in February 2013.

#### ELIA PUBLISHES REAL-TIME FORECASTS AND ESTIMATES FOR SOLAR GENERATION FROM PHOTOVOLTAIC INSTALLATIONS

The capacity of photovoltaic (PV) solar energy installed in Belgium is currently around 2,500 MWc<sup>3</sup>. This has an increasing impact not only on Elia's balance management but also on the operation of the market and changes in prices. Accordingly, Elia provides market players with forecasts and measurements of actual solar energy generation

from PV installations in Belgium. Market players can therefore better estimate the electricity load or consumption and corresponding prices in the short and medium term (for the same day or up to three days in advance). Meticulous monitoring of aggregated estimates in real time will also enable them to maintain balance in their portfolio in real time. This tool supports the efforts expected of market players in terms of intermittent generation forecasts, investments in flexibility and proactivity on the markets.

In February 2012, Elia made available to market players forecasts for actual wind and solar power output.

www.elia.be, in Grid Data > Power generation





50Hertz offshore search and rescue helicopter ready for expanded use around the Baltic Sea

#### Prediction of the development of renewable energies in the medium term and forecast for a renewable energy levy for 2015

The publication on injections from units generating renewable energy in accordance with the law on renewable energy sources (EEG) predicts the ongoing growth of renewable energies in the next five years. In addition, the four German TSOs - 50Hertz, Amprion, TenneT and TransnetBW - published a prediction concerning the levy to be paid in order to fund financial aid for renewable energies in 2015. It should be between 5.85 and 6.86 ct/kWh.

#### Involvement in innovative projects which in the future will make it possible to respond to energy challenges

Decentralised energy sources can provide the system with ancillary services.

ECOGRID.eu: ELIA is involved in this project, which consists of demonstrating a new concept in real-time balancing as well as the efficient operation of a distribution system with a high level of penetration by renewable sources.

Elia also conducts research on the implementation of market concepts on a large scale throughout continental Europe. In Belgium, Elia is involved in the GREDOR project, which covers the economic and technical aspects of redefining long-term operational processes in real time for the transmission system operator (TSO) and interaction between market players and the TSO.



#### **50HERTZ AND TENNET TSO STEPPED UP THEIR COOPERATION WITH OPER-**ATORS OF OFFSHORE WIND FARMS

The two TSOs and the operators of offshore wind farms want to pave the way for the efficient development of offshore wind power in the North Sea and Baltic Sea by developing a common approach designed to reduce the risks of poorly coordinated development. Offshore wind power is an important

factor in the energy transition and requires optimal synchronisation of all

partners in order to reduce the risk of stranded costs.

#### **50HERTZ OFFSHORE SEARCH** AND RESCUE HELICOPTER **READY FOR EXPANDED USE** AROUND THE BALTIC SEA

The DRF, the German airborne search and rescue unit, and 50Hertz maintain a specially equipped search and rescue helicopter on alert for use at sea. The helicopter is based at Guttin on the island of Rügen and enhances the

search and rescue system for individuals active in the development of offshore wind power. An emergency team is on standby round the clock for offshore operations.



## LICENCE TO OPERATE

## The meeting point between collective and individual needs

The Elia Group plays an essential role in the well-being of the community and in the economic success of companies and the success of their business activities. As such, Elia must set an example as a socially responsible company in the performance of its activities.

The Elia Group must operate, maintain and modernise its infrastructure. Its responsibility is reflected, inter alia, in the efforts made to have its projects accepted by the entire community and, more specifically, by the local residents directly concerned. Obtaining a real consensus is becoming a crucial condition for the continuity of its mission. This also involves improving the environment directly around its infrastructure via corrective actions.

#### A new participatory mode for explaining the reasons and need for having an electricity infrastructure

Relations with citizens are characterised by a profound paradox. On the one hand, the importance of energy sources that are respectful of the environment enjoys a broad social consensus. The citizen is aware that it is necessary to take measures and make investments to exploit new forms of energy. But on the other hand, the same citizen is not always prepared to assume the full

Elia and 50Hertz are working proactively on upgrading existing infrastructure and creating new connections when necessary. Each project deadline depends on the specific nature of the project in question. To this is added the complexity and length of the procedures for obtaining permits.

The transmission system is a key component in the energy transition and infrastructure projects have the following objectives:

- improving security of supply;
- reducing the risk of imbalance between available generation and consumption needs;
- enabling the transmission of renewable energy;
- increasing import and export capacity;
- opening up the electricity market to more competition, with a positive impact on electricity prices and thus benefiting companies and the community (see Projects, p.25).





Appointed as a pioneer within the community of system operators, 50Hertz was invited to chair the Management Committee for the project entitled 'European strategy to promote public acceptance of the development of system infrastructure'.

weight of these new investments needed for infrastructure, especially if they are planned in the immediate vicinity of his/ her home.

This is known as the NIMBY (Not In My Back Yard<sup>4</sup>) syndrome, which refers to residents' opposition to essential investments. This creates tension between the legitimate right of citizens to take part as individuals and the need to incur fresh investments on behalf of the interests of the society of tomorrow.

Elia and 50Hertz wish to improve the perception of projects in order to ensure smooth deployment. The sharing of experience between the two system operators is a plus for all stakeholders and helps to ensure the best possible energy transition at local level.

#### In Germany

Politicians and NGOs (non-governmental organisations) are discussing the principles overseeing a new model of involvement in order to modernise procedures and improve social democracy. Citizens are grouping together and actively taking part in the debate.

There are many complex issues pertaining to grid planning, project planning and technical solutions. Such issues circulate less easily. While a great deal of sometimes contradictory information circulates. All of this requires opening up the dialogue to enable in-depth discussions as well as mediation and even conflict-resolution procedures. 50Hertz has therefore developed a systematic and strategic approach to be applied to every grid project with a view to achieving better collaboration and dialogue between the relevant stakeholders and to improve the distribution and transparency of information to the greatest number of people.

#### THE TOOLS AND RESOURCES USED

- Discussion meetings
- Meeting with delegations, among others at the 50Hertz Transmission Control Centre (TCC)
- Visit to a tunnel housing the underground high-voltage cable in Berlin
- Visit to the Gridlab training and simulation centre, presentation on the current and future state of the grid and on the impact of renewable energies using a simulation of various grid situations
- Newsletters are sent out regularly to keep interested parties informed
- Telephone line
- Articles in the local press
- A website providing access:
  - To a project space
  - To real load flows
  - To an online interactive game





Federal Minister of Economics Philipp Rösler visits the 380-kV Berlin cable, a genuine backbone for the security of electricity supply for the German capital

Thanks to this strategy and the deployment of communication efforts, substantial progress was made in the public perception of various line projects in the past year. Accordingly, the public was well informed of the details of the 'Thuringian Bridge' interconnector project and the number of objections during the consultation phase for the third section of the line dropped by 85% compared to objections received in 2012 on the second section. The authorisation process for the first section of the Berlin 380 kV North Ring was completed successfully. 50Hertz established a constructive dialogue with the local citizens' group for this project. With respect to the 'Lauchstädt-Meitingen' project, 50Hertz launched very early on a series of information-provision and dialogue-promoting activities with the stakeholders and the feedback received following this proactive, constructive and transparent approach was positive.

50Hertz is acknowledged as a key partner in achieving a political consensus and better citizen involvement in infrastructure projects, well beyond its control area.

For instance, we can mention the collaboration in establishing Plan N 2.0 of the Forum for the Integration of Renewable Energies of the German Environmental Aid Association (DUH), the agreement on information and involvement between the federal state of Brandenburg and 50Hertz, attendance at seminars organised by NGO Germanwatch on the correct implementation

of the Grid Expansion Acceleration Act (NABEG), the dialogue with the VDI (Association of German Engineers) on its new Directive 7000 on the early involvement of the public in infrastructure projects, and the development of a joint position with the three national associations of German local authorities.

#### In Belgium

There has always been a desire to engage in dialogue with local residents concerned by projects. Meetings with the various stakeholders are organised to explain the project, both to deal with the stages inherent in the legal process, and to reach out to local residents who want information.

#### MULTIPLE TOOLS ARE PROVIDED

- Information meetings
- A 'Projects' area on the website for major infrastructure projects: www. elia.be/en/projects
- · Brochure, informative leaflet provided
- Meeting with the local press
- Compensation policy for the use of farmland developed with farming federations.
- Compensation policy when building a new line for building or built plotsover which the new line runs.

To go a bit further and address the expectations and concerns of stakeholders, a project called 'SANDI' (Stimulating Acceptance for New Development Infrastructure) was launched. It aims to organise the approach that should lead

to a consensus on a project, whether it involves upgrading an existing line or a new infrastructure project. The aim is to formalise a methodology and improve coordination between internal resources in order to achieve a better acceptance rate for projects. Communication about the project also plays a key role.

The SANDI project has the following objectives:

- Increasing sensitivity awareness when obtaining permits at all project stages within Elia
- Ensuring better interaction between departments
- Launching a proactive approach to stakeholders
- Increasing collaboration with stakeholders
- Ensuring a consistent approach.

Submitting conclusions and deploying actions are planned for 2014.



Heike Müller
PROJECT MANAGER AT
THE UFU INDEPENDENT
INSTITUTE FOR
ENVIRONMENTAL ISSUES

The German UNESCO Commission and the national committee for the Decade of Education for Sustainable Development have praised "Turning around energy together". This interactive road show for students is an initiative by 50Hertz that we helped launch. We are very proud of this achievement, not in the least because this commendation reflects our exemplary cooperation to promote sustainable thinking and action in society.

#### **Preventing pollution**

### CARRYING OUT SOIL STUDIES AND DECONTAMINATION

Since Elia was established, soil studies have been conducted at over 200 sites across Flanders, in accordance with Flemish soil legislation. The significant soil pollution observed at some sites had already been noted previously and was the result, not of electricity transmission activities, but rather of earlier or nearby industrial activities (gas plants, blast furnaces, chemicals, etc.). In 2013, €2.2 million was spent on research, follow-up and implementation of decontamination work in Flanders.

Soil legislation was implemented in the Brussels-Capital and Walloon Regions after Elia was established. Elia anticipated said legislation by carrying out soil pollution assessments at all of its sites. Based on these, it ringfenced the future costs of potential decontamination projects. These provisions are updated in accordance with changes in legislation. Accordingly, measures were taken to manage the risks of heavy metal pollution at the Avenue de Vilvorde - Quai Monnoyer sites in Brussels.

In Wallonia, the restoration of the Ville-sur-Haine site started. The project to renovate the Bévercé high-voltage substation includes soil decontamination, as does the excavation of the three cable routes in the Bastogne area. For the southern part of the Marche-les-Dames site, Elia received approval for the soil decontamination project that will start early 2014.

#### ACCIDENTAL SOIL POLLUTION

Elia manages over 12,000 plots of ground, all across Belgium. To prevent waste dumping (fly-tipping) on this land and protect the surrounding environment (soil, ground and surface water, etc.) in the event of accidental pollution, Elia can call on the services of a specialist firm seven days a week to remove all contamination as quickly as possible. Our operational teams also have the appropriate equipment, such as absorption mats, to intervene on site. In 2013, some 19 interventions took place with no major incidents. A loss of oil at the entrance to the Zedelgem substation up to the neighbouring home, the cause of which has not yet been identified, resulted in a fine levied against Elia. The pollution was contained and cleaned up. Elia is taking action against the perpetrators.

#### TRANSFORMER TANKS

Since transformers contain large quantities of mineral oil, new equipment is systematically installed in a watertight tank with an oil-water separator to prevent environmental pollution in the event of a leak. In addition to separators, Elia is installing coalescence filters to guarantee compliance with surface water quality environmental standards in the event of a leak.

In Flanders, in the wake of the Vlarem legislation, all existing transformers must be fitted with a tank if they are upgraded, modified, replaced or moved. In Wallonia, all existing transformers will have to be fitted with a tank and an oil-water separator by 2015. An investment programme was established in 2004 for 540 voltage transformers and 800 backup or earthing transformers. The programme was updated in 2011 and includes an additional investment budget of €8,000,000 over five years. In 2013, 68 transformers were fitted with tanks, representing an investment of €1 million.





#### **ELIMINATION OF PCBS**

Since the end of 2005, in accordance with the relevant legislation, none of Elia's equipment has contained more than 500 ppm of PCB (polychlorobiphenyl). Elia has undertaken to decontaminate transformers with concentrations below 500 ppm which are still in operation, or to replace those transformers before the end of their service life. The funds needed to complete this project have been earmarked. In 2013, 9 transformers were decontaminated by an accredited firm, representing 123 tonnes of mineral oil.

#### NOISE

Transformers at high-voltage substations generate low-frequency noise, the level of which must comply with values defined by regional legislation, according to the area's designated land use as stipulated in the land-use plans. Whenever changes or extensions are made to its facilities, Elia uses simulations to ensure that the prevailing values are not exceeded and makes any appropriate adjustments.

Noise screens were installed at the Herfelingen substation (in Herne) and a project is under way for the complete renovation of installations. Noise screens were also installed at the Hoeilaart substation to reduce noise in the vicinity of a residential area. The area around the Hamme substation, currently an industrial estate, is to become a residential area. Elia is looking into what this means in terms of noise.

Elia follows up on all noise-related complaints from local residents. Such complaints may relate to noise generated at high-voltage substations or by electrical conductors of overhead lines, mainly when there is fog or drizzle. In 2013, ten complaints were made about noise generated by substations. In three cases, the cause was inherent to the projects in progress and will disappear once the projects are completed. In two cases, Elia was found to be in compliance with relevant rules. At Lint and Merelbeke, an additional study is necessary in order to go further towards finding a solution. At Blankenberge, the relevant measures were taken. Two complaints are still under study.

#### Environmental protection, biodiversity and restoration of natural habitats

#### SF

SF<sub>6</sub> gas has been used in electrical equipment for over 30 years as an electrical insulator in high- and very high-voltage devices. Gas Insulated Switchgear (GIS) is used in densely populated areas because it is more compact than traditional switchgear which uses air as an insulator. In the case of medium-voltage facilities, Elia uses mainly vacuum-circuit breaking chambers as an alternative to SF<sub>6</sub>. This alternative is not available for high- and very-high voltage devices.

Elia has drawn up investment and maintenance policies to limit the risk of SF<sub>6</sub> loss. To this end, manufacturers must guarantee a very stringent maximum percentage of SF<sub>e</sub> loss throughout the lifetime of the facilities. The maintenance policy keeps operations involving compartments containing SF, gas to an absolute minimum. The volume of SF<sub>e</sub> gas installed in the Elia grid (from 36 kV up to and including 380 kV) is 58.8 tonnes. Consumption of SF, gas (as a replacement and as a top-up in the event of a leak) is tracked closely using a system that monitors each bottle of SF<sub>6</sub>. The SF<sub>6</sub> leak percentage for all Elia facilities was 0.9% in 2013. This is one of the best results recorded for European TSOs.

Maintenance of facilities containing  ${\rm SF_6}$  gas is carried out by certified teams in accordance with EU Regulation No. 305/2008. The first Elia employees were certified in 2010 on the basis of the Flemish Decree of 4 September 2009 on the certification of technicians tasked with recovering fluorinated greenhouse gases from high-voltage facilities. For this certification, Elia provides Synergrid (test centre) with access to its experts and the appropriate equipment to perform practical tests.





#### REDUCING HERBICIDE USE

Elia owns 650 high-voltage substations located throughout Belgium. To prevent electrical arcing, vegetation is not allowed to grow beneath the technical facilities. In such places, the ground is mostly covered with gravel, which is difficult to maintain other than by using herbicides. Two measures have been taken to limit herbicide use: a ban on the use of herbicides in non-gravelled parts of substations (planted areas, areas of bare ground, etc.), and a largescale trial to assess 10 or so methods for maintaining gravelled areas at five substations without using herbicides. This trial has been under way for a year now. The various types of development (implantation of grassland, cover vegetation, semi-permeable ecological ground cover, etc.) were deployed and the various types of maintenance (mechanical using a harrow, ecological herbicide, etc.) began. The trial will be conducted over a three-year period with the aim of finding a long-term maintenance solution for all Elia substations involving minimal use of herbicides.

Elia has also banned the use of herbicides by its subcontractors in all areas outside substations, such as around pylon bases.

## IMPACT OF OVERHEAD LINES ON BIRDS

At Elia's request, Natagora and AVES, in collaboration with INBO, Vogel-bescherming Vlaanderen and Natu-urpunt, carried out a study into the distribution of hundreds of bird species (some of them rare) across Belgium. This, combined with the map of Elia's overhead line network, was used to work out the collision and electrocution risks faced by birds in the areas where they live.

The study also compares the methods used to make overhead lines more visible to birds.

A policy on installing bird guards on the most at-risk lines and on new projects is currently being finalised. A new contract with AVES and INBO for 2013 and 2014 will make it possible to identify the most at-risk lines in the field and to accurately select the spans to be fitted with bird guards.

Meanwhile, work continued in 2013 to monitor the numbers of birds born in the falcon nesting boxes on Elia pylons. 51 kestrels and 3 peregrine falcons were ringed in 2013 in Flanders and 64 baby kestrels were ringed in Wallonia.

## PLANTING OF TREES AND HEDGES AROUND OUR FACILITIES

Elia has been planting native species of hedges around its high-voltage substations since 2008. In 2013, indigenous hedges were planted around an additional five substations. A former vacant plot of land treated with herbicide near the Pepinster substation was redeveloped into grassland and shrubland. The new contract, which took effect in 2013, stipulates late mowing of all grassy areas. From now on, these areas will be mown twice a year and the cuttings used to promote the creation of natural flower meadows.

#### DEVELOPMENT OF CORRIDORS UNDER HIGH-VOLTAGE LINES

#### - LIFE+ELIA PROJECT

The LIFE+Elia project, launched in September 2011, is subsidised by the European Commission and the Walloon Region and is being run in collaboration with RTE (France). It aims to create ecological corridors beneath high-voltage lines in forested areas.

In the autumn of 2013, large corridors were developed, including the 12-km corridor underneath the Tenneville-Nassogne line. Efforts to develop 160 km of lines will continue over the next two years.





There are plans to install a second 3-phase transmission line on an existing high-voltage line in western Limburg which runs across and alongside several protected areas. In this connection, Elia produced a forest development plan to enhance the ecological value of the corridor beneath the line, in the same spirit as the LIFE project. Sheep will be placed underneath the lines to maintain the vegetation and keep it herbaceous. www.life-elia.eu/

#### **ELECTRIC AND MAGNETIC FIELDS**

The magnetic field produced by the electricity system has a very low frequency (50 Hz), much lower than that used by mobile phones and microwaves for example, and its intensity declines rapidly the further you move from the source. There are concerns amongst the public about the potential impact of magnetic fields on human health. International scientific studies carried out over the past four decades have not established a correlation between 50 Hz magnetic fields and health problems. Concerned about its responsibility for its employees and society, Elia has been actively contributing to the advancement of scientific knowledge on this subject. In 2013, it renewed its cooperation agreement for four years, including full guarantees of scientific independence, with various research centres and universities forming part of the Belgian BioElectroMagnetic Group (BBEMG).

The BBEMG studies the effects of electric and magnetic fields generated by the transmission and use of electrical energy at work and in our day-to-day lives. In addition, Elia has access to the results of high-level international research in the field through the Electric Power Research Institute in the United States.

Elia also measures magnetic fields on site at the request of local residents.

It received around 250 questions and requests in 2013, resulting in some 200 field measurements.

In the absence of specific Belgian legislation in this area, Elia applies the European recommendations issued by the International Commission on Non-Ionising Radiation Protection (IC-NIRP) and the Council of the European Union. When planning new investments, magnetic fields are simulated during the study phase. The area in which the magnetic field of overhead lines has an effect can be reduced through new technologies such as compact pylon arms. Furthermore, Elia avoids inhabited areas as much as possible when building new facilities.

## 160 km

Efforts to develop lines as part of the LIFE project will continue in 2014 and 2015



The German UNESCO
Commission praised the
interactive road show
"Turning around energy
together" developed by
50Hertz in the framework of
the UN Decade of Education
for Sustainable Development.



#### **In Germany**

50Hertz set itself the objective of permanently reducing by 0.6% per year greenhouse gas emissions produced by the operational, maintenance and repair of its grid.

50Hertz is working in close collaboration with environmental and forestry departments across Germany to identify those corridors having a minimum impact on the countryside and located as far away as possible from densely populated areas. Several hundred environmental protection measures have been developed on-site with regional partners to offset the residual impact of new lines. Whenever possible, lines are combined with existing infrastructure.

As part of these responsible conduct and self-monitoring measures, 50Hertz decided to support the German industry's voluntary commitment to reduce emissions of sulphur hexafluoride (SF<sub>c</sub>).

## GECOLOGICAL MANAGEMENT OF OVERHEAD LINES

A study into the ecological management of overhead lines, funded by the European Union and conducted in collaboration with local partners, helped to establish differentiated forest management on a regional scale and better compatibility with the landscape. The aim of the study is to enhance biodiversity in the corridors beneath lines while enabling the safe operation of the relevant installations and promoting social acceptance of overhead lines. A pilot project is currently under way beneath two high-voltage lines in the Thuringia region. Action plans will be developed once the relevant sections of line have been selected and mapped.

#### AN INTERACTIVE SCHOOL EXHIBIT

'Turning around energy together' is the title of an interactive exhibit for children developed by 50Hertz in collaboration with UfU (Independent Institute for Environmental Issues) that visited various schools in Mecklenburg-Vorpommern in 2013. Pupils learned about and discussed the energy transition and its consequences. The interactive exhibit is touring schools in the region served by 50Hertz.

The German Commission for UNESCO welcomed the initiative in connection with the UN Decade of Education for Sustainable Development. The prize is awarded to projects that implement the objective of the UN's global education initiative: teach children and adults to think and act in a spirit of sustainability.

More information: www.bne-portal.de/english

#### **OBJECTIVES**

To improve local public acceptance for grids by applying best practices in participation and transparency

To speed up permitting procedures while proactively addressing or even surpassing environmental protection standards

To support implementation of improved permitting procedures for "projects of common interest"

#### TO BE ACHIEVED THROUGH



#### RGI – Renewables Grid Initiative

Since 2011, Elia and 50Hertz have been members of the Renewable Grid Initiative (RGI), a coalition of nature conservation groups (such as the WWF and Birdlife) and system operators, including Elia and 50Hertz. Their shared aim is to generate consensus around the grid expansion needed to integrate renewables while respecting biodiversity and the environment. The European Commission called the Renewables Grid Initiative a pioneering alliance for promoting grid development that is environmentally and socially friendly. Günther Oettinger, the European energy commissioner, talked about the current development towards objectives and future European energy incentives.

www.renewables-grid.eu

#### BESTGRID

System operators must upgrade and develop their infrastructure in order to integrate renewable energies and achieve the European 2020 objectives. However, the time taken to obtain permits often delays the implementation of development projects. To increase the level of acceptance and facilitate the permitting process, RGI initiated a new approach called Bestgrid, which deploys new collaborative methods between local stakeholders right from the start of the project. Pilot projects

were identified in Belgium, Germany and the United Kingdom. Each TSO works closely with local NGOs to initiate new approaches and working methods.

Elia submitted the project for an underground high-voltage cable (150 kV) between the Braine-l'Alleud and Waterloo substations. This project will enable optimum transmission of energy increasingly generated from decentralised renewable sources (wind farms, photovoltaic installations) and will also

take part in securing the grid to ensure a reliable supply for all. Elia is working with IEW (Inter-Environnement Wallonie) to define the action plan for the relevant stakeholders.

50Hertz submitted the line (40 km) connecting Bertikow and Pasewalk, the purpose of which is to increase transmission capacity in North-East Germany and guarantee security of supply.



The Elia Group aims to meet the challenges of the future by implementing a series of initiatives on system operation, market integration, new business development and the acquisition of new expertise.

## Deployment of management at Group level

Given the in-depth transformation of the energy sector, the organisations of the two branches of the Elia Group were structured late 2013 to encourage a comprehensive dynamic at Group level, the aim being to reinforce their position and to advance collaboration between Elia in Belgium and 50Hertz in Germany. This decision is part of the vision initiated in 2012: to lead the way in the current energy revolution and contribute to the development of diversified, sustainable and reliable power systems, spanning land and sea, with new possibilities. To that end, the Group wants to continue being able to contribute its expertise and playing its key role with regard to the challenges facing the company: facilitating the integration of renewable energy sources, continuing the development of the integrated European electricity market and contributing to the security of electricity supply.

## Deployment of a new initiative between Elia and 50Hertz

In the first half of 2014, Elia System Operator and 50Hertz will jointly set up a new company to bolster the Elia Group's position in its quest to acquire assets and in the development of two businesses: Consulting & Services projects and EPC/EPCM (Engineering, Procurement & Construction) projects.

#### Review of the tariff methodology with a view to the upcoming tariff period in Belgium

Elia's personnel will work on producing the new tariff methodology. Consultation with the federal regulator (CREG) will focus on the production of appropriate tariffs while meeting the company's needs in the exercise of its mission and with a view to the challenges facing it.

The final methodology should be adopted by the end of the year at the latest. The next tariff period will start on 1 January 2016.

## Definition of a policy on corporate social responsibility for the Group

On the basis of an ISO 26000 methodological approach, action priorities in sustainable development involving all of the businesses in which we are involved were established in 2013. The deployment of a Group policy along with an action plan and associated timetable will be a priority in 2014.

## Maintaining grid security: a daily challenge

The energy landscape is undergoing radical change, with increasing energy exchanges at European level and a major expansion of power generated from renewable sources. The variability of renewable energy sources requires greater flexibility of generating facilities and the introduction of tools allowing system operators to perform their role in managing real-time balance between supply and demand. Against this backdrop, the Elia Group is particularly vigilant about performing its mission while complying with the roles and responsibilities of all market players and the authorities.

Major challenges! Maintaining the same reliability of supply in Belgium and Germany while developing its grids in order to give consumers access to a diverse energy mix at the best possible price – these are the challenges faced by the Group.

Infrastructure management is key. In Belgium, Elia aims to fulfill the new mission entrusted to it by the government in connection with security of supply by developing tools and procedures to contract the strategic reserve, the volume of which is determined by the government.

## Integration of the European electricity market

The Group aims to keep up the leading role that it has played hitherto in the creation of a fully-fledged Europe-wide electricity market. Following the successful expansion of the coupling of the day-ahead markets in NWE, Group personnel will continue to actively take part in the deployment of the flow-based mechanism within the Central West Europe regional market, intra-day coupling within NWE and the definition of European grid codes essential for the smooth operation of the single market.

## Access to a diverse and secure energy mix

Giving consumers in Belgium and Germany access to a broad and diverse energy mix contributes to the smooth functioning of a competitive market and therefore to business competitiveness and a better deal for consumers - and also to security of supply. To this end, the Elia Group is hard at work on a raft of major projects: connecting wind farms, both onshore and offshore in the North Sea and Baltic, new interconnectors between Belgium and the UK or Belgium and Germany, increasing commercial capacity at Belgium's borders, developing interconnectors with Poland and strengthening north-south and east-west routes within Germany.

## Continuing grid development: permitting issue

To fulfil its mission and, in particular, connect users to its grids at their request or develop infrastructure, the Elia Group will be making major investments in infrastructure. Timely completion of these investments for the benefit of the community depends on obtaining the necessary construction permits. Establishing a sustainable framework for issuing such permits while respecting the obligations of democratic consultation is a major challenge for the authorities. The Elia Group, both in Belgium and Germany, is actively engaged in this issue within associations of system operators and environmental conservation groups.

#### **Energy Pact call launched**

In November 2013, a call was launched to produce an energy pact involving all players in the energy sector. The objective is to define a long-term vision which can serve as a foundation for the deployment of the energy transition already under way. This pact must take account of the essential consensus to be created between collective needs and the position of the individual. This initiative will be continued in 2014.



# Corporate governance statement

With a view to meeting certain obligations, Elia is transparent, neutral and non-discriminatory towards all stakeholders involved in its activities.

At Elia, Corporate Governance is based on two pillars:

- the 2009 Corporate Governance Code¹ which Elia adopted as its benchmark code;
- the Act of 29 April 1999 on the organisation of the electricity market and the Royal Decree of 3 May 1999 on the management of the electricity transmission system applicable to Elia as a transmission system operator.

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## **Composition of management bodies**

#### **Board of Directors<sup>2</sup>**

#### **CHAIRMAN**

· Luc Van Nevel, independent

#### VICE-CHAIRMEN

- Francis Vermeiren, Publi-T
- Thierry Willemarck, independent

#### **DIRECTORS**

- Jennifer Debatisse, Publi-T
- Clement De Meersman, independent
- Jacques de Smet, independent
- Claude Grégoire, Publi-T
- Philip Heylen, Publi-T
- · Jean-Marie Laurent Josi, independent
- Miriam Maes, independent
- Jane Murphy, independent
- Dominique Offergeld, Publi-T
- Steve Stevaert, Publi-T
- Cécile Flandre, Publi-T, who took over from Leen Van den Neste, Publi-T<sup>3</sup>

#### **HONORARY CHAIRMAN**

Ronnie Belmans<sup>4</sup>

#### **Corporate Governance Committee**

- Thierry Willemarck, Chairman
- Jane Murphy
- Miriam Maes

#### **Audit Committee**

- Clement De Meersman, Chairman
- · Jacques de Smet
- Claude Grégoire

#### **Remuneration Committee**

- Jean-Marie Laurent Josi, Chairman
- Jacques de Smet
- · Francis Vermeiren

#### **Auditors**

- Klynveld Peat Marwick Goerdeler Réviseurs d'Entreprises SCRL, represented by Alexis Palm
- Ernst & Young Réviseurs d'Entreprises SCRL, represented by Marnix Van Dooren

#### Management Committee<sup>5</sup>

- Jacques Vandermeiren, Chairman and Chief Executive Officer
- Jan Gesquière, Vice-Chairman and Chief Financial Officer until 4 September 2013<sup>6</sup>
- Markus Berger, Chief Officer Asset Management
- Roel Goethals, Chief Officer European Activities & Participations until 30 April 2013
- · Hubert Lemmens, Chief Innovation Officer
- Frank Vandenberghe, Chief Officer Energy & System Management
- Catherine Vandenborre, Chief Corporate Officer and, from 4 September 2013, Chief Financial Officer<sup>7</sup>

#### **Secretary-General**

Gregory Pattou



#### **Board of Directors**

The Boards of Directors of Elia System Operator and Elia Asset consist of 14 members, none of whom perform a management role within either of those two companies. The same directors sit on the Boards of both companies. Half of them are independent directors in keeping with the conditions laid down in both Article 526ter of the Belgian Companies Code and the articles of association, and having received a positive opinion from CREG on their independence.

In accordance with provisions stipulated by legislation and the articles of association, these Boards of Directors are supported by three committees – the Corporate Governance Committee, the Audit Committee and the Remuneration Committee – which are the same for Elia System Operator and Elia Asset. The Boards ensure the effective operation of these committees.

- 2 Composition of the Boards of Directors on 31 December 2013.
- 3 On 28 February 2013, the Boards of Directors of Elia System Operator and Elia Asset accepted the voluntary resignation of Leen Van den Neste as a non-independent director. Leen Van den Neste was replaced by Cécile Flandre, who was co-opted as a non-independent director on 28 February 2013 and was appointed permanently by the Ordinary General Meetings of Elia System Operator and Elia Asset on 21 May 2013.
- 4 Ronnie Belmans is Honorary Chairman of the Elia System Operator and Elia Asset Boards of Directors and is no longer a director. This means that he is no longer required to attend Elia System Operator and Elia Asset Board meetings except when invited by the Chairman to attend a meeting and assist with deliberations (in accordance with point 6 of the internal rules of procedure of the Boards of Directors). He was given the title on an honorary basis.
- 5 Composition of the Elia System Operator and Elia Asset Management Committees on 31 December 2013. The composition of and distribution of tasks in the Management Committees have been amended from 1 January 2014. See 'Significant events after the balance sheet date' below.
- 6 On 4 September 2013, the Boards of Directors of Elia System Operator and Elia Asset decided to end the term of office of Jan Gesquière as Chief Financial Officer and Vice-Chairman of the Management Committees of Elia System Operator and Elia Asset.
- 7 On 4 September 2013, the Boards of Directors of Elia System Operator and Elia Asset decided to appoint Catherine Vandenborre as Chief Financial Officer of Elia System Operator and Elia Asset with effect from 4 September 2013, taking over from Jan Gesquière.

#### APPOINTMENT OF DIRECTORSS

The Boards of Elia System Operator and Elia Asset co-opted Cécile Flandre on 28 February 2013 as a non-independent director and replacement for Leen Van den Neste, who resigned with effect from 28 February 2013. Cécile Flandre was appointed permanently by the Ordinary General Meeting of Elia System Operator and Elia Asset on 21 May 2013.

The directorships of the 14 directors will expire at the end of the 2017 Ordinary General Meeting for the financial year ending on 31 December 2016. The six-year term diverges from the term of four years recommended by the Belgian Corporate Governance Code, a fact justified by the technical, financial and legal specificities and complexities associated with the tasks of the transmission system operator, which call for greater experience in those areas.

It should be remembered that the appointment of independent and non-independent members of the Elia System Operator and Elia Asset Boards of Directors and their committees, as well as their roles, are subject to specific corporate governance rules. These procedures are laid down in the Act of 29 April 1999 on the organisation of the electricity market and in the companies' articles of association.

The Act of 29 April 1999 on the organisation of the electricity market gave the Corporate Governance Committee the important task of putting forward candidates for the role of independent director. The directors are appointed based on the candidate list drawn up by the Corporate Governance Committee. For each candidate, the Committee takes into account the upto-date CV and the signed formal declaration concerning the independence criteria as stipulated by legislation applying to Elia and the articles of association.

The General Meeting then appoints the independent directors. These appointments are submitted to CREG for its opinion on the independence of each independent director. A similar procedure applies where an independent directorship becomes vacant during the relevant term of office and where the Board co-opts a candidate put forward by the Corporate Governance Committee.

One of the Corporate Governance Committee's tasks is therefore to act as a nomination committee for independent directors. For the appointment of non-independent directors, no nomination committee has been established to make recommendations to the Board. This arrangement, which diverges from the Corporate Governance Code, is due to the fact that the Board constantly seeks consensus, wherever possible. Moreover, no significant decision can be made without a -majority among the groups of independent directors and non-independent directors respectively.

#### APPOINTMENT OF COMMITTEE MEMBERS

The terms of office of the members of the various committees supporting the Boards of Directors of Elia System Operator and Elia Asset were renewed by the two companies' Boards of Directors on 10 May 2011 for a period of three years. On the same date, the Boards appointed Miriam Maes as a member of the Corporate Governance Committee, to replace Luc Van Nevel.

#### **AUDITORS**

At the Ordinary General Meeting of Elia System Operator and Elia Asset on 10 May 2011, Ernst & Young Réviseurs d'Entreprises and Klynveld Peat Marwick Goerdeler Réviseurs d'Entreprises, represented by Marnix Van Dooren and Alexis Palm respectively, were reappointed as auditors for a period of three years. Their terms of office are due to expire following the 2014 Ordinary General Meeting for the financial year ending on 31 December 2013.

The annual auditors' fees for auditing the simplified and consolidated annual accounts of Elia System Operator and the simplified annual accounts of Elia Asset and Elia Engineering were set at €150,000 (€90,000 for Elia System Operator, €50,000 for Elia Asset and €10,000 for Elia Engineering), to be indexed annually based on the cost-of-living index.

#### BOARD OF DIRECTORS' ACTIVITY REPORT

The Board of Directors exercises at least the following powers (the list is not exhaustive):

- It defines the company's general policy, values and strategy.
   In transposing those values and strategy into primary guidelines, the Board of Directors takes into account corporate social responsibility and diversity, both in terms of gender and generally;
- It exercises the powers bestowed on it by or under the Belgian Companies Code and by the Act of 29 April 1999 on the organisation of the electricity market, with the exception of powers attributed or delegated to the Management Committee;
- It takes any action deemed useful or necessary to achieve the object of the company, with the exception of powers reserved for the General Meeting by law or the articles of association and actions falling within the scope of the powers attributed or delegated exclusively to the Management Committee;
- It exercises the powers bestowed on it by the articles of association:
- It exercises general control, for example over the Management Committee in accordance with statutory restrictions regarding access to commercial data and other confidential information relating to grid users and its processing. It also monitors and evaluates the effectiveness of the committees supporting the Board.

The Boards of Directors of Elia System Operator and Elia Asset met on seven occasions in 2013.

The following members were absent at one or more Board meetings in 2013: Jennifer Debatisse (29 August), Philip Heylen (28 November), Dominique Offergeld (21 March and 27 June) and Leen Van den Neste (28 February).

Members who are unable to attend usually have a representative. Under Article 19.4 of the Elia System Operator articles of association and Article 18.4 of the Elia Asset articles of association, members who are absent or prevented from attending may give their prior written permission authorising another member of the Board to represent them at a given meeting and vote on their behalf at that meeting. However, no member can represent more than two directors.

## Significant events in 2013

## Changes to the articles of association following CREG's decision concerning the certification of Elia System Operator as Transmission System Operator for Electricity

The certification of Elia System Operator as a fully unbundled transmission system operator for electricity, granted by CREG on 6 December 2012, was conditional upon some changes to the articles of association. These amendments to Elia System Operator's articles of association were approved by the Extraordinary General Meeting of 21 May 2013. The amendments in question are as follows:

- amendment of the Dutch version of Article 3.3 of the articles of association:
- insertion of a new Article 4.4 into the articles of association and consequent renumbering of Articles 4.4, 4.5 and 4.6 of the articles of association:
- amendment of Article 4.6 of the articles of association, renumbered as Article 4.7;
- amendment of Article 10 of the articles of association;
- amendment of Article 13.1 of the articles of association;
- amendment of Article 13.5.1 of the articles of association;
- amendment of Article 14.1 of the articles of association;
- amendment of Article 37 of the articles of association.

## Changes to the articles of association following implementation of the capital increase reserved for staff members

On 25 October 2012, the Extraordinary General Meeting of Elia System Operator approved the proposed capital increase reserved for members of staff of the company and its Belgian subsidiaries.

This capital increase took place in two stages, primarily in November 2012 and January 2013, for a total of €6 million (maximum of €5,300,000 in 2012 and maximum of €700,000 in 2013). It involved the issue of new VVPR Class B shares, with cancellation of the preferential subscription right of existing shareholders in favour of staff members of the company and its Belgian subsidiaries, if necessary below the accounting par value of the existing shares in the same class.

The Extraordinary General Meeting decided to set the issue price at a price equal to the average of the closing prices on the 30 calendar days preceding 25 October 2012 for the 2012 capital increase and preceding 30 January 2013 for the 2013 capital increase, less 16.66%.

The total value of the 2013 capital increase was €353,597.40. A total of 12,420 Class B shares in Elia System Operator were issued.

Accordingly, Articles 4.1 and 4.2 of the articles of association of Elia System Operator relating to the share capital and the number of shares were amended on 20 March 2013.

The latest version of Elia System Operator's articles of association is available in full on the company's website (www.elia.be, under 'Elia', 'Corporate Governance').

#### Elia launches a euro medium term note programme and completes a €750 million bond offering

#### Elia System Operator has launched a Euro Medium Term Note (EMTN) programme worth a total of €3 billion

As part of its €3 billion EMTN programme, Elia announced on 26 March 2013 that it had successfully issued a dual-tranche Eurobond consisting of a €550m 15-year tranche and a €200m 20-year tranche. The issue launch followed a roadshow introducing Elia's industrial and regulatory strengths on leading European financial markets. Investors reacted very positively during both the roadshow and the building of the order book, offering up more than €2.95 billion. The operation attracted over 210 investors from 21 countries. The proceeds from the bond issue will be used to refinance existing loans and for general corporate purposes.

With this bond offering Elia confirms its financial strategy for the management of its debt through a mix of short-term, medium-term and long-term debt. It will also allow Elia to develop its business activities and pursue its contribution towards the further opening of the Belgian and European electricity markets and the integration of energy generated from renewable sources.

#### **Belfius Insurance increases stake in Elia**

On 5 February 2013, Belfius Insurance announced that it had purchased 1,400,000 Elia System Operator shares (2.31% of the total number of shares) on Euronext Brussels. On 30 January 2013, Belfius Insurance, which already had a stake in Elia System Operator, held 3,276,497 shares in Elia System Operator, i.e. 5.41% of the total.

## Cécile flandre, CFO of Belfius Insurance, joins elia board of directors

On 28 February 2013, the Board of Directors of Elia System Operator and Elia Asset co-opted Cécile Flandre as a director of Elia System Operator and Elia Asset on the proposal of core shareholder Publi-T, taking over from Leen Van den Neste. Cécile Flandre is Chief Financial Officer of Belfius Insurance. She was appointed permanently by the Ordinary General Meeting of Elia System Operator and Elia Asset on 21 May 2013.

## CREG approves adjusted transmission tariffs for 2012-2015

Pursuant to appeals lodged by various electricity generators, the Brussels Court of Appeal annulled – in its judgment handed down on 6 February 2013 – CREG's decision approving the transmission tariffs for 2012-2015. The CREG decision dated back to 21 December 2011.

Following this annulment, Elia submitted an adjusted tariff proposal based on the adapted tariff method for setting transmission tariffs. This method, published by CREG after consulting market players, takes account of legislative changes (specifically the publication of the new Electricity Act of 8 January 2012, transposing the EU's Third Energy Package) and the judgment handed down by the Brussels Court of Appeal on 6 February 2013. Elia's adjusted tariff proposal was approved by the CREG Management Committee on 16 May 2013.

On 14 June 2013, an appeal was lodged against the CREG decision approving the adjusted tariff proposal for 2012-2015. This appeal was initiated by FEBELIEC and a number of industrial players. Elia is involved in the proceedings as an intervener.

## Elia System Operator and TenneT Holding confirm launch of APX exchange

As of 1 March 2013 APX-ENDEX has been split into a power spot and clearing entity and a derivatives and spot gas entity. APX remains a leading trading platform for power spot contracts across Belgium, the Netherlands and the UK, driven by the dedication to further develop these markets and provide the best exchange trading, central clearing & settlement and benchmark data solutions to more than 150 participants in over 15 countries. APX's share capital is held by TenneT Holding B.V. (70.8%) and Elia System Operator (29.2%).

## Jan Gesquière, CFO, leaves Elia and is succeeded by Catherine Vandenborre

Jan Gesquière, Chief Financial Officer and Vice-Chairman of the Management Committee of Elia System Operator and Elia Asset, left the company on 4 September 2013. As of that date, Catherine Vandenborre, Chief Corporate Officer of Elia System Operator and Elia Asset, has overseen the company's financial operations.

## **Board of Directors welcomes two federal government representatives**

At its session on 28 February 2013, the Board of Directors of Elia System Operator welcomed for the first time the two federal government representatives appointed in accordance with the Electricity Act as amended by the Act of 8 January 2012 transposing the EU's Third Energy Package. They are Nicolas De Coster, energy and environment adviser to the office of the State Secretary for Energy, and Nele Roobrouck, energy adviser to the Deputy Prime Minister responsible for energy.

## Incorporation of a company by Elia and 50Hertz

The Board of Directors of Elia System Operator approved the proposal to create, together with 50Hertz, a new company, which is the next stage in its plan to be active internationally. This new company will act as a facilitator for the development of the Elia group's non-regulated activities, combining the strengths of the group's two high-voltage system operators, Elia System Operator and 50Hertz Transmission.

## Significant events after the balance sheet date

## CHANGE TO THE COMPOSITION OF AND DISTRIBUTION OF TASKS WITHIN THE MANAGEMENT COMMITTEE

Following a decision taken by the Board of Directors on 28 November 2013, the composition of the Management Committee is to be amended from 1 January 2014. More specifically, Ilse Tant and Frédéric Dunon will also be part of the Management Committee from that date: Ilse Tant as Chief Corporate Affairs Officer and Frédéric Dunon as Chief Officer Operations, Maintenance & Methods.

In addition, from 1 January 2014, the distribution of tasks between members of the Management Committee is to be amended as follows:

Name	Position
Jacques Vandermeiren	Chairman of the Executive Committee and Chief Executive Officer
Markus Berger	Chief Officer Infrastructure Development
Frédéric Dunon	Chief Officer Operations, Maintenance & Methods
Ilse Tant	Chief Corporate Affairs Officer
Frank Vandenberghe	Chief Officer Customers, Market and System
Catherine Vandenborre	Chief Financial Officer

#### **Remuneration Committee**

In addition to its usual support role to the Board of Directors and in accordance with Article 526quater of the Belgian Companies Code, the Act of 29 April 1999 on the organisation of the electricity market and the articles of association, the Remuneration Committee is required to make recommendations to the Board of Directors with regard to remuneration policy and the individual remuneration of Management Committee members and directors. The Remuneration Committee also draws up a remuneration report for presentation at the Ordinary General Meeting.

The Remuneration Committee met on two occasions in 2013.

The company evaluates its executive staff on a yearly basis in accordance with its performance management policy. This policy also applies to members of the Management Committee. Accordingly, the Remuneration Committee evaluates the members of the Management Committee on the basis of a series of quantitative and qualitative collective and individual targets.

As noted elsewhere, remuneration policy for the variable portion of the Management Committee's remuneration was adapted to take account of the implementation of multi-year tariffs. Consequently, since 2008 the salary scheme for members of the Management Committee has included, among other things, an annual variable remuneration and a long-term incentive staggered over the multi-year regulation period. The annual variable remuneration has two parts: the attainment of quantitative collective targets, and individual performance, including progress on business projects.

The Remuneration Committee also examined the proposed collective targets for the Management Committee for 2013. In this connection, the ratio of targets relating to Belgian activities and those relating to German activities was reviewed and amended from 70-30% to 60-40%. This new ratio better reflects the contribution of the two businesses in terms of turn-

over and net result of the Elia group. In addition, the Remuneration Committee approved the remuneration report which forms part of the annual report.

#### **Audit Committee**

In addition to its usual support role to the Board of Directors and in accordance with Article 526bis of the Belgian Companies Code, the Act of 29 April 1999 on the organisation of the electricity market and the articles of association, the Audit Committee is responsible for:

- · examining accounts and controlling budgets;
- · monitoring financial reporting procedures;
- ensuring the effectiveness of internal control and risk management systems;
- · monitoring internal audits and their effectiveness;
- following up on the statutory audit of annual accounts;
- evaluating and ensuring the independence of auditors;
- making proposals to the Board of Directors as to the (re) appointment of auditors and the conditions of such (re)appointments;
- investigating any issues that resulted in the resignation of auditors and making proposals as to what actions, if any, should be taken in this respect;
- verifying the nature and extent of non-audit services provided by auditors;
- ensuring the effectiveness of external audit procedures.

Pursuant to Article 96(§1)9° of the Belgian Companies Code, this report must justify the independence and accounting and auditing competence of at least one member of the Audit Committee. The obligation for at least one member of the Audit Committee to have the necessary accounting and auditing competencies is also laid down in the articles of association.

Clement De Meersman, the Chairman of the Audit Committee, is an independent director and has extensive experience and competence in accounting and auditing. He holds a degree in electromechanical engineering from KULeuven and a PhD in applied sciences. He has completed executive training courses at IMD in Switzerland and the Vlerick Management School. He was a visiting student researcher at MIT (USA) and the Institute of Technology in Tokyo. He began his working life at KULeuven as an assistant before pursuing a career outside academia at a company affiliated to the Michelin Group. In 1986, he joined the Dutch DSM Group as a business unit director in charge of the development and sale of plastic materials, composites and high-performance products. From 1994 to 2009, he was the CEO of Deceuninck NV/SA. Clement De Meersman is also the chairman of the boards of directors of Deceuninck Turkey. Deceuninck North America, Deceuninck Ireland, Darvan and Smartroof as well as a member of the boards of directors of Plasticvision, ANL, Rf-T, Lano Textiles and Upgrade Energy. He is a member of the advisory boards of Verhelst, ORAC and ING Kortrijk. He teaches at KULeuven. He used to sit on the boards of directors of Roularta and Koramic Industries.

The Audit Committee may investigate any matter that falls within its remit. It is given the resources it needs to perform this task, has access to all information with the exception of confidential commercial data concerning grid users, and can call on internal and external experts for advice.

The Audit Committee met on seven occasions in 2013.

The Committee examined the annual accounts for 2012, drawn up in accordance with both Belgian GAAP and IFRS. It then analysed the quarterly results as at 31 March 2013, the half-yearly results as at 30 June 2013 and the figures for the first three quarters as at 30 September 2013, drawn up in accordance with Belgian GAAP and IFRS.

The Committee took note of the internal audits and the recommendations made.

It also proposed an action plan for each audit carried out, in order to improve the efficiency, traceability and awareness of the areas audited and thereby reduce the associated risks and provide assurance that the control environment and risk management are aligned. The Committee monitored these action plans from a number of perspectives (timetable, results, priorities) on the basis, among other things, of an activity report from the internal audit department.

The Committee also approved the 2014 audit plan.

The Audit Committee updated the strategic risks and carried out ad-hoc risk analyses based on the changing environment in which the group operates. Alongside this, the change in tactical risks was monitored as well as the action plans put in place to reduce these risks.

The Committee discussed the approach taken by Elia to draw up the Risk Assessment for the Belgian Offshore Grid project and the Nemo project.

#### **Corporate Governance Committee**

In addition to its usual support role to the Board of Directors and in accordance with both the Act of 29 April 1999 on the organisation of the electricity market and the articles of association, the Corporate Governance Committee is responsible for:

- pputting forward candidates to the General Meeting to be appointed as independent directors;
- giving prior approval for the appointment and/or removal (where applicable) of Management Committee members;
- examining at the request of any independent director, the
  Chairman of the Management Committee or the competent
  federal and/or regional regulatory body or bodies all cases of conflicts of interests between the system operator, on
  the one hand, and a dominant shareholder, municipal shareholder or company associated with or linked to a dominant
  shareholder, on the other hand, with a view to reporting to
  the Board of Directors. This task aims to strengthen the directors' independence above and beyond the procedure detailed in Article 524 of the Belgian Companies Code, which
  the company also applies;
- providing its opinion in cases of incompatibility on the part of members of the Management Committee and personnel;
- ensuring the application within the company of provisions laid down by law, regulations, decrees and other acts relating to the operation of electricity systems, evaluating their effectiveness in view of the requirements for the independent and impartial operation of those systems, and ensuring compliance with Articles 4.4 and 13.1(2) and (3) of Elia System Operator's articles of association. A report on this subject is submitted every year to the Board of Directors and the federal and/or regional body or bodies responsible for regulating the electricity market;
- convening at the request of at least one third of members

   Board of Directors meetings in accordance with the formalities for calling meetings as laid down in the articles of association:
- examining, after notification of a director, whether a director's membership of the supervisory board, the administrative board or bodies legally representing an undertaking which exercises control, directly or indirectly, over an electricity producer and/or supplier complies with Article 9.1b), c) and d) of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, and reporting on this matter to the Board of Directors. In this examination, the Committee takes account of the role and influence that the director concerned has in the undertaking concerned and of the degree of control or influence that the undertaking concerned has over its subsidiary. The Committee also examines whether, in the exercise of the director's office within the company, there is the possibility

or motive for favouring generation or supply interests as regards access to and investment in the grid to the detriment of other grid users;

checking, prior to any appointment of a director, whether that be the appointment of a new director of the re-election of an existing director, whether the candidate director takes account of the incompatibilities set forth in the company's articles of association. To this end, all candidate directors are required to furnish the Committee with an overview of (i) any offices they hold on the administrative board, supervisory board or any other body of other legal entities besides the company and (ii) any other functions or activities, paid or unpaid, which they perform for an undertaking performing any of the functions of electricity generation or supply.

The Committee met on 12 occasions in 2013.

As far as confidentiality rules permit, the Committee is kept regularly informed of issues of importance, such as the services rendered to 50Hertz, changes to the articles of association, changes to the Corporate Governance Charter, the certification of Elia System Operator, the succession of members of the Board of Directors and Management Committee, and the method Elia uses to calculate energy capacity on Belgian interconnections.

#### **EVALUATION**

In 2012, the Board of Directors of Elia System Operator organised a formal procedure for evaluating its own functioning, that of its committees and the interaction between the Board of Directors and the Management Committee. This procedure was conducted in accordance with provisions 4.11 to 4.15 inclusive of the Corporate Governance Code, which the company has adopted as its benchmark code. The results of the evaluation were very satisfactory. A new evaluation is scheduled for 2015.

#### **Management Committee**

Pursuant to Article 9(§9) of the Act of 29 April 1999 on the organisation of the electricity market, the Management Committee is responsible for:

- · loperation of the electricity systems;
- day-to-day management of the system operator; and
- exercising the powers assigned to it by the articles of association and those delegated to it by the Board of Directors.

The Management Committee usually meets formally at least once a month. Members also attend informal weekly meetings. Members who are unable to attend usually have a representative. In accordance with the Committee's internal rules of procedure, an absent member may authorise another member of the Management Committee to represent him or her by giving prior written permission. Nobody can represent more than two members.

In 2013, the Management Committee met on 13 occasions for Elia System Operator and 12 occasions for Elia Asset.

Each quarter, the Management Committee reports to the Board of Directors on the company's financial situation (in particular on the balance between the budget and the results stated). It also reports on transmission system operation at each Board of Directors meeting.

As part of its responsibilities to report on operation of the transmission system in 2013, the Management Committee kept the Board informed of developments in legislation applying to the company, the company's financial situation, the situation of its subsidiaries, the certification, the main decisions taken by regulators and administrations, as well as the monitoring and development of various investment projects.

#### CODE OF CONDUCT

Elia has a Code of Conduct to prevent staff and those with leadership responsibilities in the Elia group from potentially breaking any laws on the use of privileged information and market manipulation. The Code of Conduct lays down a series of regulations and communication obligations for transactions by those individuals in relation to their Elia System Operator securities, in accordance with the provisions of Directive 2003/6/EC on insider trading and market manipulation and the Act of 2 August 2002 on monitoring of the financial sector and other financial services. The Code of Conduct is available on the company's website (www.elia.be, under 'Elia', 'Corporate Governance').



from left to right: Jacques Vandermeiren, Catherine Vandenborre, Markus Berger, Frank Vandenberghe, Ilse Tant and Frédéric Dunon (Management Committee 1/1/2014).

Elia has a Code of Conduct to prevent staff and those with leadership responsibilities in the Group from potentially breaking any laws on the use of privileged information and market manipulation.

## CORPORATE GOVERNANCE CHARTER AND INTERNAL RULES OF PROCEDURE OF THE MANAGEMENT COMMITTEE, BOARD OF DIRECTORS AND BOARD COMMITTEES

The internal rules of procedure of the Management Committee, Audit Committee and Remuneration Committee were last amended by the Board of Directors on 25 May 2010. The Corporate Governance Charter and the internal rules of procedure of the Board of Directors and the Corporate Governance Committee were amended following the changes to the articles of association approved by the Extraordinary General Meeting on 21 May 2013. The Corporate Governance Charter and the internal rules of procedure can be found on the company's website (www.elia.be, under 'Elia', 'Corporate Governance').

#### TRANSPARENCY RULES - NOTIFICATIONS

Elia System Operator received one notification in 2013 pursuant to the Act of 2 May 2007 on disclosure of major shareholdings in issuers whose shares are admitted to trading on a regulated market and laying down miscellaneous provisions and the Royal Decree of 14 February 2008 on disclosure of major shareholdings.

In particular, on 5 February 2013, Belfius Insurance announced that it had purchased 1,400,000 Elia System Operator shares (2.31% of the total number of shares) on Euronext Brussels. On 30 January 2013, Belfius Insurance, which already had a stake in Elia System Operator, held 3,276,497 shares, i.e. 5.41% of the total

According to this notification, Publi-T, on the one hand, and Belfius Insurance, on the other hand, are acting jointly within the meaning of the Act of 2 May 2007.

## **Remuneration report**

## Remuneration of the Board of Directors and Management Committee members

#### PROCEDURE APPLIED IN 2013 WITH A VIEW TO DEVISING THE REMUNERATION POLICY AND REMUNERATING DIRECTORS AND MANAGEMENT COMMITTEE MEMBERS

Pursuant to Articles 16.1 and 15.1 of the respective articles of association of Elia System Operator and Elia Asset, a draft policy for the remuneration of Board of Directors and Management Committee members was drawn up by the Remuneration Committee. The Boards of Directors of Elia System Operator and Elia Asset approved the draft remuneration policy for Management Committee members. The draft remuneration policy for directors was approved by the General Meeting of Shareholders of Elia System Operator and Elia Asset.

The Remuneration Committee also made recommendations regarding the remuneration policy and the remuneration of directors and Management Committee members.

The composition and activities of the Remuneration Committee are covered in greater detail on pages 90 and 95 of the annual report.

#### REMUNERATION OF BOARD OF DIRECTORS MEMBERS

Total remuneration paid to the 14 directors in 2013 was €614,164 (€310,887 for Elia System Operator and €303,277 for Elia Asset).

The table below lists the individual gross sums paid to each director for Elia System Operator and Elia Asset combined.

These figures were calculated on the basis of seven meetings of the Board of Elia System Operator and seven meetings of the Board of Elia Asset in 2013. In 2013, the Audit Committee met on seven occasions, the Corporate Governance Committee on 12 occasions and the Remuneration Committee on two occasions.

Directors' remuneration consists of a basic remuneration of €25,000 per annum (€12,500 for Elia System Operator and €12,500 for Elia Asset) plus an additional €800 (€400 for Elia System Operator and €400 for Elia Asset) for each meeting after the eighth Board meeting of the year, including meetings with regulators. The remuneration is 50% more for the Chairman and 20% more for each Vice-Chairman of the Board of Directors.

Luc Van Nevel	58,977.00	€
Francis Vermeiren	53,270.00	€
Thierry Willemarck	61,382.00	€
Jennifer Debatisse <sup>8</sup>	31,708.00	€
Clement De Meersman	43,374.00	€
Jane Murphy	48,444.00	€
Jacques de Smet	62,399.00	€
Claude Grégoire <sup>9</sup>	42,360.00	€
Jean-Marie Laurent Josi	46,928.00	€
Dominique Offergeld	31,708.00	€
Leen Van den Neste (until 28 February 2013)	0.00	€
Miriam Maes	46,416.00	€
Steve Stevaert	31,708.00	€
Philip Heylen	31,708.00	€
Cécile Flandre (since 28 February 2013) <sup>10</sup>	23,782.00	€

- 8 Jennifer Debatisse's fees are paid to the company Interfin
- Claude Grégoire's fees are paid to the company Socofe.
- 10 Cécile Flandre's fees are paid to the company Belfius Insurance.

An additional basic remuneration of €6,000 per year per committee (€3,000 for Elia System Operator and €3,000 for Elia Asset) is awarded to directors who sit on a support committee (i.e. the Audit Committee, Remuneration Committee or Corporate Governance Committee). An additional remuneration of €800 (€400 for Elia System Operator and €400 for Elia Asset) is also awarded for each additional committee meeting (i.e. each meeting after the three covered by the basic remuneration), including meetings with regulators.

This remuneration covers all costs, except for travel and accommodation costs abroad incurred by directors in the performance of their office. It is included in the company's operating costs and is indexed annually in accordance with the consumer price index. All remunerations are paid on a pro-rata basis during the director's term of office.

Directors receive an advance on their annual remuneration at the end of the first, second and third quarters. The advance is calculated on the basis of the basic indexed remuneration and on a pro-rata basis in relation to the duration of the directorship during the quarter in question. A detailed account is prepared during the month of December for the financial year. This account takes into consideration any additional remuneration on top of the basic remuneration.

Directors do not receive any other benefits in kind, stock options, special loans or advances. Neither Elia System Operator nor Elia Asset has issued credit to or on behalf of any Board member.

There are no plans to substantially amend the current remuneration policy for directors in 2014 or 2015.

Management Committee remuneration policy

The Remuneration Committee evaluates the members of the Management Committee once a year. The change in the basic remuneration is linked to the position of each member of the Management Committee with respect to a benchmark salary in the general marketplace and the assessment of his/her individual performance.

Since 2004, the Hay Group methodology has been used to weight each management position and ensure that remuneration is in line with the going market rate.

The remuneration of Management Committee members consists of the following components:

- · basic salary;
- short-term variable remuneration;
- · long-term variable remuneration;
- pension;
- other benefits.

Article 17.9 of the articles of association provides for a derogation from the provisions of Article 520ter(1) and (2) of the Belgian Companies Code for all persons falling within the scope of those provisions.

As regards variable remuneration, the Remuneration Committee evaluates Management Committee members at the end of each year based on a number of qualitative and quantitative targets. Since 2008, the variable remuneration has comprised two components, a short-term one and a long-term one.

#### **Basic remuneration**

Given general market conditions in late 2013, it was decided, at the suggestion of the Chairman of the Management Committee, to adjust basic remuneration beyond inflation only for Management Committee members who assumed a new position or who were moving towards the benchmark salary for their position.

All the members of Elia's Management Committee have employee status.

The basic remuneration for the Chairman of the Management Committee totalled €347,471.94 in 2013.

The recurring remuneration paid to the other members of the Management Committee totalled €1,314,509.73 (€934,487.88 for Elia System Operator management and €380,021.85 for Elia Asset management).

Therefore, a total basic remuneration of €1,661,981.67 was paid to members of the Management Committee in 2013.

#### SHORT-TERM VARIABLE REMUNERATION

The first component of variable remuneration is based on the attainment of a number of targets set by the Remuneration Committee at the start of the year, with a maximum of 25% of variable remuneration for the individual targets and 75% for the attainment of the Elia group's collective targets ('short-term incentive plan').

In 2013, the short-term variable remuneration earned by the Chairman of the Management Committee totalled €290,206.71.

Variable remuneration earned by other members of the Management Committee in 2013 totalled €533,104.49 (€380,141.39 for Elia System Operator management and €152,963.10 for Elia Asset management).

Therefore, a total of €823,311.20 of variable remuneration was paid to Management Committee members in 2013.

#### TOTAL ANNUAL REMUNERATION

In 2013, the total annual remuneration paid to the Chairman of the Management Committee was €637,678.65.

Total remuneration paid to other members of the Management Committee stood at €1,847,614.23 (€1,314,629.27 for Elia System Operator management and €532,984.96 for Elia Asset management).

Therefore, total remuneration for all Management Committee members in 2013 stood at €2,485,292.88.

#### LONG-TERM VARIABLE REMUNERATION

The second component of variable remuneration is based on multiannual criteria covering a period of four years ('long-term incentive plan'). The long-term variable remuneration earned in 2013 can be estimated at €90,733.09 (maximum amount in the event of full attainment of the multiannual criteria for the tariff period concerned) for the Chairman of the Management Committee and €305,105.77 for the other members of the Management Committee (€238,726.37 for Elia System Operator management and €66,379.40 for Elia Asset management).

These amounts are reviewed at the end of each year based on the achievement of the multiannual criteria. Part of the longterm variable remuneration is scheduled for payment in 2014 and the rest in 2016.

No other variable remuneration was paid in 2013.

Remuneration is definitively acquired at the moment of payment.

#### CONTRIBUTIONS TO THE CORPORATE PENSION SCHEME

Since 2007, all pension plans for Management Committee members have been 'defined contribution' plans, meaning that the amount paid, excluding tax, is calculated on the basis of annual remuneration. In 2013, Elia System Operator paid a total of €92,366.03 for the Chairman of the Management Committee.

For the other members of the Management Committee, Elia paid a total of €405,970.28 (€297,783.85 for Elia System Operator management and €108,186.43 for Elia Asset management).

#### SEVERANCE PAY

Pursuant to Article 96(§3)10° of the Belgian Companies Code, the remuneration report must contain, in the event of the departure of executive directors, Management Committee members, other executives or persons in charge of day-to-day management, the rationale and decision of the Board of Directors, based on a proposal by the Remuneration Committee, as to whether the person concerned qualifies for severance pay, and the basis for calculating that pay.

Following the departure of the CFO in early September 2013, Elia concluded a transaction agreement which provides for severance pay not exceeding the 12 months' remuneration as stipulated in Article 554 of the Belgian Companies Code.

#### Other benefits

Other benefits awarded to members of the Management Committee, such as guaranteed income in the event of long-term illness or an accident, healthcare and hospitalisation insurance, invalidity insurance, life insurance, tariff benefits, other allowances, assistance with public transport costs, provision of a company car, employer-borne costs and other small benefits are in line with the regulations applying to all company executives.

The cost of other benefits in 2013 was valued at €45,260.53 for the Chairman and €223,061.94 for the other members of the Management Committee (€138,779.23 for Elia System Operator management and €84,282.71 for Elia Asset management).

There were no Elia stock options for the Management Committee members in 2013.

## PROVISIONS OF MANAGEMENT COMMITTEE EMPLOYMENT CONTRACTS AND SEVERANCE BENEFITS

The employment contracts of Management Committee members concluded after 3 May 2010 were drawn up in accordance with the prevailing legislation on resignation and dismissal.

The employment contracts of Management Committee members concluded before 3 May 2010, including the Chairman, contain no specific terms and conditions regarding resignation.

## Elia System Operator shares held by members of the Management Committee

Management Committee members held the following shares on 31 December 2013:

#### Number of Elia System Operator shares

Management Committee members	at 31.12.2013	at 31.12.2012
Jacques Vandermeiren Chief Executive Officer - Chairman of the Management Committee	3.003	3.503
Jan Gesquière Chief Financial Officer <sup>11</sup> Vice-Chairman of the Management Committee until 4 September 2013	6.029	6.029
Markus Berger Chief Officer Asset Management	7.633	7.633
Roel Goethals Chief Officer European Activities & Participations until 30 April 2013	4.015	4.015
Hubert Lemmens Chief Innovation Officer	6.134	6.134
Frank Vandenberghe Chief Officer Energy & System Management	4.552	4.195
Catherine Vandenborre Chief Corporate Officer, from 4 September 2013, Chief Financial Officer	794	794

There were no Elia System Operator stock options for the Management Committee members in 2013. Members of the Management Committee can buy shares via existing capital increases reserved for personnel or on the stock exchange.

## Other information to be communicated under Article 96 of the Belgian Companies Code and Article 34 of the Royal Decree of 14 November 2007 on the obligations of issuers of financial instruments admitted to trading on a regulated market

This section contains the information required to be disclosed under the aforementioned legislation and not included in other parts of the annual report.

### INFORMATION REGARDING SPECIAL CONTROL RIGHTS OF CERTAIN SECURITY HOLDERS

Pursuant to Article 4.3 of the articles of association of Elia System Operator and Elia Asset, all shares in these two companies have the same rights, regardless of the class to which they belong, except as otherwise stated in the articles of association.

In this context, the articles of association state that specific rights are associated with Class A and Class C shares regarding (i) the appointment of Board members (Article 13.5.2 of the articles of association of Elia System Operator and Article 12.5.2 of the articles of association of Elia Asset) and (ii) the approval of decisions by the General Meeting (Articles 28.2.1 and 28.2.2 of the articles of association of Elia System Operator and Article 27.2 of the articles of association of Elia Asset).

## INFORMATION REGARDING LIMITATIONS BY LAW OR THE ARTICLES OF ASSOCIATION ON THE EXERCISE OF VOTING RIGHTS

Pursuant to Article 4.3 of the articles of association of Elia System Operator and Elia Asset, the voting rights associated with shares held directly or indirectly by companies active in the generation and/or supply of electricity and/or natural gas are suspended.

## INFORMATION REGARDING THE RULES ON AMENDING THE ARTICLES OF ASSOCIATION

In the event of the articles of association of Elia System Operator and Elia Asset being amended, Article 29.1 of the articles of association of Elia System Operator and Article 28.1 of the articles of association of Elia Asset are applicable.

### INFORMATION REGARDING LIMITATIONS BY LAW OR THE ARTICLES OF ASSOCIATION ON SECURITIES TRANSFER

Transfers of securities are governed by Article 9 of the articles of association of Elia System Operatorr.

### INFORMATION REGARDING THE COMPANY'S REACQUISITION OF ITS OWN SHARES

The permission granted to the Elia System Operator Board of Directors for the reacquisition by the company of its own shares in the event of serious and imminent damage, as defined in Article 37 of the articles of association of Elia System Operator, was renewed for a period of three years with effect from the date of publication of the decision taken by the Extraordinary General Meeting of 21 May 2013.

## Shareholder structure at the balance sheet date

On 31 December 2013, the shareholder structure of Elia System Operator was as indicated in the following table:

#### SH REHOLDERS STRUCTURE

	Shares	% Shares	% Voting rights
Publi -T	27,383,50712	45.21	45.21
Publipart	1,526,756	2.52	2.52
Belfius Insurance	3,276,497 <sup>13</sup>	5.41	5.41
Other Free float	28,381,469	46.86	46.86
Total	60,568,229	100	100

<sup>12</sup> Based on the Publi-T - Arco declaration of transparency of 30 January 2013

<sup>13</sup> Based on the Belfius declaration of transparency of 30 January 2013

## Features of the internal control and risk management systems

The reference framework for internal control and risk management, established by the Management Committee and approved by the Elia Board of Directors, is based on the COSO II framework developed by the Committee of Sponsoring Organisations of the Treadway Commission. The framework has five closely linked basic components, providing an integrated procedure for internal control and risk management systems: control environment, risk assessment, control activities, information and communication, and monitoring.

The use and inclusion of these concepts in Elia's various procedures and activities enables the company to control its activities, improve the effectiveness of its operations, optimally deploy its resources, and ultimately achieve its objectives. The implementation of COSO II at Elia is described below.

#### 1. Control environment

#### ORGANISATION OF INTERNAL CONTROL

Pursuant to the Elia articles of association, the Board of Directors has established various committees to help it fulfil its duties: the Management Committee, the Audit Committee, the Remuneration Committee and the Corporate Governance Committee. The Elia Board of Directors is responsible for evaluating the effectiveness of the internal control and risk management systems.

The Board has charged the Audit Committee with the task of monitoring: (i) the financial reporting procedure; (ii) the effectiveness of internal control and corporate risk management systems; (iii) the internal audit and its effectiveness; (iv) the statutory audit of annual and consolidated accounts, including the follow-up of any issues raised or recommendations made by external auditors; (v) the independence of external auditors. The Audit Committee meets quarterly to discuss the above points.

The Finance Department helps the Management Committee to provide, in a timely manner, correct and reliable financial information to aid not only decision-making with a view to monitoring the profitability of activities, but also effective management of corporate financial services. External financial reporting – one of Elia's duties – includes (i) statutory financial and tax reporting; (ii) consolidated financial reporting; (iii) specific reporting obligations applicable to public companies; (iv) reporting obligations under the regulatory framework.

Financial reporting is organised in such a way as to meet all reporting obligations while ensuring consistency between various reports and avoiding inefficiencies.

The structured approach developed by Elia helps to ensure that financial data is both exhaustive and precise, taking into account the deadlines for activity reviews and the actions of key players so as to ensure adequate control and accounting.

#### INTEGRITY AND ETHICS

Elia's integrity and ethics are a crucial aspect of its internal control environment. The Management Committee and management regularly discuss these principles, on which the corporate rules established to clarify the mutual rights and obligations of the company and its employees are based. These rules are disseminated to all new employees, and compliance with them is formally included in employment contracts. The Code of Conduct also helps to prevent employees from breaking any Belgian legislation on the use of privileged information or market manipulation and suspicious activities.

Management consistently ensures that employees comply with internal values and procedures and – where applicable – take any actions deemed necessary, as laid down in the company regulations and employment contracts. A particular focus is laid on compliance with confidentiality rules, primarily by means of a specific confidentiality clause in employment contracts, but also through various measures applied in the event of noncompliance.

By virtue of its legal status as a power transmission system operator, Elia abides by a large number of statutory and regulatory rules setting out various fundamental principles such as confidentiality, transparency and non-discrimination. With a view to meeting these specific obligations, Elia has drawn up an Engagement Programme (approved by the Corporate Governance Committee) and produced a roadmap identifying which control initiatives should be taken, and in which order. The Compliance Officer reports annually to the relevant regulatory bodies in this regard.

#### **ROLES AND RESPONSIBILITIES**

Elia's internal control system relies on clearly defined roles and responsibilities at all levels of the organisation. The roles and responsibilities of the various committees established within Elia are primarily identified in the legal framework applicable to Elia, the articles of association and the Corporate Governance Charter.

Under the supervision of the Chief Financial Officer, the Accounting Department is responsible for statutory financial and tax reporting and the consolidation of the Elia Group's various subsidiaries. The Controlling Department monitors analytical accounting and reporting and assumes responsibility for all reporting in a regulatory context. The Investor Relations Department is responsible for specific reporting applicable to companies listed on the stock exchange.

As regards the financial reporting process, the tasks and responsibilities of all employees in the Accounting Department have been clearly defined with a view to producing financial results that accurately and honestly reflect Elia's financial transactions. A detailed framework of tasks and responsibilities has been drawn up to identify the main control duties and the frequency with which tasks and control duties are performed.

An IFRS Accounting Manual is used by all entities within the scope of consolidation as a reference for accounting principles and procedures, thus ensuring consistency, comparability and accurate accounting and reporting within the Group. The Finance Department has the appropriate means (including IT tools) to perform its tasks; all entities within the scope of consolidation use the same ERP software, which has a range of integrated controls and supports task separation as appropriate.

Elia also clarifies the roles and responsibilities of all its employees by providing a description of its procedures, in keeping with the Business Process Excellence methodology, and of each job.

#### COMPETENCIES

With a view to ensuring its various activities are performed reliably and effectively, Elia clearly spells out the vital importance of its employees' competencies and expertise in its recruitment, training and retention procedures. The Human Resources Department has drawn up the appropriate policies and defined all jobs in order to identify the relevant roles and responsibilities as well as the qualifications needed to fulfil them.

Elia has drawn up a policy for the management of generic and specific competencies in line with the company's values, and promotes training so as to enable all its employees to effectively perform the tasks allocated to them. Requirements with regard to competency levels are continually analysed by means of formal and informal (self-)assessments at various stages of an employee's career.

Training programmes on financial reporting are offered to all employees involved directly or indirectly with that task. The training lays an emphasis on the existing regulatory framework, accounting obligations and actual activities, with a high level of understanding enabling participants to address the appropriate issues.

#### 2. Risk management

Risk management is crucial in helping Elia to achieve its strategic objectives as defined in its mission. The Board of Directors and the Risk Manager jointly and regularly identify, analyse and assess key strategic and tactical risks. The risks are assessed qualitatively and/or quantitatively depending on their nature and potential effect. The Risk Manager then makes recommendations on how best to manage each risk considering the close interaction of Elia's entire risk universe. Based on this assessment, preventive, remedial and/or corrective actions are implemented, including the strengthening of existing internal control activities where applicable.

The objectives set for the entire Group feed through to each level of the organisation. Assessments are performed annually to determine how well those objectives have been achieved.

As part of its responsibilities, Elia's management establishes an effective internal control system to ensure, among other objectives, accurate financial reporting. It emphasises the importance of risk management in financial reporting by taking into account, with the Audit Committee, a whole range of associated activities and risks. It ensures that risks are truly reflected in financial results and reports. In addition, Risk Management goes beyond those risks known to Elia and tries to anticipate the nature and characteristics of emerging risks, which may impact Elia's objectives.

Financial risk assessments primarily involve the identification of:

- · significant financial reporting data and its purpose;
- · major risks involved in the attainment of objectives;
- · risk control mechanisms, where possible.

Financial reporting objectives include (i) ensuring financial statements comply with widely accepted accounting principles; (ii) ensuring that the information presented in financial results is both transparent and accurate; (iii) the use of accounting principles appropriate to the sector and the company's transactions; (iv) ensuring the accuracy and reliability of financial results.

The activities undertaken by Elia, as an electricity transmission system operator in relation to its physical installations, contribute significantly to its financial results. Therefore, appropriate procedures and control systems have been established to ensure an exhaustive and realistic inventory of physical installations.

Elia has established an enterprise risk management (ERM) culture to ensure the correct identification, analysis, assessment and actions towards risks in the achievement of Elia's strategy. This approach incorporates the key policies and procedures set out in the risk management recommendations and Risk Management Charter.

Risk management is a company-wide activity, actively supported by the delegation of relevant responsibilities to all employees as part of their specific activities, as defined in the Charter.

#### CONTINUOUS ASSESSMENT

Employing a simultaneously top-down and bottom-up approach enables Elia to identify and, where possible, anticipate forthcoming events and react to any incidents occurring inside or outside the organisation which might affect the attainment of objectives.

#### TOP-DOWN APPROACH BASED ON STRATEGIC RISKS

Elia's strategic risk assessments are reviewed on a quarterly basis in the Audit Committee. Action plans or specific, themebased risk assessments are carried out whenever there is a perception of potential threats or opportunities.

#### **BOTTOM-UP APPROACH WITH REGARD TO BUSINESS**

With a view to identifying new risks or evaluating changes in existing risks, the Risk Manager and management remain in contact and look out for any changes that may call for the relevant risk assessment and associated action plans to be amended.

Various criteria are used to determine the need to re-evaluate financial reporting procedures and associated risks. Emphasis is put on risks associated with changes in the financial and regulatory context, industrial practices, accounting standards and corporate developments such as mergers and acquisitions. Operational management assesses the relevant risks and puts forward action plans. Any significant changes to assessment rules must be approved by the Board of Directors.

Risk Management is instrumental for Elia to maintain its value for stakeholders and the community, works with all departments with a view to optimising Elia's ability to achieve its strategic objectives, and advises the company regarding the nature and potential effects of future risks.

#### 3. Control activities

#### MAIN CONTROL ACTIVITIES

Elia has established control activities at its various structural levels so as to ensure compliance with standards and internal procedures geared to the proper management of identified risks. These include:

- (i) clear task separation as part of procedures, preventing the same person from initiating, authorising and recording a transaction – policies have been drawn up regarding access to information systems and the delegation of powers;
- (ii) integrated audit approach as part of internal procedures so as to link end results with the transactions supporting them;
- (iii) data security and integrity through the appropriate allocation of rights;
- (iv) appropriate documentation of procedures through the use of the Business Process Excellence Intranet, which centralises policies and procedures.

Departmental managers are responsible for establishing activities to control the risks inherent to their department.

Elia takes all necessary measures to adapt its control activities where internal or external events are liable to affect existing processes.

#### FINANCIAL REPORTING PROCEDURE

For all significant financial reporting risks, Elia sets out appropriate control mechanisms to minimise the probability of error. Roles and responsibilities have been defined in connection with the closing procedure for financial results.

Measures have been established for the continuous follow-up of each stage, with a detailed agenda of all activities undertaken by Group subsidiaries; control activities are performed to ensure quality and compliance with internal and external requirements and recommendations.

During the financial closing period, a specific test is performed to ensure control over significantly unusual transactions (e.g. through data mining software), accounting checks and adjustments at the end of the relevant financial period, company transactions and critical estimates.

The combination of all these controls ensure the reliability of financial results. Regular internal and external audits also contribute to financial reporting quality.

In identifying those risks that may affect the achievement of financial reporting objectives, the management takes into account the possibility of misreporting associated with fraud and takes appropriate action where internal control needs to be strengthened. Internal Audit performs specific audits based on the risk assessment for potential fraud, with a view to avoiding and preventing any instances of fraud, and data mining software is used in areas susceptible to fraud.

#### 4. Information and communication

Elia communicates relevant information to its employees to enable them to fulfil their responsibilities and achieve their objectives. Financial information is needed for budgeting, forecasts and ensuring compliance with the regulatory framework. Operational information is also vital for the production of various reports, essential for the well-functioning of the company. As such, Elia records recent and historical data needed for corporate risk assessments. Multiple communication channels are used: manuals, memos, emails, bulletin boards and intranet applications.

Established information systems are used to structure information from a range of different sources so as to ensure: (i) transactions are recorded and monitored in real time; (ii) data is entered within a time-frame and at a level of detail that meets risk management requirements; (iii) the quality of information through discussions at different levels: the information owner validates the relevant data before publication, the management checks its accuracy and reliability, and IT risks (such as the quality of IT developments or the stability of data transmission) are followed up by action plans.

Financial results are reported internally and validated at different levels. The management responsible for financial reporting regularly meets other internal departments (operational and control departments) to identify financial reporting data. It validates and documents the critical assumptions underpinning booked reserves and the company's accounts.

At Group level, consolidated results are broken down into segments and validated by means of a comparison with historical figures and a comparative analysis between forecasts and actual data. This financial information is reported monthly to the Management Committee and is discussed quarterly with the Audit Committee. The Chairman of the Audit Committee then reports to the Board of Directors.

#### 5. Monitoring

Elia continually re-evaluates the adequacy of its risk management approach. Monitoring procedures include a combination of monitoring activities carried out as part of normal business operations, in addition to specific ad-hoc assessments on selected topics.

Monitoring activities include (i) monthly reporting of strategic indicators to the Management Committee and the management; (ii) follow-up on key operational indicators at departmental level; (iii) a monthly financial report including an assessment of variations as compared with the budget, comparisons with preceding periods and events liable to affect cost controlling.

Consideration is also given to third-party feedback from a range of sources, such as (i) stock market indices and reports by ratings agencies; (ii) share value; (iii) reports by federal and regional regulators on compliance with the legal and regulatory framework; (iv) reports by security and insurance companies.

Comparing information from external sources with internally generated data and ensuing analyses allows Elia to keep on making improvements.

Internal Audit also plays a key role in monitoring activities by conducting independent reviews of key financial and operational procedures in view of the various regulations applicable to Elia. The findings of those reviews are reported to the Audit Committee to help it monitor internal control and risk management systems and corporate financial reporting procedures.

The Group's legal entities are also subject to external audits, which generally entail an evaluation of internal control and remarks on (annual and quarterly) statutory and consolidated financial results. External auditors make recommendations for improving internal control systems. The recommendations, action plans and their implementation are reported annually to the Audit Committee, which in turn reports to the Board of Directors on the independence of the auditor or statutory audit firm and drafts a motion for a resolution on the appointment of external auditors.

## Risks and uncertainties facing the company

#### 1. Regulatory and income risks

#### INTERNATIONAL

The two transmission system operators in the Elia Group strive to proactively anticipate European legislation, new directives and regulations being prepared at EU level or awaiting transposition into Belgian and German law in order to minimise uncertainties.

Elia and 50Hertz are European leaders when it comes to the components of the European Commission's third package of directives aimed at developing a single electricity and gas market, as regards both the independence and impartiality of the management.

The provisions of the third package were transposed into Belgian and German law. Under these provisions, Elia System Operator and 50Hertz are subject to new procedures, such as certification as a full-owned unbundled TSO. The application of these new procedures may include regulatory risks for both companies. Both Elia and 50 Hertz have received certification as ownership unbundled transmission system operator

While this authorisation is not limited in time, it can be revoked if Elia or 50Hertz do not have, inter alia, the personnel, technical and/or financial means to guarantee the continuous and reliable operation of the network in accordance with the applicable legislation, as well as the unbundling obligations as described in article 9 of the EU Electricity Directive. Such a revocation will have an adverse material impact on Elia and/or 50Hertz.

Elia and 50Hertz are also founding members of the European Network of Transmission System Operators for Electricity (ENTSO-E), which was set up in December 2008 and brings together 41 transmission system operators from 34 countries, including the EU Member States. Amongst other things, ENT-SO-E performs the role of the European Network of Transmission System Operators provided for in the third package.

#### **NATIONAL**

The Belgian legal framework was established when the first EU Directive on the internal electricity market was transposed by the Electricity Act of 29 April 1999. The amendment from 8 January 2012 adapted the Electricity Act to comply with the third package of European directives. As a result, CREG has been made competent for the tariff methodology within the framework provided in the Act, and consequently the Royal Decree regarding the tariff setting for transmission activities has been revoked. Based on CREG's request, the Belgian constitutional court has decided on 7 August 2013 that this amendment was compliant with the third EU electricity directive, except for a few provisions recently corrected by two amendments to the Electricity Act dated September 2013.

The company's net profit is largely determined by a fair return mechanism. In addition, and for the period 2012-2015, there exist two 'incentive' components spread over four years. Elia's result is therefore influenced annually by changes to Belgian linear bonds (10-year OLOs), by its ability to achieve and/or exceed the efficiency improvement factor, and by the federal regulator's analysis of the various budget items.

On 22 December 2011, the tariffs and mechanisms determining Elia's profitability as Belgium's transmission system operator were approved by CREG for a new four-year tariff period, effective 1 January 2012. The methodology used by CREG to adopt that approval was provisional since the third package of European directives had not been transposed into Belgian law by that date.

Following the annulment of the tariffs approved by CREG by the Brussels Court of Appeal in February 2013, the CREG has approved the adjusted tariff proposal submitted by Elia on the basis of the adapted transmission tariff calculation method on May 16th 2013. These new tariffs led to a new appeal by other third parties. There is in general a legislative and regulatory uncertainty which Elia takes into consideration.

Elia's turnover also depends on the energy transported through its grid, and therefore on the level of business activity of its customers. The decline in residential and industrial electricity consumption prompted by the slowdown in economic activity since 2009 may result in differences between actual electricity volumes being transmitted and those estimations built into the 2012-2015 tariffs as approved by the regulator. Any deficit and/ or extra costs incurred as a result, such as additional financing needs, must be offset by the tariffs for the next regulatory period, under prevailing legislation.

The impact on the electricity consumption and injection of Elia's various customer segments and the uncertainty surrounding the outlook for a lasting upturn in business amongst industrial clients pose a risk to Elia's cash flow.

Elia's income is influenced by the dividends received from companies in which it has shareholdings, in particular those of 50Hertz.

The tariffs charged by 50Hertz are subject to regulation by the German federal regulatory agency, Bundesnetzagentur (BNetzA). Decisions made and actions taken by the BNetzA under the current regulatory framework may have a substantial impact on 50Hertz.

Furthermore, the German regulatory framework governing the activities of 50Hertz is subject to extensive European, national and regional legislation and regulation. Even though 50Hertz tries to anticipate European legislation, new directives and regulations in preparation at the European level or existing regulations and directives awaiting transposition into national law (such as those included in the Third Energy Package) may always cause uncertainties.

The legislation and directives regarding the renewable energy sources may also have a great impact on 50Hertz's liquidity. Changes in the legislation may lead to significant variations on the current regulatory and/or liquidity risk.

#### REGIONAL

The regulatory framework entails risks at regional level in Belgium. For instance, contradictions between the various regulations, including the grid codes, can hinder the exercise of the company's activities. The further development of and changes to these regulations may also impact the company's liability in the event of a power outage on the grid or – in the context of a reform of the State – the division of powers between federal and regional authorities, including the power to approve transmission tariffs.

In addition, the regulatory uncertainty surrounding certain surcharges linked to, among other things, the green certificates mechanism means a risk that may affect cash flow and investment requirements.

#### 2. Operational risks

#### **ENERGY BALANCE**

Every year, Elia and 50Hertz Transmission seek to contract the reserves needed to ensure continual balance between production and consumption in their respective zones. To that end, they analyse, both at national and European level, how the growing proportion of intermittent renewable energy generation units can be safely integrated without compromising the energy balance. The growth across Europe in the number of cogeneration and renewable energy units connected to distribution systems and the future connection of large offshore wind farms also create new challenges for operational grid management and require the further development of their infrastructure.

These developments, changing trends in offtake and injection and the enhancement of interconnection capacity between EU member states are dependent on securing permits and approvals from local, regional, national and international authorities. The need to obtain such approvals and permits within certain timeframes represents a risk to timely implementation. Moreover, these approvals and permits can be contested in the relevant courts.

#### **POWER OUTAGES**

The reliability of the transmission systems operated by Elia and 50Hertz is among the best in Europe. Nonetheless, unforeseen events, such as unfavourable weather conditions, may occur to a degree which interrupts the smooth operation of one or more infrastructure components. In most cases, these incidents have no impact on consumers' power supply because the meshed structure of the grids operated by Elia and 50Hertz means that consumers can be reached via a number of different connections. However, in extreme cases an incident in the electricity system may lead to a local or widespread outage (known as a blackout). Such outages may be caused by natural phenomena, unforeseen incidents or operational problems, either in Belgium or abroad. The Elia Group regularly holds crisis management drills so that it is ready to deal with the most unexpected and extreme situations. The general terms and conditions of its contracts limit the liability of Elia and 50Hertz to a reasonable level while its insurance policy is designed to offset the financial repercussions of these risks.

## RISKS ASSOCIATED WITH ELECTROINIC, IT AND TELECOMMUNICATION EQUIPMENT

The incorporation of electronic, IT and telecommunication technologies in electricity transmission systems for the purposes of operational management, communication and surveillance (such as smart grids) modifies the nature of electricity systems and infrastructure used by TSOs such as Elia and 50Hertz.

Failures in the telecommunications network or IT systems used to operate the electricity system may harm the latter's performance. Elia takes appropriate measures to back up the IT network and associated systems to the maximum extent allowed by technical and financial considerations. It has drawn up and regularly tests recovery plans for the most critical IT systems. However, component failures in the telecommunication network and IT systems are impossible to rule out. Where systems do fail, Elia will strive to minimise the impact on customers.

#### **ENVIRONMENTAL RISK**

Elia's results may be affected by outgoings needed to keep up with environmental legislation, including costs associated with implementing preventive or corrective measures or settling third-party claims. The company's environmental policy is developed and monitored in such a way as to manage these risks. Where Elia or 50Hertz might in any way be liable for decontamination, the appropriate provisions are set aside. Additional analyses are in progress and could lead to a revision of existing provisions or the adoption of new provisions. The same holds true for electric and magnetic fields.

#### PERMITTING RISKS

Both Elia and 50Hertz work have a duty to build an electricity grid consistent with the energy needs of its respective client base and the move by the energy industry into decentralised electricity generation, which necessitates a reinforced electrical grid.

To this effect, electrical installations need to be upgraded or built new, which means obtaining building permits. Occasionally, obtaining permits takes place after lengthy dialogue with local populations and authorities, which may delay the building of such grid.

#### **RISK OF LEGAL DISPUTES**

Although the company operates in such a way as to minimise the risk of legal disputes, it may nonetheless become involved in such disputes. Where necessary, the appropriate provisions are laid aside for this.

#### SAFETY AND WELFARE

The Elia Group operates facilities that may cause harm to the natural or human environment or for which accidents or external attacks may have major repercussions. Persons working in or near electricity transmission facilities may be exposed, in the event of an accident, error or negligence, to the risk of electrocution. The safety and welfare of individuals (both Elia personnel and third parties) is a daily priority for the Elia Group's management, supervisory staff and personnel, and substantial resources are invested in safeguarding them. Each year, an action plan is approved and implemented based on developments in safety figures.

## RISKS ASSOCIATED WITH INEFFICIENT INTERNAL CONTROL MECHANISMSE

All internal processes can have an impact on the company's results in some way. The multi-year tariff mechanism increases the need for year-on-year increases in the company's overall efficiency. To this end, the efficiency of internal processes is monitored regularly, using performance indicators and/or audits, to ensure they are kept under proper control. This is overseen by the Audit Committee, which controls and monitors the work of the Internal Audit & Enterprise Risk Management Department.

#### 3. Financial risks

The Group is exposed to various financial risks in the exercise of its activities: market risk (namely interest rate risk, inflation risk, tax risk and limited exchange risk), liquidity risk and credit risk. The risks the company faces are identified and analysed in order to establish appropriate limits and controls and monitor risks and compliance with such limits. To this end, the Group has defined responsibilities and procedures specifically for the financial instruments to be used and the operating limits for managing them. These procedures and related systems are revised on a regular basis to reflect any changes in market conditions and the activities of the Group. The financial impact of these risks is limited, as Elia and 50Hertz are operating under the Belgian or German regulatory framework. See the 'Regulatory framework' section for further details.

To finance its investments and to achieve its short- and longterm strategic goals, Elia and 50Hertz turn to the capital markets. At the time of writing, the economic and financial environment in Europe has been shaken by the debt crisis affecting banks and the member states of the EU. This tension on the capital and credit market in a highly interdependent financial system may have an impact on loans to companies, in some cases reducing the financing capacity of Elia and/or 50Hertz. This situation could have an adverse effect on Elia's and 50Hertz's growth and on the pursuit of their objectives. Elia is partly financed with floating rate bonds. Although a financing policy has been approved that strives to achieve an optimal ratio between fixed and variable interest rates and appropriate financial instruments are used to mitigate the financial risk, a change in interest rates can have an impact on financial charges passed on in a subsequent regulatory tariff period (or in the same period in the event of an exceptional change in charges). Financial charges are also related to the credit rating of the company. Elia cannot guarantee total protection in the event of significant movements in interest rates or in the event of a downgrading of its rating, or Eurogrid GmbH's rating. For more information, see the section on 'Financial risk and financial derivatives' in the annual report.

With the advent of new Belgian laws and regulations governing the decentralised production of renewable energy, notably via photovoltaic solar panels and windmills, the federal and regional governments have authorised the issuance of so-called 'green certificates', which are used as a financial support instrument for the renewable energy. The obligation for Elia to buy these certificates at a guaranteed minimum price poses a cash-flow risk, as 'green certificates' are effectively used as 'call' options and hence its execution is uncertain. Consequently, Elia is subject to unforeseeable and sudden influxes of large numbers of 'green certificates', which, depending on the type of regulation applicable per region, must be either financed by Elia, or paid outright to the energy producer, representing a risk to Elia's cash flow. However, Elia has the possibility to ask the CREG to adapt the tariffs so as to recover possible shortcomings between the expenses due to public service obligations and the cash-flow generated by the approved surcharges meant to cover such expenses.

Elia has in place regulatory and cash-planning Grid mechanisms which allows it to partially reduce the cash impact that this risk may pose. The unforeseeable nature of the execution of the 'call' options prevents Elia from guaranteeing total protection in the event of significant variations in either the guaranteed minimum price or the volume of 'green certificates', the market prices for 'green certificates', or the evolution in the legal and regulatory environments at, Federal and Regional levels.

Similarly, 50Hertz is exposed to a cash-flow risk as it is obliged to buy the electricity generated by renewable sources for a fixed price, but to sell it at variable prices dictated by the market.

#### 4A. New business developments

The Elia Group strives to anticipate new opportunities relating to its core business, both inside and outside the Belgian regulated framework. The launch of international projects abroad may create risks associated with foreign regulations or uncertainties regarding the business plans to be drawn up. Efforts to identify and assess risks are carried out in parallel to the business plan in order to assess and manage the various risks.

#### OFFSHORE GRID IN THE NORTH SEA

A particular business development is that related to Belgian Offshore Grid. Elia can develop, build, operate and maintain an offshore electrical grid, which is meant to connect a group of offshore wind parks to the existing onshore electrical grid. This is a new, large-scale, long-lasting and technically complex project reliant on a number of regulatory, technical and financial conditions being met. Elia has a good understanding of the risks involved in the project and works with all stakeholders to move forward with the project. This North Sea offshore grid project is part of a broader project to interconnect Belgium, the Netherlands, Germany, Denmark, Norway and the United Kingdom in a North Sea grid (North Sea Grid Initiative).

#### ATLANTIC WIND CONNECTION

This project relates to the future construction of the first direct current high-voltage offshore grid, located off the East Coast of the United States. Elia is part of the consortium of companies that own the project. Elia takes account of the risks inherent in a business activity in a country whose legislative and regulatory framework and whose permitting procedures are different, while also factoring in the project's financial aspects and governance.

## 4B. Specific risks relating to Elia's acquisition of 50Hertz

As regards the acquisition of 50Hertz by Elia and IFM (through Eurogrid International SCRL and Eurogrid GmbH), the possibility of a limited or non-existing recourse to Vattenfall concerning certain risks relating to the activities of 50Hertz cannot be excluded, nor can it be excluded that certain risks are not covered by representations and guarantees or allowances provided by Vattenfall.

#### 5. Contextual factors

#### MACRO-ECONOMIC RISKS

For some time now, all European economies have faced greater uncertainty and volatility, while the financial recovery expected after the multifaceted economic and financial crisis that emerged in 2007/2008 has not materialised, leaving European economies in a vulnerable condition.

Five years after the start of the financial crisis, there remains uncertainty about how to solve the underlying long-term structural economic problems, such as national account imbalances, large levels of long-term unemployment, diverging levels of competitiveness between EU countries, and the questioning of the current economic model used

The close interconnection within the EU between macro-economic factors and an economic sovereignty which is split among EU, Member States and regions, further complicates the timely finding of solutions in terms of financial stability, economic growth, employment and political agreement among leaders whose electorates' expectations are very different per country.

Against this uncertain backdrop, an extended period of slow economic growth, low interest rates and high unemployment rates cannot be excluded. This may have a negative impact on volumes of electricity transmitted and on plans to develop the current grid and electricity generation assets (including renewable energy sources).

#### **HUMAN RESOURCES RISK**

Elia pursues an active branding and recruitment policy to maintain an appropriate level of expertise and know-how in a tight labour market. This is an ongoing risk, bearing in mind the highly specialised and complex nature of its business.

#### **IMAGE RISK**

Generally speaking, circumstances may arise that have a negative impact on the company's image. Elia has an internal control mechanism to guarantee the confidentiality of data. Despite this, external parties may pass on information in their possession that could have an impact on the company's share price.

#### **MISCELLANEOUS**

Elia realises that there might be other risks of which the company is not yet aware. Some risks may seem limited today but increase in the future. The subdivisions used give no indication of the potential consequences of the listed risks.



# Financial report

The results of the year 2013 in details.

#### **DECLARATION BY RESPONSIBLE PERSONS**

The undersigned Chairman of the Management Committee and Chief Executive Officer Jacques Vandermeiren and Chief Financial Officer Catherine Vandenborre declare that to the best of their knowledge:

- a. the consolidated financial statements for the year ending 31 December 2013 have been prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union, and give a true and fair view of the consolidated financial position and results of the Elia Group and of its subsidiaries included in the consolidation:
- b. the annual report for the year ending 31 December 2013 gives, in all material aspects, a true and fair view of the evolution of the business, the results and the situation of the Elia Group and of its entities included in the consolidation, as well as a description of the most significant risks and uncertainties with which the Elia Group is confronted.

Brussels, 27 March 2014

Jacques Vandermeiren Chairman and CEO Catherine Vandenborre Chief Financial Officer

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## **Consolidated financial statements IFRS**

## Consolidated income statement

(in million €) – Year ended 31 December	Notes	2013	2012
CONTINUING OPERATIONS			
Revenue	(5.1)	1,323.0	1,228.0
Raw materials, consumables and goods for resale*	(5.3.1)	(32.2)	(35.4)
Other income	(5.2)	66.5	78.6
Services and other goods*	(5.3.1)	(665.3)	(625.6)
Personnel expenses	(5.3.2)	(178.9)	(170.7)
Depreciation, amortization, impairment and changes in provisions	(5.3.3)	(141.5)	(150.1)
Other expenses	(5.3.4)	(26.2)	(19.4)
RESULTS FROM OPERATING ACTIVITIES (EBIT)		345.4	305.4
NET FINANCE COSTS	(5.4)	(108.5)	(134.8)
Finance income		14.5	12.9
Finance costs		(123.0)	(147.7)
Share of profit of equity accounted investees (net of income tax)	(5.6)	0.4	0.6
Profit before income tax		237.3	171.2
Income tax expense	(5.5)	(61.5)	(16.2)
Profit from continuing operations		175.8	155.0
Profit for the period		175.8	155.0
Profit attributable to:			
Owners of the Company		175.8	155.0
Non-controlling interest		0.0	0.0
PROFIT FOR THE PERIOD		175.8	155.0
Earnings per share (€)	Notes	31.12.2013	31.12.2012
Basic earnings per share	(5.7)	2.90	2.57
Diluted earnings per share	(5.7)	2.90	2.57

<sup>\*</sup> These sections include a reclassification of the figures per 31 December 2012 for comparison reasons. For more details we refer to note 5.3.1. The accompanying notes are an integral part of these consolidated financial statements.

## Consolidated statement of comprehensive income

(in million €) – Year ended 31 December	Notes	2013	2012
PROFIT FOR THE PERIOD		175.8	155.0
Other comprehensive income			
Items that may be reclassified subsequently to profit or loss:			
Effective portion of changes in fair value of cash flow hedges	(5.8)	9.2	(1.5)
Tax on items that are or may be reclassified subsequently to profit or loss	(5.8)	(3.1)	0.5
Exchange differences on translation of foreign operations		(0.1)	0,0
Items that will never be reclassified to profit or loss:			
Remeasurements of post-employment benefit obligations	(6.12)	11.0	(14.9)
Tax on items that will not be reclassified to profit or loss	(6.12)	(3.7)	5.0
Other comprehensive income for the period, net of income tax		13.3	(10.9)
Total comprehensive income for the period		189.1	144,1
Profit attributable to:			
Owners of the Company		189.1	144.1
Non-controlling interest		0.0	0.0
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD		189.1	144.1

## Consolidated statement of financial position

ASSETS (in million €)	Notes	31.12.2013	31.12.2012
NON-CURRENT ASSETS		5,662.3	5,370.5
	(0.4)	·	
Property, plant and equipment	(6.1)	3,629.8	3,319.3
Intangible assets	(6.2)	1,758.4	1,757.0
Trade and other receivables	(6.3)	132.4	126.5
Investments in equity-accounted investees	(6.4)	23.4	34.3
Other financial assets (including derivatives) Deferred tax assets	(6.5) (6.6)	89.4 28.9	90.3 43.1
CURRENT ASSETS		869.9	816.5
Inventories	(6.7)	16.4	15.0
Trade and other receivables	(6.8)	402.0	625.7
Income tax receivable	,	4.7	4.7
Cash and cash equivalents	(6.9)	437.7	166.2
Deferred charges and accrued revenues	(6.8)	9.1	4.9
TOTAL ASSETS		6,532.2	6,187.0
EQUITY AND LIABILITIES (in millions €)	Notes	31.12.2013	31.12.2012
EQUITY		2,209.1	2,108.5
Equity attributable to Owners of the Company	(6.10)	2,209.1	2,108.5
Share capital	,	1,506.9	1,506.5
Share premium		8.8	8.8
Reserves		97.2	83.7
Hedging reserve		(18.1)	(24.3)
Retained earnings		614.3	533.8
Non-controlling interest		0.0	0.0
Non-controlling interest		0.0	0.0
NON-CURRENT LIABILITIES		2,845.6	2,650.2
Loans and borrowings	(6.11)	2,598.0	2,351.1
Employee benefits	(6.12)	106.9	118.6
Derivatives	(7.2)	27.5	36.7
Provisions	(6.13)	62.3	58.4
Deferred tax liabilities	(6.6)	32.8	66.0
Other liabilities	(6.14)	18.1	19.4
CURRENT LIABILITIES		1,477.5	1,428.3
Loans and borrowings	(6.11)	573.5	725.9
Provisions	(6.13)	21.6	29.6
Trade and other payables*	(6.15)	506.9	414.9
Trade and other payables* Income tax payables	(6.15)	506.9 76.9	414.9 40.9
Trade and other payables*		506.9	414.9

<sup>\*</sup> These sections include a reclassification of the figures per 31 December 2012 for comparison reasons. For more details we refer to notes 6.15 and 6.16. The accompanying notes are an integral part of these consolidated financial statements.

## Consolidated statement of changes in equity

(in million €)	Notes	Share capital	Share premium	Hedging reserve	Foreign currency translation	Reserves	Retained earnings	Total	Non controlling interests	Total equity
BALANCE AT 1 JANUARY 2012		1,500.6	8.5	(23.3)	0.1	67.6	493.4	2,046.9	_	2.046.9
		1,500.0	0.5	(20.0)	0.1					,
Profit for the period		-	-	-	-	-	155.0	155.0	-	155.0
OCI*: cash-flow hedges	5.8	-	-	(1.0)	-	-	-	(1.0)	-	(1.0)
OCI: actuarial gain/(loss)	6.12	-	-	-	-	-	(9.9)	(9.9)	-	(9.9)
Total comprehensive income for the period		-	-	(1.0)	-	-	145.1	144.1	-	144.1
Transactions with Owners, recorded directly in equity Contributions by and distributions to Owners										
Shares issued	6.10	5.0	0.3	-	-	-	-	5.3	-	5.3
Share-based payment expense	6.10	0.9	-	-	-	-	-	0.9	-	0.9
Transfer to legal reserve	6.10	-	-	-	-	16.1	(16.1)	-	-	-
Dividends	6.10	-	-	-	-	-	(88.7)	(88.7)	-	(88.7)
Total transactions with Owners		5.9	0.3	-	-	16.1	(104.8)	(82.5)	-	(82.5)
BALANCE AT 31 DECEMBER 2012		1,506.5	8.8	(24.3)	0.1	83.7	533.7	2,108.5	-	2,108.5
BALANCE AT 1 JANUARY 2013		1,506.5	8.8	(24.3)	0.1	83.7	533.7	2,108.5	-	2,108.5
Profit for the period		_	_	_	_	_	175.8	175.8	_	175.8
OCI: cash-flow hedges	5.8	_	_	6.1	_	_	_	6.1	_	6.1
OCI: actuarial gain/(loss)	6.12	_	_	_	_	_	7.3	7.3	_	7.3
OCI: exchange differences		-	-	_	(0.1)	-	-	(0.1)	_	(0.1)
Total comprehensive income for the period		_	_	6.1	(0.1)	_	183.1	189.1	_	189.1
Transactions with Owners, recorded directly in equity Contributions by and distributions to Owners										
Shares issued	6.10	0.3	0.1	-	-	-	-	0.4	-	0.4
Share-based payment expenses	6.10	0.1	-	-	-	-	-	0.1	-	0.1
Transfer to legal reserve	6.10	-	-	-	-	13.5	(13.5)	-	-	-
Dividends	6.10	-	-	-	-	-	(89.0)	(89.0)	-	(89.0)
Total transactions with Owners		0.4	0.1	-	-	13.5	(102.5)	(88.5)	-	(88.5)
BALANCE AT 31 DECEMBER 2013		1,506.9	8.9	(18.2)	-	97.2	614.3	2,209.1	-	2,209.1

 $<sup>^{\</sup>star} \;\; \text{OCI} = \text{Other comprehensive income}$ 

The accompanying notes are an integral part of these consolidated financial statements.

## Consolidated statement of cash flows

(in million €) – Year ended 31 December	Notes	2013	2012
CASH FLOWS FROM OPERATING ACTIVITIES			
Profit for the period		175.8	155.0
Adjustments for:			
Net finance costs	(5.4)	108.5	135.1
Other non-cash items		0.1	4.6
Income tax expense	(5.5)	87.3	50.1
Profit or loss of equity accounted investees, net of tax	(5.6)	(0.4)	(0.6)
Depreciation of property, plant and equipment and amortisation of intangible assets	(6.1 - 6.2)	149.7	148.3
Gain on sale of property, plant and equipment and intangible assets	(6.1 - 6.2)	7.7	3.2
Impairment losses of current assets	(5.3.4)	13.0	1.5
Change in provisions	(5.3.3)	(5.7)	0.3
Change in fair value of derivatives	(7.2)	(1.4)	0.7
Change in deferred taxes	(6.6)	(25.9)	(34.0)
Changes in fair value of financial assets through profit or loss		0.0	0.3
Cash flow from operating activities		508.7	464.5
Change in inventories	(6.7)	(1.8)	0.6
Change in trade and other receivables	(6.8)	215.4	(351.2)
Change in other current assets	(6.8)	(4.4)	0.4
Change in trade and other payables	(6.15)	56.6	2.5
Change in other current liabilities	(6.14 - 6.16)	90.6	112.6
Changes in working capital		356.4	(235.1)
Interest paid	(5.4)	(134.3)	(142.8)
Interest received*	(5.4)	3.2	6.1
Income tax paid	(5.5)	(51.3)	(30.0)
Net cash from operating activities		682.8	62.8
CASH FLOWS FROM INVESTING ACTIVITIES			
Acquisition of intangible assets	(6.2)	(10.1)	(11.9)
Acquisition of property, plant and equipment	(6.1)	(450.2)	(305.3)
Acquisition of subsidiary net of cash acquired		0.0	0.2
Acquisition of equity accounted investees		(0.1)	(3.1)
Acquisition of investment	(7.1)	(3.7)	(0.3)
Proceeds from sale of property, plant and equipment		1.6	1.9
Proceeds from sales of investments		11.6	0.0
Net cash used in investing activities*		(450.9)	(318.5)
CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from issue share capital		0.4	5.3
Expenses related to issue share capital		0.0	(0.2)
Dividends paid (-)	(6.10)	(89.3)	(88.7)
Repayment of borrowings (-)		(619.7)	0.0
Proceeds from withdrawal borrowings (+)		748.2	120.0
Net cash flow from (used in) financing activities		39.6	36.4
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	6	271.5	(219.3)
Cash & Cash equivalents at 1 January		166.2	385.6
Cash & Cash equivalents at 1 January Cash & Cash equivalents at 31 December		166.2 437.7	385.6 166.3

<sup>\*</sup> These sections include a reclassification of the figures per 31 December 2012 for comparison reasons. According to IAS 7.33 "Interest received" can be disclosed either under "Net cash used in investing activities" or under "Net cash from operating activities". In 2013 the Group decided to show interest received under Net cash from operating activities, which resulted in an increase of the Net cash from operating activities in 2012 from € 56.7 million to € 62.8 million, and in a similar decrease in Net cash used in investing activities, from € (312.4) million to € (318.5) million. This change in accounting policy has been applied to provide more relevant information about the effect of the interest received on the cash from operating activities and will be applied consistently from period to period going forward.

The accompanying notes are an integral part of these consolidated financial statements.

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## 1. Reporting entity

Established in Belgium, Elia System Operator SA (the 'company' 'Elia') has its registered office at Boulevard de l'Empereur 20, B-1000 Brussels. The company's consolidated financial statements for the 2013 financial year include those of the company and its subsidiaries (together referred to as the 'Group') and the Group's interest in joint ventures and associates.

The company is a limited liability company, with its shares listed on NYSE Euronext Brussels, under the symbol ELI.

The Elia Group develops, maintains and operates two major electricity networks located in Central and North West Europe: the Belgian transmission grid interconnected with France and the Netherlands and 50Hertz transmission grid interconnected with Poland, the Czech Republic and Denmark. These two grids connect generators to major industries and distribution system operators and ensure electricity imports and exports from and to other European countries in an efficient, reliable and secure way. Elia owns the entire Belgian very high voltage grid (150 to 380 kV) and some 94% (ownership and user rights) of the high-voltage grid (30 to 70 kV) with 5,561 km of overhead lines and 2,809 km of underground cables. 50Hertz owns the entire network (220 to 380 kV) in its geographical area as well as the transmission grid in the Hamburg area and offshore connections in the Baltic Sea. The 50Hertz grid comprises 9,860 km of overhead lines and 150 km of underground cables. Elia Group's investment in interconnection capacity with its neighbours makes it the most open and interconnected transmission system operator in Europe.

## 2. Basis of preparation

#### 2.1. Statement of compliance

The consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS), as adopted for use in the European Union. The Group has applied all new and revised standards and interpretations published by IASB and applicable to the Group's activities which are effective for financial years starting on 1 January 2013.

#### 2.2. Functional and presentation currency

The financial statements are presented in million euro (the functional currency of the Company), rounded to the nearest hundred thousand, unless stated otherwise.

#### 2.3. Basis of measurement

The financial statements have been prepared on a historical-cost basis, except for the financial instruments, which are measured at fair value. Non-current assets and disposal groups held for sale are valued at the lowest of the carrying amount and the fair value less cost to sell, and employee benefits are valued at the present value of the defined benefit obligations, less plan assets. Changes in fair value of financial assets are recorded through profit and loss.

#### 2.4. Use of estimates and judgements

The preparation of financial statements in accordance with IFRS requires management to make judgements, estimates and assumptions that could affect the reported amounts of assets and liabilities and revenue and expenses. The estimates and underlying assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgements regarding the carrying amounts of assets and liabilities. Actual results could differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision only affects this period, or in the period in which the estimate is revised and future periods if the revision affects both current and future periods.

Information about significant areas of estimation uncertainty and critical judgements in applying accounting policies that have the most significant effect on the amounts recognised in the consolidated financial statements is included in the following notes:

- Deferred tax assets are recognized for the carry forward
  of unused tax losses and unused tax credits to the extent
  that it is probable that future taxable profit will be available
  against which the unused tax losses and unused tax credits
  can be utilized. In making its judgment, management takes
  into account elements such as long-term business strategy
  and tax planning opportunities (see note 6.6). Tax receivable:
  recovery of the tax receivables of Elia System Operator is
  deemed highly probable (see note 5.5);
- Credit risk related to customers: management closely reviews the outstanding trade receivables, also considering ageing, payment history and credit risk coverage (cf. note 7.2);
- Employee benefits: the Group has defined benefit plans which are disclosed in note 6.12. The calculation of the liabilities or assets related to these plans is based on actuarial and statistical assumptions. This is for example the case for the present value of future pension liabilities. The present value is amongst others impacted by changes in discount rates, and financial assumptions such as future increases in salary. Next to that demographic assumptions, such as average assumed retirement age, also impact the present value of future pension liabilities;
- Provisions for environmental remediation costs: at each yearend an estimate is made of future expenses in respect of soil remediation, based on the advice of an external expert. The extent of remediation costs is dependent on a limited number of uncertainties, amongst others, the identification of new soil contaminations;
- Provisions for "litigation" and for "rights to use land" are based on the value of the claims filed or on the estimated amount of the risk exposure. The expected timing of the related cash outflow depends on the progress and the duration of the associated process/procedures (cf. note 6.13);
- Impairment: the Group performs impairment tests on goodwill
  and on cash-generating units at reporting date, and whenever
  there are indicators that the carrying amount might be higher
  than the recoverable amount. This analysis is based upon
  assumptions such as market evolution, market share, margin
  evolution and discount rates (see note 6.2);
- Lease accounting: more information can be found in note 7.3;
- Hedging: changes in the fair value of the derivative hedging instrument designated as a cash flow hedge are recognised directly in other comprehensive income (OCI) to the extent that the hedge is effective. To the extent that the hedge is ineffective, changes in fair value are recognised in profit or loss (see note 7.2).

The accounting policies set out hereafter have been applied consistently to all the periods presented in these financial statements and have been applied by all Group entities.

#### 2.5. Approval by the Board of Directors

These consolidated financial statements were authorised for issue by the Board of Directors on 27 March 2014.

### 3. Significant accounting policies

## 3.1. Initial application of new, revised or amended standards and interpretations

The accounting policies adopted are consistent with those of the previous financial year except for the following new, amended or revised **IASB** pronouncements that have been adopted as of January 1, 2013:

- Amendments to IAS 1 Presentation of Items of Other Comprehensive Income;
- Amendments to IAS 12 Recovery of underlying assets;
- Amendments to IAS 19 Employee Benefits;
- Amendments to IFRS 7 Disclosures –
   Offsetting Financial Assets and Financial Liabilities;
- Improvements to IFRS (issued May 2012);
- IFRS 13 Fair Value Measurements;
- IFRIC 20 Stripping Costs in the Production Phase of a Surface Mine; and
- · Amendments to IFRS 1 Government Loans.

Not all of these standards and amendments impact the Group's consolidated financial statements. If a standard or amendment affects the Group, it is described, together with the impact hereunder.

The impact of the initial application of the amended IAS 1 is shown in the consolidated statement of comprehensive income, in which a distinction was made between the items that may be reclassified subsequently to profit or loss (such as exchange differences on foreign operations or the effective portion of changes in fair value of cash flow hedges) and the items which will never be reclassified to profit or loss (such as actuarial gains or losses on defined benefit plans).

The Group applied IAS 19 (Revised 2011) retrospectively in the current period in accordance with the transitional provisions set out in the revised standard. The opening statement of financial position of the earliest comparative period presented (1 January 2012) and the comparative figures have not been impacted by the application of IAS 19R (we refer to note 6.12) for the following reasons:

Both the rate of return on plan assets (compliant with the previous version of IAS 19 applicable until 31 December 2012) and the discount rate used to calculate the defined benefit liability/asset are independently calculated by different actuarial experts. These calculations resulted in an expected rate of return on plan assets close/equal to the discount rate used to calculate the defined benefit liability/asset at the start of each annual reporting period;

- All actuarial gains or losses were already directly recognized in other comprehensive income; and
- There were no unrecognized past service costs.

IFRS 13 establishes a single source of guidance under IFRS for all fair value measurements. IFRS 13 does not change when an entity is required to use fair value, but rather provides guidance on how to measure fair value under IFRS. IFRS 13 defines fair value as an exit price. Application of IFRS 13 has not materially impacted the fair value measurements of the Group. The fair value hierarchy is provided in Note 6.17.

Elia Group did not early adopt any new IFRS standards, amendments to standards or interpretations.

#### 3.2. Basis of consolidation

#### **SUBSIDIARIES**

A subsidiary is an entity that is controlled by the company. Control means that the company has the power to directly or indirectly govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, potential voting rights that are currently exercisable or convertible are taken into account. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. The accounting policies of subsidiaries have been changed when necessary to align them with the policies adopted by the Group. Losses applicable to the non-controlling interests in a subsidiary are allocated to the non-controlling interests even if doing so causes the non-controlling interests to have a deficit balance.

#### ASSOCIATED COMPANIES

Associated companies are those companies in which the company has significant influence, but not control, over the financial and operating policies. The consolidated financial statements include the Group's share of the total recognised profits and losses of associated companies on the basis of the equity method, from the date that significant influence commences until the date that significant influence ceases. When the Group's share of the losses exceeds its interest in an associated company, the Group's carrying amount is reduced to nil and further losses are not recognised except to the extent that the Group has incurred legal or constructive obligations or has made payments on behalf of an associated company.

#### JOINT VENTURES

'Joint ventures' refers to jointly controlled entities, established pursuant to a contractual agreement and subject to the required approval for strategic, financial and operating decisions. Investments in joint ventures are consolidated proportionally: a proportionate part of the assets, equities & liabilities and income and expenditure statements must be in accordance with IFRS as applied by Elia, with similar items in the consolidated figures grouped into the same category. The gain or loss realised via the acquisition will be recognised as a surplus or as gain on bargain purchase.

#### LOSS OF CONTROL

Upon the loss of control, the Group derecognizes the assets and liabilities of the subsidiary, any non-controlling interests and the other components of other comprehensive income related to the subsidiary. Any surplus or deficit arising on the loss of control is recognized in profit or loss. If the Group retains any interest in the previous subsidiary, then such interest is measured at fair value at the date that control is lost. Subsequently it is accounted for as an equity-accounted investee or as an available-for-sale financial asset depending on the level of influence retained.

#### **ELIMINATION OF INTRA-GROUP TRANSACTIONS**

Intra-Group balances and any unrealised gains or losses or revenue and expenses arising from intra-Group transactions are eliminated when preparing the consolidated financial statements.

Unrealised gains from transactions with associated companies are eliminated to the extent of the Group's interest in the entity. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence for impairment.

#### 3.3. Foreign currency translation

#### FOREIGN CURRENCY TRANSACTIONS AND BALANCES

Transactions in foreign currencies are converted into the functional currency of the Group, at the foreign exchange rate on the date of the transaction. Monetary assets and liabilities denominated in foreign currencies on the balance sheet date are converted at the foreign exchange rate on that date. Foreign exchange differences arising on conversion are recognised in profit or loss.

Non-monetary assets and liabilities denominated in foreign currencies that are valued in terms of historical cost are converted at the exchange rate on the date of the transaction.

#### **FOREIGN OPERATIONS**

A foreign operation is an entity that is a subsidiary, associate, joint venture or branch of the reporting entity, the activities of which are based or conducted in a country or currency other than those of the reporting entity.

The financial statements of all Group entities that have a functional currency different from the Group's presentation currency are translated into the presentation currency as follows:

- Balance sheets are translated at the exchange rate at reporting date,
- Income statements are translated at the average exchange rate of the year,
- Shareholder's equity is translated at historical exchange rate.

Exchange differences arising from the translation of the net investment in foreign subsidiaries, joint ventures and associates at closing exchange rates are included in shareholder's equity under "OCI: exchange differences" as part of the "Other comprehensive income". At (partial) disposal of foreign subsidiaries,

joint ventures and associates, (part of) cumulative translation adjustments are recognized in the income statement as part of the gain/loss of the sale.

#### 3.4. Financial instruments

#### **DERIVATIVE FINANCIAL INSTRUMENTS**

The Group sometimes uses derivative financial instruments to hedge its exposure to foreign exchange and interest rate risks arising from operating, financing and investment activities. In accordance with its treasury policy, the Group neither holds nor issues derivative financial instruments for trading purposes. However, derivatives that do not qualify for hedge accounting are accounted for as instruments held for trading purposes.

Derivative financial instruments are recognised initially at fair value. Any gain or loss resulting from changes in the fair value is immediately booked in the income statement. Where derivative financial instruments qualify for hedge accounting, the reflection of any resultant gain or loss depends on the nature of the item being hedged.

The fair value of interest rate swaps is the estimated amount that the Group would receive or pay to terminate the swap at the end of the reporting period, taking into account the current interest rates and the current creditworthiness of the swap counterparties and the Group. The fair value of forward exchange contracts is their quoted market price at the end of the reporting period, i.e. the present value of the quoted forward price.

## DERIVATIVES USED AS HEDGING INSTRUMENTS Cash-flow hedges

Changes in the fair value of the derivative hedging instrument designated as a cash flow hedge are recognised directly in other comprehensive income ("OCI") to the extent that the hedge is effective. To the extent that the hedge is ineffective, changes in fair value are recognised in profit or loss.

If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated or exercised, hedge accounting is discontinued prospectively. The cumulative gain or loss previously recognised in OCI remains there until the forecast transaction occurs. When the hedged item is a non-financial asset, the amount recognised in OCI is transferred, where justified, to the carrying amount of the asset. In other cases the amount recognised in OCI is transferred to profit or loss in the same period that the hedged item affects profit or loss.

When a derivative or hedge relationship terminates, cumulative gains or losses still remain in OCI provided that the hedged transaction is still expected to occur. If the hedged transaction is no longer expected to take place, the cumulative unrealised gain or loss is removed from OCI and is immediately recognised in profit or loss.

#### Hedging of monetary assets and liabilities

Hedge accounting is not applied to derivative instruments that economically hedge monetary assets and liabilities denominated in foreign currencies. Changes in the fair value of such derivatives are recognised in profit or loss of foreign currency gains and losses.

#### 3.5. Balance sheet items

#### PROPERTY, PLANT AND EQUIPMENT

#### Owned assets

Items of property, plant and equipment are stated at cost (including the directly allocated costs such as finance costs) less accumulated depreciation and impairment losses (see chapter "Impairment"). The cost of self-produced assets comprises the cost of materials, of direct labour and, where relevant, of the initial estimate of the costs of dismantling and removing the assets and restoring the site where the assets were located. If parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items of property, plant and equipment.

#### Leased assets

Leases under the terms of which the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. Fixed assets used via a finance lease are stated at an amount equal to the lower of the fair value and the present value of the minimum lease payments at the start of the lease, less accumulated depreciation (see hereafter) and impairment losses (see chapter "Impairment"). Lease payments are accounted for as described in the chapter "Expenses".

#### Subsequent costs

The Group recognises in the carrying amount of an item of property, plant and equipment the subsequent costs of replacing part of such an item when that cost is incurred, only when it is probable that the future economic benefits embodied in the item will flow to the Group and the cost of the item can be measured reliably. All other costs, such as repair and maintenance costs, are recognised in profit or loss as and when they are incurred.

#### Depreciation

Depreciation is recognised in profit or loss on a straight-line basis over the estimated useful life of each component of an item of property, plant and equipment. Land is not depreciated. The applied depreciation percentages can be found in the table hereafter.

Depreciation methods, remaining useful lives and residual values of the property, plant and equipment are reassessed annually and are prospectively adjusted as the occasion arises.

	%
Administrative buildings	2.00
Industrial buildings	2.00 - 4.00
Overhead lines	2.00 - 4.00
Underground cables	2.00 - 5.00
Offshore cables	2.50 - 5.00
Substations (facilities and machines)	2.50 - 6.67
Remote control	3.33 – 12.50
Dispatching	4.00 - 10.00
Other property plant and equipment: fitting out rented buildings	contractual period
Vehicles	6.67 – 20.00
Tools and office furniture	6.67 – 20.00
Hardware	25.00 - 33.00

#### Dismantling obligation

Provision is made for decommissioning and environmental costs, based on future estimated expenditures, discounted to present values. An initial estimate of decommissioning and environmental costs attributable to property, plant and equipment is recorded as part of the original cost of the related property, plant and equipment.

Changes in the provision arising from revised estimates or discount rates or changes in the expected timing of expenditures that relate to property, plant or equipment are recorded as adjustments to their carrying value and depreciated prospectively over their remaining estimated economic useful lives; otherwise such changes are recognised in the income statement.

The unwinding of the discount is included within the income statement as a financing charge.

#### **De-recognition**

An asset is no longer recognised on the balance sheet when the asset is subject to disposal or when no future economic benefits are expected from its use or disposal. Gains or losses arising from the de-recognition of the asset from the balance sheet (which is determined as the difference between the net disposal proceeds and the carrying amount of the asset) are included in profit or loss, under other income / other expenses, during the year in which the asset was derecognised from the balance sheet.

#### INTANGIBLE ASSETS

#### **Business combinations and goodwill**

Goodwill arises on the acquisition of subsidiaries, joint ventures and associates and represents the excess of the consideration transferred over the Group's interest in the net fair value of the net identifiable assets, liabilities and contingent liabilities of the acquiree.

The Group measures goodwill at the acquisition date as:

- the fair value of the consideration transferred; plus
- the recognised amount of any non-controlling interest in the acquiree; plus
- if the business combination is achieved in stages, the fair value of the pre-existing equity interest in the acquiree; less
- the fair value of the identifiable assets acquired and liabilities at acquisition date.

When the excess is negative, a bargain purchase gain is recognised immediately in profit or loss.

The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognised in profit or loss.

Transactions costs, other than those associated with the issue of debt or equity securities, that the Group incurs in connection with a business combination are expensed as incurred.

Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity, then it is not re-measured and settlement is accounted for within equity. Otherwise, subsequent changes in the fair value of the contingent consideration are recognised in profit or loss.

Goodwill is stated at cost less accumulated impairment losses. Goodwill is allocated to cash-generating units and is not amortised but tested annually for impairment (see chapter "Impairment"). In the case of associated companies, the carrying amount of goodwill is included in the carrying amount of the investment in the associated company.

#### Computer software

Software licences acquired by the Group are stated at cost less accumulated amortisation (see hereafter) and impairment losses (see chapter "Impairment").

Expenditure for research activities undertaken with the prospect of developing software within the Group is recognised in profit or loss as expenditure as incurred. Expenditure for the development phase of software developed within the Group is capitalised if:

- the costs of development can be measured reliably,
- the software is technically and commercially feasible and future economic benefits are likely,
- the Group plans and has sufficient resources to complete development,
- the Group plans to use the software.

The capitalised expenditure includes cost of material, direct labour costs and overhead costs that are directly attributable to preparing the software for its use. Other costs are recognised in profit or loss as incurred.

#### Licenses, patents and similar rights

Expenditure on acquired licences, patents, trademarks and similar rights are capitalised and amortised on a straight-line basis over the contractual period, if any, or the estimated useful life.

#### Subsequent expenditure

Subsequent expenditure on capitalised intangible assets is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is recognised in profit or loss as expenditure as incurred.

#### Amortisation

Amortisation is recognised in profit or loss on a straight-line basis over the estimated useful life of intangible assets, unless the useful life is indefinite. Goodwill and intangible assets are tested systematically for impairment on each end of the reporting period. Software is amortised from the date it is available for use. The estimated useful lives are as follows:

%

Licences	20.00
Concessions	contractual period
Computer software	20.00 - 25.00

Depreciation methods, remaining useful lives, and residual values of intangible assets are reassessed annually and are prospectively adjusted as the occasion arises.

#### **INVESTMENTS**

Each type of investment is recognised on the date of the transaction.

#### Investments in equity securities

Investments in equity securities are undertakings in which the Group does not have significant influence or control. This is the case in undertakings where the Group owns less than 20% of the voting rights. Such investments are designated as available-for-sale financial assets and are measured at fair value. Any resulting changes in fair value, except those related to impairment losses, are recognised directly in other comprehensive income ("OCI"). On disposal of an investment, the cumulative gain or loss previously recognised directly in OCI is recognised in profit or loss.

The equity investees are measured at cost if there is no quoted price in an active market and the fair value cannot be measured reliably.

#### Investments in debt instruments

Investments in debt securities classified as held for trading purposes or as being available-for-sale are carried at fair value, with any resulting gain or loss respectively recognised in profit or loss or directly in equity. The fair value of these investments is determined as the quoted bid price at the end of the report-

ing period. Impairment charges and foreign exchange gains and losses are recognised in profit or loss. Investments in debt securities classified as held to maturity are measured at amortised cost.

#### Other investments

Other investments held by the Group are classified as availablefor-sale and are measured at fair value, with any resulting gain or loss recognised directly in equity. Impairment charges are recognised in OCI (see chapter "Impairment").

#### TRADE AND OTHER RECEIVABLES

#### Construction work in progress

Construction work in progress is stated at cost price plus profit based on progress made to date, less a provision for foreseeable losses and less progress billing. The cost price comprises all expenditure directly related to specific projects, plus an allocation of fixed and variable overheads incurred during the Group's contract activities based on normal operating capacity.

#### Lease receivables

Receivables from lease contracts are stated at an amount equal to the present value of the future net lease payments at the start of the contract. The values of the receivables are reduced in the course of the lease contract by the amount of the lease payments associated with the reimbursement of the principal amount.

#### Trade and other receivables

Trade receivables and other receivables are measured at amortized cost, less the appropriate allowance for amounts regarded as unrecoverable.

#### INVENTORIES

Inventories (spare parts) are stated at the lower of cost and net realisable value. Net realisable value is the estimated selling price less the estimated costs of completion and selling expenses. The cost of inventories is based on the weighted-average-cost-price method. The cost includes the expenditure incurred in acquiring the inventories, and the direct costs of bringing them to their location and making them operational.

Write-offs of inventories to net realisable value are recognised in the period in which the write-offs occurred.

#### CASH AND CASH EQUIVALENTS

Cash and cash equivalents comprise cash balances, bank balances and deposits that can be withdrawn on demand. Overdrafts that are repayable on demand and form an integral part of the Group's cash management are included as a component of cash and cash equivalents for the purpose of the statement of cash flows.

#### IMPAIRMENT - NON FINANCIAL ASSETS

The carrying amount of the Group's assets, excluding inventories (see chapter "Inventories") and deferred taxes (see chapter "Income taxes"), are reviewed at the end of the reporting period for each asset to determine whether there is any indication of impairment. If any such indication exists, the recoverable amount of the asset is estimated.

The recoverable amount of goodwill and intangible assets with an indefinite useful life and intangible assets that are not yet available for use is estimated at the end of each reporting period.

An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in profit or loss. Recognised impairment losses relating to cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to cash-generating units and then to reduce the carrying amount of the other assets in the units on a pro-rata basis.

After recognition of impairment losses, the depreciation costs for the asset will be adjusted for the future.

#### Calculation of the recoverable amount

The recoverable amount of intangible assets and property, plant and equipment is determined as the higher of their fair value less costs to sell or value in use. In assessing value in use, the expected future cash flows are discounted to their present value using a pre-tax discount rate that reflects both the current market assessment of the time value of money and the risks specific to the asset.

The Group's assets do not generate cash flow that is independent from other assets and the recoverable amount is therefore determined for the cash-generating unit (i.e. the entire high-voltage network) to which the asset belongs. This is also the level at which the Group administers its goodwill and reaps the economic benefits of acquired goodwill.

#### Reversals of impairment

An impairment loss in respect of goodwill is not reversed. Impairment loss on other assets is reversed if there have been changes in the estimates used to determine the recoverable amount.

An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

#### IMPAIRMENT - FINANCIAL ASSETS

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount and the present value of the estimated future cash flows discounted at the asset's original effective interest rate. Losses are recognised in profit or loss and reflected in an allowance account against loans and receivables or held-to-maturity investments securities. Interest on the impaired asset continues to be recognised. When an event occurring after the impairment was recognised causes the amount of impairment

loss to decrease, the decrease in impairment loss is reversed through profit or loss.

Impairment losses on available-for-sale financial assets are recognized by reclassifying the losses accumulated in the fair value reserve in equity to profit or loss. The cumulative loss that is reclassified from equity to profit or loss is the difference between the acquisition cost, net of any principal repayment and amortisation, and the current value, less any impairment loss recognized previously in profit or loss. Changes in cumulative impairment losses attributable to application of the effective interest method are reflected as a component of interest income. If, in a subsequent period, the fair value of an impaired available-for-sale debt security increases and the increase can be related objectively to an event occurring after the impairment loss was recognised, then the impairment loss is reversed, with the amount of the reversal recognised in profit or loss. However, any subsequent recovery in the fair value of an impaired available-for-sale equity security is recognised in other comprehensive income.

#### SHARE CAPITAL

#### **Transaction costs**

Transaction costs in respect of the issuing of capital are deducted from the capital received.

#### **Dividends**

Dividends are recognised as a liability in the period in which they are declared.

#### INTEREST-BEARING LOANS

Interest-bearing loans are recognised initially at fair value less related transaction costs. Subsequent to initial recognition, interest-bearing loans are stated at amortised cost price with any difference between cost price and redemption value being recognised in profit or loss over the period of the loans on an effective interest basis.

#### **EMPLOYEE BENEFITS**

#### **Defined-contribution plans**

Obligations related to contributions to defined-contribution pension plans are recognised as an expense in profit or loss as incurred.

#### Defined-benefit plans

For defined-benefit plans, the pension expenses are assessed on an annual basis by accredited actuaries separately for each plan by using the projected unit credit method. The estimated future benefit that employees have earned in return for their service in the current and prior periods is discounted to determine its present value, and the fair value of any plan assets is deducted. The discount rate is the interest rate as at the end of the reporting period on high-quality bonds which have maturity dates that approximate the terms of the Group's obligations and that are denominated in the currency in which the benefits are expected to be paid. When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognised as an expense in profit or loss at the earlier of the

following dates:

- a) When the plan amendment or curtailment occurs; or
- b) When the entity recognizes related restructuring costs under IAS 37 or termination benefits.

Where the calculation results in a benefit to the Group, the recognised asset is limited to the present value of any future refunds from the plan or reductions in future contributions to the plan.

#### Other long-term employee benefits

The Group's net obligation in respect of long-term service benefits, other than pension plans, is assessed on an annual basis by accredited actuaries. The net obligation is calculated using the projected unit credit method and is the amount of future benefit that employees have earned in return for their service in the current and previous periods. The obligation is discounted to its present value and the fair value of any related assets is deducted. The discount rate is the yield as at the end of the reporting period on high-quality bonds having maturity dates that approximate to the terms of the Group's obligations and that are denominated in the currency in which the benefits are expected to be paid.

#### Short-term employee benefits

Short-term employee benefits are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognised as for the amount expected to be paid out under a short-term cash bonus or profit-sharing plans if the Group has a legal or constructive obligation to pay this amount as a result of the past service provided by the employee and the obligation can be estimated reliably.

#### PROVISIONS

A provision is recognised in the balance sheet when the Group has a current legal or constructive obligation as a result of a past event and it is likely that an outflow of economic benefits of which a reliable estimate can be made - will be required to settle the obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects the current market assessment of the time value of money and, where appropriate, of the risks specific to the liability.

If the Group expects to recover some or all of the provisions from a third party, the compensation is only included as a separate asset if it is virtually certain that said compensation will be awarded. The cost connected to a provision is included in profit or loss net of any compensation.

The total estimated cost of dismantling and disposal of an asset are, if applicable, recognised as property, plant and equipment and depreciated over the asset's entire useful life. The total estimated cost of dismantling and of disposal of the asset, is posted as provisions for the discounted current value. If the amount is discounted, the increase of the provision due to the lapse of time is classified as finance expenses.

#### TRADE AND OTHER PAYABLES

Trade and other payables are stated at amortised cost.

#### **GOVERNMENT GRANTS**

Government grants are recognised when it is reasonably certain that the Group will receive the grant and that all underlying conditions will be met. Grants related to an asset are presented under other liabilities and will be recognised in the income statement on a systematic basis over the expected useful life of the related asset. Grants related to expense items are recognised in the income statement in the same period as the expenses, for which the grant was received. Government grants are presented as other operating income in the income statement.

#### 3.6. Income statement items

#### **REVENUE**

Revenue is recognised when it is probable that future economic benefits associated with the transaction will flow to the entity and that these benefits can be measured reliably and recovery of the compensation due is likely. Revenues include the changes in the balance settlement mechanism. See note 6.16. Revenue represents the fair value of the consideration received in the ordinary course of the Group's activities.

#### Goods sold and services rendered

Revenue from services and the sale of goods is recognised in profit or loss when the significant risks and rewards of ownership have been transferred to the buyer.

#### **Construction work in progress**

As soon as the outcome of a construction contract can be estimated reliably, contract revenue and expenses are recognised in profit or loss in proportion to the stage of completion of the contract. An expected loss on a contract is immediately recognised in profit or loss.

#### Transfer of assets from customers

The revenue from customers (financial contribution) for the construction of connections and related grid enhancement to the high-voltage grid is recognised in profit or loss on the basis of the stage reached in recovery of the underlying property, plant and equipment.

#### Other income

Other income is recognized when it is earned or when the related service is performed.

#### **EXPENSES**

#### Operating lease payments

Payments made under operating leases are recognised in profit or loss on a straight-line basis over the term of the lease. Lease incentives received to conclude the leasing agreement are recognised in profit or loss as an integral part of the total lease expenses.

#### FINANCE INCOME AND EXPENSES

Finance expenses comprise interest payable on borrowings, calculated using the effective interest rate method, foreign exchange losses, gains on currency hedging instruments offsetting currency losses, results on interest rate hedging instruments, losses on hedging instruments that are not part of a hedge accounting relationship, losses on financial assets classified as for trading purposes and impairment losses on available-for-sale financial assets as well as any losses from hedge ineffectiveness. Net finance expenses comprise interest on loans, calculated using the effective interest rate method and foreign exchange gains and losses.

Finance income includes amongst others interest receivables on bank deposits, recognised in profit or loss as it accrues using the effective interest rate method.

Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in profit or loss using the effective interest method.

#### **INCOME TAXES**

Income taxes comprise current and deferred tax. Income tax expense is recognised in profit or loss, except to the extent that it relates to items recognised directly in equity.

Current tax is the expected tax payable on taxable income of the year, using tax rates enacted or substantively enacted at the end of the reporting period, and any adjustments to tax payable in respect of previous years.

Deferred tax is recognised using the balance sheet method, on temporary differences arising between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for the following temporary differences: the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit, and differences relating to investments in subsidiaries and jointly controlled entities to the extent that it is probable that they will not reverse in the foreseeable future. In addition, deferred tax is not recognised for taxable temporary differences arising from initial recognition of goodwill. Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they are reversed, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different

tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

A deferred tax asset is recognised only to the extent that it is likely that future taxable profits will be available against which the asset can be utilised. Deferred tax assets are reduced to the extent that it is no longer likely that the related tax benefit will be realised.

Additional income taxes that arise from the distribution of dividends are recognised at the same time as the liability to pay the related dividend.

## 3.7. Standards and Interpretations issued but not yet effective

The standards, interpretations or amendments listed hereafter are published on the date of approval of these consolidated financial statements but are not yet effective, and the group did not opt for early adoption:

- IAS 32 Offsetting Financial Assets and Financial Liabilities —
   Amendments to IAS 32 (applicable for annual periods beginning on or after January 1, 2014, endorsed by the EU).
   The amendment adds application guidance to the existing financial asset and financial liabilities offsetting requirements in IAS 32. The Group believes that the initial application of the amendment should have minimal impact on its consolidated financial statements.
- IFRS 9 Financial instruments (effective date still to be determined) the Group continues reviewing the revised guidance and the ongoing progress and subsequent changes made by the IASB with respect to the new standard in order to assess the full impact IFRS 9 might have on its consolidated financial statements, but will only be able to conclude once the IASB has finalized the development of IFRS 9.
- IFRS 10 Consolidated Financial Statements and amendments to IAS 27 Separate Financial Statements (applicable for annual periods beginning on or after January 1, 2014, endorsed by the EU) (see below table);
- IFRS 11 Joint Arrangements and amendments to IAS 28 Investments in Associates and Joint Ventures (applicable for annual periods beginning on or after January 1, 2014, endorsed by the EU);
- IFRS 12 Disclosures of Interests in Other Entities (applicable for annual periods beginning on or after January 1, 2014, endorsed by the EU) – The standard includes the disclosure requirements for all forms of interests in other entities, including joint arrangements, associates, special purpose vehicles and other off balance sheet vehicles. The disclosures are generally more extensive than under current IFRS guidance.
- Transition Guidance (Amendments to IFRS 10, IFRS 11 and IFRS 12) (applicable for annual periods on or after January 1, 2014, endorsed by the EU): On June 28, 2012, the IASB issued an amendment to IFRS 10, IFRS 11 and IFRS 12 which

clarifies that the "date of initial application" means "the beginning of the annual reporting period" in which these standards have to be applied for the first time. The requirement means that for Elia Group the date of initial application of these standards will be January 1, 2014.

- Investment Entities: Amendments to IFRS 10, IFRS 12 and IAS 27 (applicable for annual periods beginning on or after January 1, 2014, endorsed by the EU): On October 31, 2012, the IASB issued an amendment to IFRS 10, IFRS 12 and IAS 27 that introduced an exception to the principle that all subsidiaries shall be consolidated. This amendment defines the term investment entity and requires a parent that is an investment entity to measure its investments in particular subsidiaries at fair value through profit or loss in accordance with IAS 39. The Group expects that the new guidance will have no impact on its consolidated financial statements.
- IFRIC 21 Levies (applicable for annual periods beginning on or after January 1, 2014) – the adoption of this new interpretation and her impact on the results of the Group is currently being investigated.
- IAS 36 Recoverable Amount Disclosures for Non-Financial Assets Amendments to IAS 36 (applicable for annual periods beginning on or after 1 January 2014, endorsed by the EU). The amendments clarify the disclosure requirements in respect of fair value less costs of disposal. In general the amendments increase the number of disclosures. The Group believes that the application of these amendments will have minimal to no impact on its consolidated financial statements.
- IAS 27 Separate Financial Statements (applicable for annual periods beginning on or after January 1, 2014, endorsed by the EU).
- Amendments to IAS 19 Employee Benefits Defined Benefit Plans: Employee Contributions introduce a relief that will

- reduce the complexity and burden of accounting for certain contributions from employees or third parties. The amendments which become mandatory for the Group's 2015 consolidated financial statements, are not expected to have a material impact on the Group's consolidated financial statements.
- Amendments to IAS 39 Financial Instruments (endorsed by the EU) – Novation of Derivatives and Continuation of Hedge Accounting add a limited exception to IAS 39, to provide relief from discontinuing an existing hedging relationship when a novation that was not contemplated in the original hedging documentation meets specific criteria. The amendments will become mandatory for the Group's 2014 consolidated financial statements, with retrospective application. It is expected not to have a material impact on the Group's consolidated financial statements.
- Annual Improvements to IFRS 2010-2012 cycle is a collection of minor improvements to 6 existing standards. This collection, which becomes mandatory for the Group's 2015 consolidated financial statements, is not expected to have a material impact on the Group's consolidated financial statements.
- Annual Improvements to IFRS 2011-2013 cycle is a collection of minor improvements to 4 existing standards. This collection, which becomes mandatory for the Group's 2015 consolidated financial statements, is not expected to have a material impact on the Group's consolidated financial statements.

As described under section 3.2 of the accounting rules, the group is applying the proportionate consolidation method for the entities mentioned in note 7.5, the quantitative impact on its consolidated financial statements as per 31 December 2013 (conform IAS 8) of the implementation of IFRS 10 and 11 is set out here below:

Key figures IFRS	Proportionate	<b>Equity method</b>	Difference	%
(in million €)				
CONSOLIDATED RESULTS	31.12.2013	31.12.2013	31.12.2013	(%)
Total revenues and other income	1,389.5	832.7	(556.8)	-40.1
Depreciation, amortization, impairment and				
changes in provisions	(141.5)	(104.5)	37.0	-26.2
EBITDA*	487.0	313.9	(173.1)	-35.5
Operating profit (EBIT*)	345.4	209.3	(136.1)	-39.4
Net finance costs	(108.5)	(109.2)	(0.7)	0.7
Income tax expenses	(61.5)	(23.4)	38.2	-62.0
Share of profit of equity accounted investees	0.0	99.0	99.0	n.r.
Profit attributable to the Owners of the Company	175.8	175.8	0.0	0.0
CONSOLIDATED STATEMENT OF				
FINANCIAL POSITION	31.12.2013	31.12.2013	31.12.2013	(%)
Total assets	6,532.2	5,555.7	(976.5)	-14.9
Equity, attributable to the Owners of the Company	2,209.1	2,209.1	0.0	0.0
Net financial debt	2,733.9	2,628.4	(105.5)	-3.9

 $<sup>^{\</sup>star} \quad \text{EBIT} = \text{earnings before interest and taxes} - \text{EBITDA} = \text{EBIT} + \text{depreciation} \, / \, \text{amortization} \, / \, \text{impairment and changes in provisions}.$ 

### 4. Segment reporting

The Group has opted for a geographical segmentation since this segmentation forms the basis of the Company's internal management reporting and enables the Chief Operating Decision-Maker (CODM) to evaluate and assess the type and financial profile of its activities in a transparent way.

Pursuant to IFRS 8, the Group has identified the following operating segments based on the aforementioned criteria:

- Elia Transmission (Belgium), which comprises Elia System
  Operator and the companies of which activities are directly
  linked to the role of Belgian transmission system operator
  (i.e. group before the acquisition of 50Hertz);
- 50Hertz Transmission (Germany), which comprises Eurogrid International SCRL and companies of which activities are directly linked to the role of transmission system operator in Germany.

The two operating segments also have been identified as the cash generating units of the group, as the group of assets managed by both segments independently generates cash flows.

The Chief Operating Decision-Maker (CODM) has been identified by the Group as being the Boards of Directors, the CEO's and the Management Committees of each segment. The Chief

Operating Decision-Maker periodically reviews the Group's segments performance against a certain number of indicators such as revenue, EBITDA and operating profit.

The Company's geographical segments are mainly characterized by common revenue and cost drivers and the same public service mission in their respective geographical area, but they distinguish themselves mainly at the level of the specific country related regulatory frameworks. For more details around this topic we refer to the chapter on "Regulatory framework and tariffs".

The information presented to the CODM follows the IFRS accounting policies of the Group, therefore no reconciling items have to be disclosed. Intergroup transactions are concluded on an at arm's length basis.

As described by IFRS 8 the Group is required to report segment information about each operating segment that exceeds certain quantitative thresholds. Since the operational activities of Atlantic Grid do not exceed the threshold, its operations have been aggregated in the reporting segment 50Hertz Transmission (Germany), because its activities are regularly evaluated by the CODM of that segment.

#### 4.1. Segment Elia Transmission (Belgium)

#### KEY FIGURES

Results Elia Transmission	2013	2012	Difference (%)
(in million €) – Year ended 31 December			
Total revenues and other income	832.7	770.1	8.1
- Revenues and other income	832.7	809.1	2.9
- One-off revenues and other income	0.0	(39.0)	n.r.
EBITDA*	313.9	291.6	7.6
Operating profit (EBIT*)	209.3	188.6	11.0
Finance income	13.7	10.7	28.0
Finance costs	(122.9)	(128.2)	-4.1
Income tax expenses	(23.4)	17.5	233.7
- Income tax expenses	(23.4)	(21.5)	8.8
- One-off income taxes	0.0	39.0	n.r.
Profit attributable to the Owners of the Company	77.1	89.2	-13.6
Consolidated statement of financial position	31.12.2013	31.12.2012	Difference (%)
(in million €)			
Total assets	4,885.9	4,618.4	5.8
Capital expenditures	223.2	150.0	48.8
Net financial debt	2,628.4	2,488.3	5.6

<sup>\*</sup> EBIT = earnings before interest and taxes - EBITDA = EBIT + depreciation / amortization / impairment and changes in provisions.

In 2013, **Elia Transmission's revenue** in Belgium rose by 8.1% to €832.7 million compared with the same period last year. This increase is due mainly to the one-off deduction in 2012 of the deferred tax advantage on the transferable notional interest deduction reserve, and to higher costs in connection with ancillary services and use of the European grid. The table below provides more details of changes in the various revenue components.

Detail revenues and other income	2013	2012	Difference (%)
(in million €) – Year ended 31 December			
Grid connection revenue	41.1	40.9	0.5
Grid use revenue	495.8	605.4	-18.1
Ancillary services revenue	143.7	147.7	-2.7
International revenue	67.8	31.1	118.0
Transfers of assets from customers	8.0	5.4	47.2
Other revenue	4.3	5.9	-27.1
Other income	45.2	49.6	-8.9
Subtotal revenues & other income	805.9	886.0	-9.0
Balance Settlement mechanism: deviations from approved budget	(4.8)	(33.6)	n.r.
Balance Settlement mechanism: to be refunded to the tariffs of current period	31.6	(43.3)	n.r.
Subtotal recurring revenues and other income, incl. Balance settlement mechanism	832.7	809.1	2.9%
One-off revenues and other income	0.0	(39.0)	n.r.
TOTAL REVENUES AND OTHER INCOME	832.7	770.1	8.1%

Grid connection revenue remained stable compared with 2012 at €41.1 million.

Grid use revenue and ancillary services revenue fell by 18.1% and 2.7% respectively owing to the adjustment of the costs charged to generators following introduction of the new tariffs approved by CREG. Following the Court of Appeal ruling of 6 February 2013, which annulled the earlier decision approving the transmission tariffs for 2012–2015, CREG approved an adjusted tariff proposal on 16 May 2013. In the adjusted proposal, the tariff components for generators were revised downwards and offset in the tariff components for consumers. The new tariffs for ancillary services and system operation, which are applied to the offtake of energy, took effect on 1 June 2013. The new tariffs for grid use, which are applied to power, came into effect on 1 January 2014.

The excess costs charged to generators since the start of the regulatory period 2012–2015 have been reimbursed and will be recovered through the new tariffs over the period 1 June 2013 to 31 December 2015.

International revenue rose by €36.7 million (up 118%), mainly due to higher congestion and auction revenue on the interconnections with the Netherlands and France owing to the unavailability of the Doel 3 and Tihange 2 nuclear power station units.

Following a significant decline in 2012 (down 56.1%), **revenue** from customer contributions to investments ("transfers of assets from customers") recovered partially and rose by €2.6 million (47.2%) compared with 2012.

**Other revenue** fell by 8.9% compared with 2012, primarily due to lower amounts being recovered from insurance policies.

The **settlement mechanism** encompasses deviations from the **budget approved by CREG** with regard to the non-controllable costs and revenue. The operational result was up by €4.8 million, primarily as a result of higher international revenue (€39.5 million), the lower actual average OLO (€17.2 million) and lower non-controllable costs (€5.1 million). This was largely offset by the higher incentive on replacement investments (-€1.6 million) and the lower tariff sales (down €62.9 million) following introduction of the new tariffs approved by CREG (see below). There was also a temporary tariff deficit (€31.6 million), which is being carried forward within the current tariff period.

The passing on of the deferred tax benefit in future tariffs (€39 million) booked in 2012 is the main reason for the increase in "total revenues and other income". This passing on, which does not impact the net profit, is the result of the recognition of the deferred tax benefit following a change in the legislation concerning notional interest deduction, which can now be effected on the basis of the transferable notional interest deduction reserve built up during the period 2010-2011. This deferred tax benefit, booked as a tax reduction, was recognised as a tariff liability in 2012 seeing as the benefit will be passed on to the customer in full in the form of a reduction in future tariffs.

**EBITDA** (up 7.6%) and **EBIT** (up 11%) rose significantly in 2013 compared with 2012, mainly due to the one-off booking in 2012 (see "Passing on of the deferred tax benefit in future tariffs"). Furthermore, fair remuneration fell due to a decline in the OLO from 2.98% in 2012 to 2.43% in 2013, which was partially offset by the increase in the amount passed on in the tariffs for decommissioning of fixed assets. Finally, compared with 2012 the recalculation of the provisions for future personnel liabilities also impacted on the result.

Net **finance costs** (down 7.1%) fell by €8.3 million compared with 2012, mainly due to increased activated borrowing costs following higher levels of investment in 2013, and lower financial costs on loans with variable interest rates.

**Income tax expense** (up 233.7%) was negatively affected by the one-off recognition in 2012 of a deferred tax receivable for the future tax benefit arising from the notional interest deduction reserve. However, this had no impact on the net result, as the benefit will be channelled back into future tariffs (see 'Passing on of the deferred tax benefit in future tariffs').

Consolidated IFRS profit after income tax fell 13.6% from €89.2 million in 2012 to €77.1 million in 2013 due to the following items:

- decrease in regulated profit due to lower OLO (down €7.1 million);
- increase in the amount passed on in the tariffs for decommissioning of fixed assets (up €5.8 million);
- increase in the incentive on replacement investments (up €1.5 million);
- lower cost savings and revenue (down €0.9 million);
- one-off impact of CREG's decision concerning regulated balances from 2012 (down €1.2 million); and
- decrease in IFRS adjustments in 2013 compared with 2012 (down €10.2 million), mainly due to changes in pension commitments (we refer to note 6.12).

Total assets increased by 5.8% to €4,885.9 million, while net financial debt rose by €140.1 million (5.6%).

## **4.2. Segment 50Hertz Transmission** (Germany)

The table hereafter shows the 2013 results of 50Hertz Transmission's transmission system operator activities in Germany:

Results 50Hertz Transmission (Germany)	2013	2012	Difference (%)
(in million €) 60% proportional consolidation - Year ended 31 December			
Total revenues and other income	557.6	539.4	3.4
EBITDA*	173.1	163.9	5.6
Operating profit (EBIT*)	136.1	116.8	16.5
Net finance costs	0.7	(17.5)	-104.0
Income tax expenses	(38.2)	(33.6)	13.7
Profit attributable to the Owners of the Company	98.7	65.8	50.0
Consolidated statement of financial position	31.12.2013	31.12.2012	Difference (%)
(in million €)			
Total assets	1,646.5	1,569.0	4.9
Net financial debt	105.5	422.5	-75.0

<sup>\*</sup> EBIT = earnings before interest and taxes - EBITDA = EBIT + depreciation / amortization / impairment and changes in provisions.

**50Hertz Transmission's revenue** was up 3.4% compared with the same period last year. This increase is mainly due to higher volumes of investment, which were partially offset by the disappearance of the EEG bonus and lower customer contributions to investment projects. Furthermore revenues were positively impacted for the last time by the change in the regulatory system, which already took effect last year. In 2013 costs for new investments were charged twice, namely for 2011 and for 2013. The total revenues are detailed in the table below.

Detail revenues and other income	2013	2012	Difference (%)
(in million €) – Year ended 31 December			
Vertical arid revenue	E 40. 7	392.2	38.6
Vertical grid revenue  Horizontal grid revenue	543.7 49.7	36.0	38.1
Ancillary services revenue	50.7	77.7	-34.7
Transfers of assets from customers	1.4	3.9	-64.1
Other income	21.8	32.3	-32.5
Subtotal revenue and other income	667.3	542.1	23.1
Balance settlement mechanism: deviations from approved budget	(109.7)	(2.6)	n.r.
TOTAL REVENUES AND OTHER INCOME	557.6	539.4	3.4

Vertical grid revenue (tariffs end customers) rose by €151.5 million (38.6%). Due to the required expansion of the transmission system in Germany, the increased investment activities (onshore and offshore) are generating higher returns from vertical network tariffs. Revenue also rose due to the rise in planned energy costs (primarily redispatch), and the recovery of higher levels of costs for past ancillary services. Finally, the more significant offtake in peak volumes in 2013 resulted in increased revenue from vertical network tariffs.

Horizontal grid revenue (tariffs to TSOs) generally rose (up 38%) due to the higher volume of offshore investments, given that in Germany all offshore connection investments are shared across the four German transmission system operators. This means that 50Hertz bears around 20% of these costs and passes on 80% of its own connection costs to the other three TSOs. In view of the investment programme, these costs have risen sharply resulting in higher amounts being passed on in the tariffs.

**Ancillary services revenue** (down 34.7%) decreased by €27 million, primarily due to a fall in revenue from imbalances.

Other revenue fell by €10.3 million, mainly due to the disappearance of the EEG bonus granted in 2012 in respect of 2011. The mechanism for awarding EEG bonuses was completely overhauled in 2013 meaning that the amounts allocated and feasibility of securing a bonus at all were reduced substantially.

The **settlement mechanism** includes at 50Hertz, on the one hand, the annual offsetting of deficits and surpluses arising before 2013 (€2.5 million) and, on the other, the deviations in 2013 between the costs allowed to be passed on and the actual costs (-€112.2 million). The significant operational deviation is mainly due to the exceptionally low redispatch costs as a result

of the low level of renewable energy generation, and the higher peak volumes invoiced compared with the budgeted volumes.

The sharp rise in **EBITDA** (up 5.6%) and **EBIT** (up 16.5%) is mainly due to investment. The disappearance of EEG bonuses, lower customer contributions to investment projects and higher personnel expenses were offset by lower regulatory provisions.

Net finance costs were positively influenced (down 104%) by a drop in interests that will be payable in the event of ongoing court cases being lost, and by a substantial discount effect on long-term provisions. In 2013, the German Federal Network Agency (BNetzA) decided that congestion and auction revenue no longer needed to be incorporated into tariffs within two years but could instead be spread over a 30-year period. This is because since 2012, congestion and auction revenue has to be used to fund investment which results in better congestion management. Due to this decision the congestion and auction revenue for 2012 and 2013, which need to be passed on in the tariffs, need to be discounted and result in an important and largely one-off financial income.

In addition to the significant increase in remuneration from investments, **net profit** (up 50%) was also boosted by exceptionally low net finance costs.

The increase in **income tax expense** is mainly the result of the change in pre-tax profit.

Total assets rose by 4.9% to €1,646.5 million. Net financial debt improved significantly due to the partial repayment of pre-financing of the EEG mechanism (€484.8 million as at the end of 2012, compared with €45.5 at the end of 2013). The charging of the new offshore levy and the repayment of the two term loans totalling €200 million prompted the substantial fall in net financial debt.

#### 4.3. Reconciliation of segments with total of group

Consolidated results	2013	2013	2013	2013
(in million €) - Year ended 31 December	Elia Transmission (Belgium)	50Hertz Transmission (Germany)	Consolidation entries	Elia Group
Total revenues and other income	832.7	557.6	(0.8)	1,389.5
Depreciation, amortization, impairment and				
changes in provisions	(104.5)	(37.0)	0.0	(141.5)
EBITDA	313.9	173.1	(0.1)	486.9
Operating profit (EBIT)	209.3	136.1	0.0	345.4
Finance income	13.7	0.9	(0.1)	14.5
Finance costs	(122.9)	(0.2)	0.1	(123.0)
Income tax expenses	(23.4)	(38.2)	0.1	(61.5)
Profit attributable to the Owners of the Company	77.1	98.7	0.0	175.8
Consolidated statement of financial position	31.12.2013	31.12.2013	31.12.2013	31.12.2013
(in million €)				
Total assets	4,885.9	1,646.5	(0.2)	6,532.2
Capital expenditures	223.2	247.7	0.0	470.9
Net financial debt	2,628.4	105.5	(0.1)	2,733.8

The Group has no concentration of customers in neither of the operating segments.

## 5. Items of the consolidated income statement and other comprehensive income

#### 5.1. Revenue

(in million €)	2013	2012
Revenue Transfers of assets from customers	1,313.6 9.4	1,218.7 9.3
Total revenue	1,323.0	1,228.0

We refer to the segment reporting for a breakdown of the significant categories within the revenue of the Belgian (Note 4.1) and German segment (Note 4.2).

#### 5.2. Other income

The following table details the "Other income":

(in million €)	2013	2012
Services and technical expertise	1.6	0.9
Own production	30.2	28.4
Changes in other financial assets	(4.6)	5.6
Optimal use of assets	12.8	12.1
Other	26.5	31.5
Other income	66.5	78.6

The group's own production represents the valuation of time worked on investment projects.

The optimal use of assets represents mainly income generated from contracts with Telecom operators for making available high voltage towers to several telecom operators as supporting structure for their mobile network antennas.

The section "Other" mainly consists of gains on sale of property, plant and equipment, recoverable amounts of claims paid by insurance companies, etc.

#### 5.3. Operating expenses

#### 5.3.1. COST OF MATERIALS, SERVICES AND OTHER GOODS

(in million €)	2013	2012
Raw materials, consumables and goods for resale*	32.2	35.4
Purchase of Ancillary services	439.9	417.3
Services and other goods (excl. purchase of ancillary services*)	225.4	208.3
Total	697.5	661.0

<sup>\*</sup>As result of further alignment in the reporting and consolidation tool of the Group, certain prior year comparatives have been reclassified to conform to the current year's presentation. A reclassification for an amount of €29.1 million occurred from Services and other goods (amounting to €237.4 million in the Group's IFRS annual report of 2012) to Raw materials, consumables and goods for resale (amounting to €6.3 million in the Group's IFRS annual report of 2012).

The "purchase of ancillary services" includes the costs for services which enable the Group to balance generation with demand, to maintain voltage levels and to manage congestions on its grids. The increase compared to last year is generated both by Elia Transmission (Belgium) and by 50Hertz Transmission (Germany), and can be explained by:

- again exceptional weather conditions (very windy in December);
- the continued effect of the decision of the German government to close eight nuclear power plants in 2012. These costs are recovered in future tariffs;
- the unavailability of 2 nuclear power plants in Belgium (Doel 3 and Tihange 2).

The "services and other goods" are related to maintenance of the grid, services provided by third parties, insurance, consultancy, etc.

#### 5.3.2. PERSONNEL EXPENSES

(in million €)	2013	2012	2012 as reported
Salaries and wages*	127.2	121.5	121.5
Social security contributions Pension costs*	31.1 8.1	29.8 9.8	29.8 6.5
Other personnel expenses Share based payment ex-	3.4	3.9	3.9
penses Employee benefits (excl. pen-	0.1	1.0	1.0
sions)*	9.0	4.7	8.0
Total	178.9	170.7	170.7

<sup>\*</sup>These sections include a reclassification of the figures per 31 December 2012 for comparison reasons. The pension costs now also include the obligation for pre-retirement and «exit mechanism», which was previously shown under the «post-employment benefits other than pensions» or in the above table as "Employee benefits (excl. pensions)". We refer to note 6.12 and 7.8 for more details around the reclassifications.

The increase in personnel expenses can mainly be explained by the salary increases in Germany (approx. 2.8%), the increase in the number of full time equivalents and the inflation.

For more information regarding employee benefits, see Note 6.12 Employee Benefits.

## 5.3.3 DEPRECIATION, AMORTISATION, IMPAIRMENT AND CHANGES IN PROVISIONS

(in million €)	2013	2012
Amortisation of intangible assets  Depreciation of property, plant and	9.0	8.7
equipment	140.6	139.9
Total depreciation & amortisation	149.6	148.6
Impairment of inventories and trade receivables  Total impairment	0.4 <b>0.4</b>	0.7 <b>0.7</b>
Other provisions	(7.9)	1.1
Environmental provisions	(2.9)	2.0
Provisions for litigations	2.3	(2.3)
Total changes in provisions	(8.4)	0.9
Total	141.5	150.1

The variance for impairment in respect of receivables during the year can be found in note 7.2 "Financial risk and derivative management".

A detailed description of provisions is provided in Note 6.13.

#### 5.3.4. OTHER EXPENSES

(in million €)	2013	2012
Taxes other than income tax	13.7	13.9
Loss on disposal/sale of property, plant and equipment	7.9	4.5
Other	0.3	0.1
Bonus-malus settlement of previous year	1.5	0.0
Impairment on receivables	2.9	(0.2)
Payments to municipalities	0.0	1.0
Other expenses	26.2	19.3

The 2013 expenses classified as "Bonus-malus settlement of previous year" occurred in the Belgian segment as a result of the review of the Belgian regulator (CREG) of the 2012 regulatory accounts. The regulator considered some recognized revenues as non-controllable, whereas Elia Transmission (Belgium) considered them as controllable (gross impact of €1.5 million – net impact €1.2 million).

The taxes other than income tax line mainly exist of property taxes and taxes on pylons supported by Elia Transmission (Belgium).

The impairment on receivables mainly relates to impairment losses recorded on KWK receivables of the year 2002 (German segment) for an amount of  $\leq$ 2.6 million.

#### 5.4. Net finance costs

(in million €)	2013	2012
Finance income	14.5	12.9
Interest income on investment trust, bank deposits, cash and cash equivalents Other Financial Income	2.1 12.5	3.7 9.2
Finance costs	(123.0)	(147.8)
Interest expense on eurobonds and other bank borrowings Interest expense on derivatives Other Financial costs	(117.7) (8.3) 3.0	(135.8) (12.3) 0.4
Net finance costs	(108.5)	(134.8)

The decrease in interest income is mainly due to the further decrease of the returns on deposits.

The other financial income consists mainly of the moratorium interests which are computed on the tax claim (we refer to Note 5.5 below).

The interest expenses on eurobonds and other bank borrowings decreased as a result of the expiration of the bank loan of €200.0 million of 50Hertz Transmission (Germany), partially cancelled out by the increased bond position of Elia Transmission (Belgium) (we refer to Notes 4.1 and 4.2 and Note 7.2). In addition the decrease can also be explained by the lower variable interest rates on Elia Transmission's shareholder's loan, and the increased capitalisation of borrowing costs as a result of the Group's significant investments.

For more details on net debt and loans, see Note 6.11.

#### 5.5. Income taxes

#### RECOGNISED IN PROFIT OR LOSS

The consolidated income statement includes the following taxes:

(in million €)	2013	2012
Current year	90.0	47.5
Adjustments prior years	(2.6)	2.6
Total current income tax expenses	87.4	50.1
Origination & reversal of temporary differences  Total deferred taxes	(25.9) <b>(25.9)</b>	(33.9) <b>(33.9)</b>
Total income taxes recognised in profit and loss	61.5	16.2

#### RECONCILIATION OF THE EFFECTIVE TAX RATE

The tax on the company's profit (loss) before tax differs from the theoretical amount that would arise using the Belgian statutory tax rate applicable to profits (losses) of the consolidated companies as follows:

(in million €)	2013	2012
Profit after tax	175.4	154.5
Share of profit equity accounted investees  Profit for the period	0.4 <b>175.8</b>	0.6 <b>155.1</b>
Profit for the period	175.0	100.1
Income tax expenses	61.5	16.2
Profit before income tax	237.3	171.2
Income tax using the domestic corporation tax rate  Domestic corporate income tax  Effect of the foreign tax rate	80.7 33.99% (6.1)	58.2 33.99% (4.8)
Non-deductible expenses	3.5	2.7
Adjustments prior years	(3.5)	4.0
Gain on disposal of shares	(1.0)	(0.2)
Tax losses	0.1	0.0
Tax incentives (notional interest deduction)  Recognition of DTA on NID carried forward	(18.7)	(19.2) (39.0)
Tax effect of recognition of DTA on NID not previously recognized Fairness tax Other tax free income Other	(1.2) 1.7 (0.1) 2.6	13.3 0.0 (0.4) 1.6
Total income tax expenses in profit or loss	61.5	16.2

 $<sup>^{\</sup>star}$  DTA = Deferred tax asset ; NID = Notional Interest Deduction

In 2012 a DTA on NID reserves (accumulated notional interest deduction reserve over past couple of years in Elia Asset SA) has been recognized. As a result of changes in legislation and regulatory framework in 2012 the probability significantly increased of full recovery in the future of the NID reserves and resulted in a recognition of a deferred tax asset of  $\ensuremath{\in} 39$  million (See also note 4.1 – 6.6).

As per 31 December 2013 an amount of €3.6 million was utilized (notional interest deduction reserve as per end of 2013 amounted to €104.1 million).

In 2013 the Belgian fiscal legislation changed resulting in the recognition of an additional income tax, called "Fairness tax", amounting to €1.7 million. This new fiscal topic mainly impacts companies making use of the notional interest deduction mechanism (especially Elia Asset NV).

Deferred income taxes are further discussed in Note 6.6 ('Changes in deferred tax assets and liabilities resulting from movements in temporary differences during the financial year').

#### Tax assessment

Elia received a tax assessment in early 2008 in view of taxation of the remaining tariff surpluses as at 31 December 2004. The income taxes paid total €93.8 million, including an administrative charge of 10% and an increase due to insufficient prepayments. Having consulted its tax advisor and CREG and given that similar tariff surpluses accounted for by other companies in the sector were not taxed, Elia management decided to file

a complaint that was rejected by the tax authorities. By matter of consequence, Elia filed a judicial claim for the full amount, including moratorium interest.

In 2009, the tax authorities made a similar decision on the increase of tariff surpluses in 2005 and 2006. Elia received a tax assessment of €35.8 million, including an administrative charge of 10% and an increase due to insufficient prepayments, and decided to file a complaint about this in line with the case of 2004.

The tariff surpluses that led to the additional assessment are systematically settled in tariffs over the years to come (refund to consumers) in accordance with CREG decision, meaning that this solely is a matter of a timing difference between a surplus generated in the past and a refund in the subsequent years.

If Elia's complaint is rejected, the corporate income tax paid on the remaining surpluses will automatically be offset by 'recoverable taxes' on the refund given to consumers in 2005, 2006 and 2007 and subsequent periods. In that way the basic amount of the corporate income tax can be recovered in full. If a balance is still outstanding, it will be settled using the tariff mechanism.

On Friday 23 December 2011, the Brussels Court of First Instance ruled in favour of Elia in its tax dispute¹ with the Belgian tax authorities. As a result of the ruling, the tax authorities must reimburse Elia €118.4 million, consisting of €80.2 million in taxes that were paid twice and which therefore must be reimbursed with 100% certainty, €5.1 million in prepayments, €8.5 million in administrative tax increase and €24.6 million in interest. However the tax authorities lodged appeal on 6 February 2012, thus suspending the ruling by the Court of First Instance. The Court of Appeal is not expected to rule on the case until 2016 at the earliest.

## 5.6. Share of profit of equity accounted investees

(in million €)	2013	2012
CORESO	0.0	0.0
HGRT SAS	0.3	0.3
APX (Amsterdam Power Exchange)	0.3	0.2
AMPACIMON	(0.2)	0.0
Total	0.4	0.6

The share in the results of joint ventures can be found in note 4.2 Segment 50Hertz Transmission (Germany). All companies related to the 50Hertz Transmission segment are joint ventures. There are no joint ventures in other segments.

#### 5.7. Basic earnings per share

The basic earnings per share (EPS) are calculated by dividing the net profit attributable to the shareholders of the company (€175.8 million) by the weighted average number of ordinary shares outstanding during the year (60,565,541).

#### WEIGHTED AVERAGE NUMBER OF ORDINARY SHARES

	2013	2012
Issued ordinary shares on 1 <sup>st</sup> of January	60,555,809	60,355,217
Impact of shares issued in December 2012	-	7,144
Impact of shares issued in March 2013	9,732	-
Weighted average number of shares on 31st of December	60,565,541	60,362,361

#### Diluted earnings per share

Diluted earnings per share (EPS) is determined by adjusting the profit or loss attributable to ordinary shareholders and the weighted average number of ordinary shares outstanding for the effects of all dilutive potential ordinary shares, which comprise share options granted to employees.

The diluted profit is equal to the ordinary profit per share, since there are no convertible bonds or share options.

#### Share capital and reserves per share

Share capital and reserves per share totalled €36.5 per share on 31 December 2013, compared with a value of €34.9 per share at the end of 2012.

#### 5.8. Other comprehensive income

Total comprehensive income includes both the result of the period recognised in the income statement and the other comprehensive income recognised in equity. Other comprehensive income includes all changes in equity other than owner-related changes, which are analysed in the statement of changes in equity.

The deferred taxes and the changes in fair value booked in equity by item of other comprehensive income are as follows:

(in million €)	2013	2012
Derivatives (4)	(3.1)	0.5
Actuarial gains (losses) on employee benefits	(3.7)	5.0
Total	(6.9)	5.5

<sup>1</sup> Elia's tariffs are based on estimated income and costs as well as budgeted volumes. At the end of each tariff period, this results in tariff surpluses or deficits that must be factored into future tariffs. However, in 2008 the tax authorities ruled that tariff surpluses from the past (2003-2004) should be taxed immediately while Elia, in consultation with the regulator, considered this to be a debt in respect of future tariffs. All such tariff surpluses have actually been returned to consumers since the end of 2011.

The defined benefit plan actuarial gains and losses impacted positively the OCI by an amount of €11.0 million, less the deferred taxes amounting to -€3.7 million, which can mainly be explained by changes in pension age assumptions (increase in presumed retirement age), partially cancelled out by the lower discount rate.

(in million €)	2013	2012
Net changes in fair value of interest rate swaps	(6.1)	1.0
Finance income	(6.1)	1.0
Recognised in: Hedging reserve	(6.1)	1.0

The increase in net changes in fair value of the Group's IRS can mainly be attributed to the slight increase in coupon rates which occurred at the end of 2013 as compared to end of 2012. This also impacts the deferred tax which was recorded on the derivatives and explains the increase as reflected in the 1st table.

The figures for 2012 have been adapted in above table to reflect the actual net change, instead of the gross change (€1.5 million).

The hedging reserve is discussed in detail in Note 7.2.

## 6. Items of the consolidated statement of financial position

#### 6.1. Property, plant and equipment

(in million €)	Land & buildings	Machinery & equipment	Furniture & vehicles	Other tan- gible assets	Assets under construction	Total
ACQUISITION VALUE						
Balance at 1 January 2012 Additions Disposals	<b>202.5</b> 3.4 (0.8)	<b>4,992.4</b> 57.0 (27.1)	<b>130.4</b> 8.0 (3.4)	<b>11.1</b> 0.5 (1.1)	<b>294.1</b> 244.9 0.0	<b>5,630.5</b> 313.8 (32.4)
Transfers from one heading to another	0.6	115.4	1.0	1.1	(118.0)	0.1
BALANCE AT 31 DECEMBER 2012	205.8	5,137.7	136.0	11.6	421.0	5,912.0
Balance at 1 January 2013 Additions Disposals Transfers from one heading to another	205.8 19.7 (0.2) 16.1	<b>5,137.7</b> 60.5 (50.3) 128.7	136.0 14.7 (5.8) 2.4	11.6 0.0 0.0 1.7	<b>421.0</b> 365.9 0.1 (149.0)	<b>5,912.0</b> 460.7 (56.3) (0.0)
BALANCE AT 31 DECEMBER 2013	241.3	5,276.5	147.2	13.3	638.0	6,316.3
DEPRECIATION AND IMPAIRMENT						
Balance at 1 January 2012 Depreciation Disposals Transfers from one heading to another	(24.1) (2.5) 0.3 0.0	(2,335.2) (130.6) 22.4 1.1	(110.9) (6.5) 3.4 (0.0)	(9.7) (0.3) 1.1 (1.1)	0.0 0.0 0.0 0.0	<b>(2,479.9)</b> (139.9) 27.2 0.0
BALANCE AT 31 DECEMBER 2012	(26.3)	(2,442.3)	(114.0)	(10.0)	0.0	(2,592.7)
Balance at 1 January 2013 Depreciation Disposals Transfers from one heading to another	(26.3) (2.6) 0.2 0.0	(2,442.3) (129.8) 40.9 1.5	(114.0) (7.6) 5.8 (0.0)	(10.0) (0.8) 0.0 (1.5)	0.0 0.0 0.0 0.0	(2,592.7) (140.8) 47.0 (0.0)
BALANCE AT 31 DECEMBER 2013	(28.7)	(2,529.7)	(115.9)	(12.3)	0.0	(2,686.6)
CARRYING AMOUNT						
Balance at 1 January 2012 Balance at 31 December 2012 Balance at 1 January 2013 Balance at 31 December 2013	178.5 179.5 179.5 212.6	2,657.2 2,695.4 2,695.4 2,746.8	19.5 21.9 21.9 31.4	1.4 1.6 1.6 1.0	294.1 421.0 421.0 638.0	3,150.7 3,319.3 3,319.3 3,629.8

The majority of the invested amount in 2013 in Belgium is related to the reinforcement of the high voltage substations and the construction of overhead lines.

The most important projects in Belgium are the high-voltage substations at Beerse (70 kV), La Croyére (150 kV), Bevercé (70 kV), Rechteroever (36 kV), Nieuwe Vaart (150/36 kV), Montignies (150 kV), Antoing (150 kV), Lixhe (220 kV) and Villeroux (220 kV) among others were upgraded, decontaminated and/or renovated. Furthermore, new cables were laid between Schelledorp, Hoboken and Wilrijk (70 kV), between Rodenhuize and Arcelor (150 kV), and between the BNP Paribas datacenters at Vaux-sur-Sûre and Bastogne, and the high-voltage lines between Van Eyck and Zutendaal (380 kV) and between Les Isnes and Waret (70 kV) were upgraded. Construction of a new administrative building on the Quai Monnoyer in Brussels was also completed.

The main onshore investments in Germany were in the South-West Coupling Line, the expansion of the Perleberg high-voltage substation and first-wave investment in the new 50Hertz headquarters.

The offshore capital expenditure in Germany includes the connection with the offshore wind farm Baltic II, in the Baltic Sea.

During 2013, an amount of €5.0 million borrowing costs have been capitalised on the 2013 acquisition of the assets using an average interest rate of 4.0915%.

Other liabilities relating to new investments are described in Note 7.3.

Licences/ Con-

#### 6.2. Intangible assets

		cences/ Con-	ces/ Con-	
(in million €)	Goodwill	Software	cessions	Total
ACQUISITION VALUE				
Balance at 1 January 2012	1,707.8	55.9	21.7	1,785.4
Acquired, own construction capitalised	(0.0)	12.0	0.1	12.1
BALANCE AT 31 DECEMBER 2012	1,707.8	67.9	21.8	1,797.5
Balance at 1 January 2013	1,707.8	67.9	21.8	1,797.5
Acquired, own construction capitalised	0.0	10.4	0.2	10.6
Disposals	0.0	(0.2)	(0.0)	(0.2)
BALANCE AT 31 DECEMBER 2013	1,707.8	78.0	22.0	1,807.8
AMORTISATION AND IMPAIRMENT				
Balance at 1 January 2012	0.0	(29.4)	(2.4)	(31.8)
Amortisation	0.0	(7.4)	(1.2)	(8.6)
BALANCE AT 31 DECEMBER 2012	(0.0)	(36.8)	(3.6)	(40.4)
Balance at 1 January 2013	(0.0)	(36.8)	(3.6)	(40.4)
Amortisation	0.0	(7.8)	(1.2)	(9.0)
Disposals	0.0	0.1	0.0	0.1
BALANCE AT 31 DECEMBER 2013	(0.0)	(44.6)	(4.8)	(49.4)
CARRYING AMOUNT				
Balance at 1 January 2012	1,707.8	26.5	19.3	1,753.6
Balance at 31 December 2012	1,707.8	31.1	18.2	1,757.1
Balance at 1 January 2013	1,707.8	31.1	18.2	1,757.1
Balance at 31 December 2013	1,707.8	33.5	17.2	1,758.5

Software comprises both IT applications developed by the company for operating the grid and software for the Group's normal business operations.

See Note 5.3.3 for the impact of depreciations in intangible assets on profit or loss.

The goodwill which is allocated to the CGU Elia Transmission (Belgium), amounting to €1,707.8 million, relates to the following past transactions:

(in million €)	2013	2012
Acquisition of participations in Elia Asset by Elia System Operator - 2002 Acquisition of participations in Elia Engineering by Elia Asset - 2004	1,700.1 7.7	1,700.1 7.7
Total	1,707.8	1,707.8

## IMPAIRMENT TEST FOR CASH-GENERATING UNIT ELIA TRANSMISSION (BELGIUM) CONTAINING GOODWILL

In 2002, the acquisition of Elia Asset by the company for an amount of EUR 3,304.1 million resulted in a positive consolidation difference of €1,700.1 million. This positive consolidation difference is the result of the difference between acquisition value of this economic entity and carrying amount of the assets of Elia Asset. This difference consists of different elements such as the fact that (i) Elia was appointed as a TSO for a period of 20 years, (ii) Elia has unique resources in Belgium as Elia is the owner of the whole very-high-voltage network and is the owner of (or has the right to use) 94% of the high-voltage network, and hence only Elia is entitled to propose a development plan, and (iii) Elia has the TSO know-how. At the date of acquisition, the qualification or the quantification in euro of these elements could not be performed on an objective, transparent and reliable basis and therefore, the difference could not be allocated to specific assets and was considered unallocated. Therefore, this difference has been recognised as goodwill since the first adoption of IFRS at 1 January 2005. The regulatory framework, in particular the offsetting in the tariffs of the decommissioning of fixed assets, applicable as from 2008 onwards, did not have an impact on this accounting treatment. The goodwill, as described above and the goodwill resulting from the acquisition of Elia Engineering in 2004 were allocated to the single cash-generating unit for the impairment test determined, since the income and expenses were generated by one activity, specifically the 'regulated activity in Belgium', which will also be considered as one cash-generating unit. As a result, the company assigned the carrying amount of the goodwill to one unit, the regulated activity in Belgium. Since 2004, annual impairment tests have been conducted and did not result in recognition of any impairment losses. Cash-generating units to which goodwill has been allocated are tested for impairment at least annually as the higher of their fair value less cost to sell or value in use, applying the assumptions hereafter and using the following valuation methods.

The impairment test was conducted by an independent expert and was based on the following valuation methods and applying the following assumptions (according to fair value less cost to sell methodology):

- discounting of future cash flows and using the "Regulated Asset Base" or "RAB" as the basis for the estimation of the terminal value;
- 2. discounting of future dividends;
- comparison between the previously mentioned impairment methods and those used by some comparable West European listed companies, such as Red Electrica España, Enagas, Terna, Snam Rete Gas, National Grid and Fluxys;
- 4. market valuation based on the company's share price.

The future cash flows and future dividend methods are based on the business plan for the period 2012-2020 of Elia Transmission Belgium.

The key assumptions used for this valuation are

- risk-free rate of 4.0%, based on Belgian 10-year bond rates,
- cost of debt of 4.5%,
- tax rate of 33.99%,
- · market risk premium of 6.00%,
- perpetual growth rate of 0.8%.

The independent analysis did not result in the identification of an impairment of goodwill in 2013.

#### Sensitivity to changes in assumptions

With regard to the assessment of the recoverable amount, management believes, based on the analysis of an external expert, and the current knowledge, that no reasonably possible change in any of the above key assumptions would cause material impairment losses for the cash generating unit Elia Transmission (Belgium).

## 6.3. Non-current trade and other receivables

(in million €)	2013	2012
Tax receivables Other amounts receivable	131.6 0.8	125.0 1.5
Total	132.4	126.5

Long-term receivables consist of the basic amount of tax receivable (€93.8 million) and the cumulative moratorium interest that the company could recover in the future. A detailed description can be found in Note 5.5.

#### 6.4. Equity-accounted investees

#### **INVESTMENTS IN ASSOCIATED COMPANIES**

(in million €)	2013	2012
At 1 January Change in shareholding Share of (loss)/profit	34.3 (11.3) 0.4	30.6 3.1 0.6
At 31 December	23.4	34.3

For more details related to the change in shareholding, see note 7.1.

Summary of financial data on equity-accounted investees, not corrected for the group's ownership percentage:

Name	Assets	Liabilities	Revenues	Profit/(loss)	Interest held %
2012					
Coreso SA/NV	2.5	1.1	5.3	0.1	28.5
HGRT SAS	34.7	0.1	0.0	2.5	24.5
APX - Endex bv	678.5	638.1	41.6	5.5	23.1
Ampacimon	0.0	0.0	0.0	0.0	0.0
TOTAL	715.7	639.3	46.9	8.1	
2013					
Coreso SA/NV	3.6	2.0	6.2	0.2	28.5
HGRT SAS	35.8	0.2	0.0	2.9	24.5
APX - Endex bv	626.7	593.5	27.3	3.8	29.2
Ampacimon	0.6	0.2	0.7	(0.4)	36.8
TOTAL	666.7	595.9	34.2	6.4	

The summary of financial data of joint ventures can be found in Note 4.2 Segment 50Hertz Transmission (Germany). The above mentioned liabilities only reflect the current liabilities.

#### 6.5. Other financial assets

(in million €)	2013	2012
Immediately claimable deposits Others	13.3 76.2	13.5 76.8
Total	89.5	90.3

'Immediately claimable deposits' measured at fair value for which the changes in fair value are recognised in OCI. The risk profile of these investments is discussed in Note 7.2.

The item 'Others' is mainly related to a recoverable amount of a portion of the pension liability - see Note 6.12, and also include the available for sale assets measured at cost (see "other participations" in note 7.5).

#### 6.6. Deferred tax assets and liabilities

#### RECOGNISED DEFERRED TAX ASSETS AND LIABILITIES

(in million €)	20	013	20	012
	Assets	Liabilities	Assets	Liabilities
Property, plant and equipment	1.6	(85.6)	1.6	(88.9)
Intangible assets	0.0	(9.0)	0.0	(8.8)
Inventories	0.0	(0.9)	0.0	(1.0)
Interest-bearing loans and other non-current financial liabilities	8.2	(0.5)	12.6	(0.6)
Employee benefits	35.0	0.0	39.0	0.0
Provisions	3.4	(0.8)	2.5	0.0
Accrued charges and deferred income	0.4	(2.4)	4.4	0.0
Other items	42.1	(30.8)	9.7	(32.5)
Notional interest deduction carried forward - previous accounting years	35.4	0.0	39.0	0.0
Tax asset / liability before set off	126.1	(130.0)	108.9	(131.8)
Offsetting of tax	(97.2)	97.2	(65.7)	65.7
Net tax asset / (liability)	28.9	(32.8)	43.1	(66.0)

#### CHANGES IN DEFERRED TAX ASSETS AND LIABILITIES RESULTING FROM MOVEMENTS IN TEMPORARY DIFFERENCES DURING THE FINANCIAL YEAR

(in million €)	Opening balance	Recognised in income statement	Recognised in comprehensive income	Closing balance
2012				
Property, plant and equipment	(71.0)	(16.3)	0.0	(87.3)
Intangible assets	(8.2)	(0.6)	0.0	(8.8)
Inventories	(0.9)	(0.1)	0.0	(1.0)
Interest-bearing loans and other				
non-current financial liabilities	11.4	0.2	0.5	12.1
Employee benefits	35.3	(1.3)	5.0	39.0
Provisions	2.1	0.4	0.0	2.5
Accrued charges and deferred income	(0.3)	4.7	0.0	4.4
Other items	(30.8)	8.0	0.0	(22.8)
Notional interest deduction carried forward - previous accounting years	0.0	39.0	0.0	39.0
TOTAL	(62.4)	34.0	5.5	(22.9)
2013				
Property, plant and equipment	(87.2)	3.2	0.0	(84.0)
Intangible assets	(8.8)	(0.2)	0.0	(9.0)
Inventories	(1.0)	0.2	0.0	(0.9)
Interest-bearing loans and other				
non-current financial liabilities	12.0	(1.3)	(3.1)	7.7
Employee benefits	39.0	(0.4)	(3.7)	35.0
Provisions	2.5	0.2	0.0	2.7
Accrued charges and deferred income	4.4	(6.4)	0.0	(2.0)
Other items	(22.8)	34.1	0.0	11.3
Notional interest deduction carried forward - previous accounting years	39.0	(3.6)	0.0	35.4
TOTAL	(22.9)	25.9	(6.9)	(3.9)

#### UNRECOGNISED DEFERRED TAX ASSETS

As per 31 December 2013 there are no unrecognized deferred tax assets.

As of 2012 a deferred tax asset has been recognized on the notional interest deduction reserve ( $\in$ 114.8 million per end of 2012) accumulated over the past couple of years, amounting to  $\in$ 39.0 million.

This recognition took place as a result of the changes brought in the mechanism of recuperation of notional interest reserves, which was published end of 2012, and changes to the regulatory framework.

As per 31 December 2013 an amount of €3.6 million was utilized (notional interest deduction reserve as per end of 2013 amounted to €104.1 million).

#### 6.7. Inventories

(in million €)	2013	2012
Raw materials and consumables Write-off	29.4 (13.0)	27.6 (12.6)
Total	16.4	15.0

The warehouse primarily stores replacement and spare parts for maintenance and repair work on the Group's high-voltage substations, overhead lines and underground cables.

#### 6.8. Current trade and other receivables

(in million €)	2013	2012
Work in progress	0.8	1.2
Other trade receivables and advance payments Levies	236.6 132.3	207.6 360.6
Vat, other taxes Other	4.0	18.5 37.8
Deferred charges and accrued revenues	9.2	4.9
Total	411.1	630.5

The decrease in current trade and other receivables is mainly driven by the decrease in the levies in Germany (EEG) (€17.2 million versus a receivable of €287.3 million last year), slightly counterbalanced by an increase in Belgium (€115.1 million versus a receivable of €73.3 million in 2012). This decrease can mainly be allocated to the fact that 50Hertz Transmission recuperated a major part of the prefinancing of renewable energy mechanism through higher prices charged to end-users (5.277 ct/kwh in 2013 versus 3.592 ct/kwh in 2012).

Trade receivables are non-interest bearing and are generally on terms of 10 to 30 days.

The decrease in VAT and other taxes can mainly be allocated to decreased outstanding VAT receivables.

The item 'Other' mainly consists:

- receivables on insurance companies (€3 million Elia Asset and €3.1 million in Elia Re);
- subsidy amounts to receive (€1.3 million);
- EEG related items (€2 million);
- Additional and variance margin on future contracts with the German European Energy Exchange (EEX) which were contracted for the first time in 2013 (€16.62 million).

The Group's exposure to credit and currency risks, and impairment losses related to trade and other receivables are shown in Note 7.2.

(in million €)	2013	2012
Not past due Past due 0-30 days Past due 31-60 days Past due 61 - one year	213.8 20.1 0.7 2.0	182.3 18.4 2.6 2.8
More than one year  Total (excl. impairment)  Doubtful amounts	(0.4) <b>236.3</b> 13.8	1.3 <b>207.3</b> 6.8
Amounts write offs  Total	(13.5) <b>236.6</b>	(6.5)
Total	200.0	201.0

#### 6.9. Cash and cash equivalents

(in million €)	2013	2012
Call deposits Balance at bank	279.2 158.5	108.6 57.6
Total	437.7	166.2

The cash and cash equivalents of the Group significantly increased, mainly as a result of the new eurobonds which were issued in 2013 for an amount of  $\[mathbb{e}\]$ 750 million, which was partially used to refinance the expired bond of  $\[mathbb{e}\]$ 500 million; and also as a result of the lower pre-financing position linked to the levy mechanism in Germany.

Short-term deposits are invested for periods that vary from a few days and a few weeks to several months (not exceeding 3 months), depending on immediate cash requirements, and earn interest in accordance with the interest rates for the short-term deposits. The interest rate of interest-bearing investments at the end of the reporting period varies from 0.2% to 0.95%.

An amount of €0.06 million is restricted in use as result of contractual conditions related to a subsidy granted by the European community (€6.1 million per end of 2012).

Bank-account balances earn interest in line with the variable rates of interest on the basis of daily bank deposit interest. The Group's interest rate risk and the sensitivity analysis for financial assets and liabilities are discussed in Note 7.2.

#### 6.10. Shareholders' equity

#### SHARE CAPITAL AND SHARE PREMIUM

Number of shares	Ordinary shares		
	2013	2012	
Outstanding on 1 January Issued against cash payment	60,555,809 12,420	60,355,217 200,592	
Outstanding on 31 December - paid	60,568,229	60,555,809	

The extraordinary shareholder meeting of October 25 2012 decided to execute a capital increase (in two steps/periods: one in 2012 for maximum €5.3 million and one in 2013 for maximum €0.7 million) for a total maximum amount of €6.0 million for her Belgian personnel.

In October 2012 the Elia Group gave its personnel in Belgium the opportunity to subscribe to an Elia System Operator SA capital increase (tax tranche) which resulted in a  ${\in}5.0$  million increase in the share capital and simultaneously in a  ${\in}0.3$  million increase of share premium; the number of shares outstanding rose by 200,592 shares without nominal value.

The capital of Elia System Operator SA increased by €5.9 million from €1,500.6 million to €1,506.5 million in 2012, taking into account the costs for capital increases and the share premium account increased from €8.5 million to €8.8 million.

In March 2013 the second tranche took place, following on above capital increase transaction, resulting in a  $\in$ 0.31 million increase in the share capital and simultaneously in a  $\in$ 0.04 million increase of share premium; the number of shares outstanding rose by 12,420 without nominal value.

The capital of Elia System Operation SA increased by €0.37 million from €1,506.5 million to €1,506.9 million in 2013, taking into account the costs for the capital increase and the share premium account increased from €8,8 million to €8,83 million.

#### RESERVES

In accordance with Belgian legislation, 5% of the parent company's statutory net profit must be transferred to the legal reserve each year until the legal reserve represents 10% of the capital. Within the tariff mechanism, Elia must reserve in shareholders' equity the realised surplus passed on the tariffs as a result of decommissioning fixed assets (decrease in Regulated Asset Base). In 2012, this amounted to €13.5 million. The General Meeting of 21 May 2013 decided to include that amount in the legal reserve.

As per 31 December 2013 the Group's legal reserve amounts to  $\in$ 97.2 million.

The Board of Directors can propose the payment of a dividend to shareholders up to a maximum of the available reserves and the profit carried forward from previous financial years of the parent company, including the profit of the financial year ended 31 December 2013. Shareholders must approve the dividend payment at the Annual General Meeting of Shareholders.

#### **HEDGING RESERVE**

The hedging reserve comprises the effective portion of the cumulative net change in fair value of cash-flow hedging instruments in respect of hedged transactions that have not yet occurred.

#### DIVIDEND

After the balance sheet date, the Board of Directors put forward the dividend proposal indicated hereafter.

(in €)	2013	2012
Per ordinary share entitled to dividend	1.54	1.47

At the General Meeting of Shareholders on 21 May 2013, the Board of Directors proposed payment of a gross dividend of €1.47 per share, which yields a net dividend of €1.10 per share, yielding a total amount of €89.02 million.

The Board of Directors' meeting of 27 February 2014 proposed a gross dividend of €1.54 per share. This dividend is subject to approval by shareholders at the Annual General Meeting on 20 May 2014 and is not included as a liability in the consolidated financial statements of the Group.

The total dividend will be calculated on the number of shares outstanding on 27 February 2014, which corresponds to a total of €93.28 million.

The net profit also includes the realised surplus as a result of decommissioning of fixed assets of €23.3 million to be booked in equity. The Board of Directors' meeting of 27 February 2014 decided to suggest to the Annual General Meeting that this amount be allocated to the legal reserve. The amount has not yet been posted in the legal reserve on 31 December 2013.

## 6.11. Interest-bearing loans and borrowings

(in million €)	2013	2012
Non-current borrowings Subtotal non-current borrowings	2,598.0 <b>2,598.0</b>	2,351.1 <b>2,351.1</b>
Current borrowings Accrued interests Subtotal current loans and borrowings	500.0 73.5 <b>573.5</b>	654.9 70.9 <b>725.8</b>
TOTAL	3,171.6	3,076.9

The non-current borrowings consist of the Eurobond of Elia Transmission Belgium with maturity date May 2014 for an amount of €500.0 million.

Information concerning the terms and conditions of the outstanding interest-bearing loans and borrowings is given below:

(in million €)	Maturity	Amount	Interest rate before hedging	Interest rate after hedging	prop	Current cortion (%)
			%	%	Fixed	Variable
Shareholders Loan	2022	495.8	2.76	3.18	40.34	59.66
Eurobond issues 2004 / 10 years	2014	500.0	4.75	4.75	100.00	0.00
Eurobond issues 2004 / 15 years	2019	499.1	5.25	5.25	100.00	0.00
Eurobond issues 2009 / 7 years	2016	499.2	5.63	5.63	100.00	0.00
Eurobond issues 2010 / 10 years	2020	298.2	3.87	3.87	100.00	0.00
Eurobond issues 2013 / 15 years	2028	546.4	3.25	3.25	100.00	0.00
Eurobond issues 2013 / 20 years	2033	199.2	3.50	3.50	100.00	0.00
European Investment Bank	2016	40.0	4.27	4.27	100.00	0.00
European Investment Bank	2017	20.0	4.79	4.79	100.00	0.00
TOTAL	-	3,098.0	-	-	90.45	9.55

Information concerning the contractual maturities of the Group's interest-bearing loans and borrowings (current and non-current) is given hereafter:

(in million €)	Face value	Less than 1 year	1-2 years	3-5 years	More than 5 years
Shareholders Loan	495.8	0.0	0.0	0.0	495.8
Eurobond issues	2,550.0	500.0	0.0	500.0	1,550.0
European Investment Bank	60.0	0.0	0.0	60.0	0.0
TOTAL	3,105.8	500.0	0.0	560.0	2,045.8

#### 6.12. Employee benefits

In Belgium collective agreements regulate the rights of company employees in the electricity and gas industries.

These agreements provides so called "pension supplements" based on the annual salary and the career within the company of the employee. If the employee deceases, the supplements are partially revertible to the heritor (wife/orphan). The benefits granted are linked to Elia's operating result. There is neither an external pension fund nor group insurance for these liabilities, which means that no reserves are constituted with third parties. The obligations are qualified as a defined benefit.

The collective agreement determines that active staff hired from 1 January 1993 to 31 December 2001 and all managerial/executive staff hired prior to 1 May 1999 are granted the same guarantees via a defined-benefit pension scheme. Obligations under these defined-benefit pension plans are funded through a number of pension funds for the electricity and gas industries and through insurance companies.

Personnel remunerated based on a 'salary scale' recruited after 1 June 2002 and management staff recruited after 1 May 1999 are covered by defined-contribution pension plans. For payments made after 1 January 2004, the law requires an average annual return over the career of at least 3.25% for the employer's contributions and at least 3.75% for employees' contributions, with any deficit being covered by the employer. The insurer confirmed as per end of 2013 that the annual return is at least 3.25%, and therefore no provision has been established to cover any deficit.

The expenses related to these plans were €4.7 million in 2013 and €4.1 million in 2012.

Elia Transmission Belgium also has early-retirement schemes and other post-employment benefits such as reimbursement of medical expenses and price subsidies, as well as other long-term benefits (seniority payments). Not all of these benefits are funded.

50Hertz Transmission Germany has pension schemes and early-retirement plans, mainly based on collective bargaining and works agreements as well as on individual contract regulations. The level of benefits or contribution to be provided depends on the salary and years of service of the participants.

50Hertz Transmission (Germany) also has some defined contribution plans financed via a congruent reinsured benefit fund.

The group insurance plans (both for Belgium and Germany) with a guaranteed return remain classified as defined contribution plans in accordance with IAS 19R.

Whilst in principal this type of plans result IFRS technically in the classification as a defined benefit plan, due to the lack of specific guidance regarding the valuation of the post-employment obligation for this type of post-employment benefit plan, no provision was recognized as there is no shortfall in the plans compared to the minimum guaranteed return on contributions. In the event of a shortfall, the group will recognize a provision, representing the shortfall in the plans compared to the minimum guaranteed return on contributions.

The total net liability for employee benefits obligations are as follows:

(in million €)	2013	2012
Defined benefit plans Post-employment benefits other than pensions Subtotal	53.5 54.3 <b>107.8</b>	72.4 47.1 <b>119.5</b>
Other provisions - employee benefits	0.2	0.4
TOTAL PROVISIONS FOR EMPLOYEE BENEFITS	108.0	119.9

The delta of €1.1 million (€1.3 million in 2012) as compared to the "employee benefits" shown in the consolidated statement of financial statements corresponds to the short term portion of employee benefits of 50Hertz Transmission (Germany) shown under current liabilities "provisions".

In following tables the detail is shown of the outstanding provision for employee benefits, with the split between pension cost ("Pensions") and non-pension costs ("Other"), which exists of healthcare costs, tariff benefits, jubilee benefits...

(in million €)	Pensions*		Other	
	2013	2012	2013	2012
Present value of funded defined benefit obligation	(176.8)	(191.6)	(59.4)	(51.9)
Fair value of plan assets	123.3	119.1	5.1	4.8
Funded status	(53.5)	(72.4)	(54.3)	(47.1)
NET EMPLOYEE BENEFIT LIABILITY	(53.5)	(72.4)	(54.3)	(47.1)

BENEFIT OBLIGATION	Pens	ions*	Ot	her
(in million €)	2013	2012	2013	2012
At the beginning of the period	(191.6)	(180.3)	(51.9)	(49.8)
Current service cost	(4.3)	(4.1)	(2.1)	(1.8)
nterest cost/income	(4.9)	(7.0)	(1.9)	(2.0)
Contributions from plan participants	(0.6)	(0.6)	0.0	0.0
Cost of early retirement	(0.9)	(2.6)	0.0	0.0
Changes in demographic assumptions	4.0	0.0	(0.3)	0.0
Changes in financial assumptions	4.1	(14.5)	(7.6)	(2.4)
Changes from experience adjustments	4.0	0.0	(0.4)	0.0
Past service cost	(0.5)	0.0	0.0	0.0
Payments from the plan	13.9	17.5	4.7	4.1
AT THE END OF THE PERIOD	(176.8)	(191.6)	(59.4)	(51.9)

<sup>\*</sup> Pensions also include the obligation for pre-retirement and exit mechanism («uitstapregeling»), which was previously shown under the «post-employment benefits other than pensions». For more details we refer to note 7.8.

AMOUNTS RECOGNIZED IN COMPREHENSIVE INCOME	Pensi	ions*	Other	
(in million €)	2013	2012	2013	2012
Service cost				
Current service cost	(4.9)	(4.7)	(1.8)	(2.2)
Cost of early retirement	(0.9)	(2.6)	0.0	0.0
Past service cost	(0.5)	0.0	0.0	0.0
Actuarial gains/(losses) on defined benefit obligation	0.0	0.0	(5.3)	(0.5)
Net interest on the net defined benefit liability / (asset)				
Interest cost on defined benefit obligation	(4.9)	(7.0)	(1.9)	(2.0)
Interest income on plan assets	3.2	4.5	0.0	0.0
DEFINED BENEFIT COSTS RECOGNIZED IN PROFIT OR LOSS	(8.1)	(9.8)	(9.0)	(4.7)

(in million €)	2013	2012
Breakdown of defined benefit obligation by type of plan participants	(236.2)	(243.4)
Active plan participants	(156.1)	(163.9)
Terminated plan participants with deferred benefit entitlements	(3.4)	(3.5)
Retired plan participants and beneficiaries	(76.7)	(76.0)
Breakdown of defined benefit obligation by type of benefits	(236.2)	(243.4)
Retirement and death benefits	(176.8)	(191.6)
Other post-employment benefits (medical, tariff reductions, other)	(40.4)	(37.8)
Jubilee bonuses (Seniority payments)	(19.0)	(14.0)

In determining the appropriate discount rate, the Group considers the interest rates of corporate bonds in currencies consistent with the currencies of the post-employment benefit obligation with at least an 'AA' rating or above, as set by an internationally acknowledged rating agency, and extrapolated as needed along the yield curve to correspond with the expected term of the defined benefit obligation.

A stress test is performed annually. This test verifies that the minimum funding requirements are covered to "shocks" with probabilities of occurrence of 0.5%.

The members (mostly) contribute to the financing of the retirement benefits by paying a personal contribution of type 'defined contribution' (step rate formula a%t1 + b%t2) deducted monthly from their salaries.

<sup>\*</sup> Pensions also include the obligation for pre-retirement and exit mechanism "uitstapregeling", which was previously shown under the "post-employment benefits other than pensions".

The annual balance of the defined benefit lump sum is financed by the employer by a recurrent allocation expressed as a percentage of the total payroll of the affiliates. This percentage is defined by the aggregate cost method and is reviewed annually. This method of financing consists to smooth future costs over the remaining period of the plan. The costs are estimated on projected bases (salary growth and inflation taken into account). The assumptions related to salary increase, inflation, employee turnover and age-term are defined on basis of historical statistics of the company. The mortality tables used are the ones corresponding to the observed experience within the financing vehicle. The group calculates the net interest on the net defined benefit liability (asset) using the same high quality bond discount rate (cfr above) used to measure the defined benefit obligation (the net interest approach). These assumptions are challenged on a regular basis.

Exceptional events (such as modification of the plan, change of assumptions, too short degree of coverage...) can eventually lead to outstanding payments from the sponsor.

The defined benefit plans expose the company to actuarial risks such as: investment risk, interest rate risk, longevity risk and salary risk.

#### 1. Investment risk

The present value of the defined benefit plan liability is calculated using a discount rate determined to high quality corporate bonds. The difference between the actual return on assets and the interest income on plan assets is included in the remeasurements component (OCI). Currently the plan has a relatively balanced investment presented as follows:

(%)		Elia Transmission (Belgium)		ansmission nany)
	2013	2012	2013	2012
Investments quoted in an active market	79.32	77.62	0.00	0.00
Shares (Eurozone)	14.61	8.89	0.00	0.00
Shares (Outside eurozone)	11.57	13.56	0.00	0.00
Government bonds (Eurozone)	4.21	9.25	0.00	0.00
Other bonds (Eurozone)	43.97	45.92	0.00	0.00
Other bonds (Outside eurozone)	4.96	0.00	0.00	0.00
Unquoted investments	20.68	22.39	100.00	100.00
Qualifying insurance contracts	0.00	0.00	100.00	100.00
Property	4.76	5.09	0.00	0.00
Cash and cash equivalents	1.60	2.03	0.00	0.00
Other	14.32	15.27	0.00	0.00
TOTAL IN %	100.00	100.00	100.00	100.00
TOTAL IN MILLION €	114.4	119.1	0.1	0.1

Due to the long-term nature of the plan liabilities, the board of the pension fund, of which Elia Transmission (Belgium) is a member, considers it appropriate that a reasonable portion of the plan assets should be invested in equity securities to leverage the return generated by the fund.

#### 2. Interest risk

A decrease in the bond interest rate will increase the plan liability. However, this will be partially offset by an increase in the return on the plan's debt investments.

#### 3. Longevity risk

The present value of the defined benefit plan liability is calculated by reference to the best estimate of the mortality of plan participants both during and after their employment. An increase in the life expectancy of the plan participants will increase the plan's liability. For the Belgian Defined benefit plans a study has been performed in 2013 in order to determine the mortality tables that fit the best the historical observation of the portfolio. The resulting mortality tables are the MR/FR tables for the pensioners and the MR (corrected with 5 years) / FR (without correction) for the active people.

For the German defined benefit plans no changes to the mortality table were deemed necessary (we refer to the actuarial assumptions table below for more details).

#### 4. Salary risk

The present value of the defined benefit plan liability is calculated by reference to the future salaries of plan participants. As such, an increase in the salary of the plan participants will increase the plan's liability.

#### **ACTUARIAL ASSUMPTIONS**

(in %)	Elia Transmission (Belgium) (%)		50Hertz Transmission (Germany) (%)	
	2013	2012	2013	2012
Discount rate				
- Pensions	2.92	2.85	3.50	3.60
- Post-employment benefits other than pensions	3.24	3.26	3.50	3.60
Expected average salary increase (excluded inflation)	2.00	2.00	3.00	3.00
Expected inflation	2.00	2.00	2.00	2.00
Expected increase of health benefits (included inflation)	3.00	3.00	2.00	2.00
Expected increase of tariff advantages	2.00	0.25	-	-
Average assumed retirement age - Employee: - Manager  Mortality table used	62 63	60 62	65 65	65 65
- Active personnel: - Inactive personnel:	MR(-5)/FR MR/FR	MR/FR MR/FR	Richttafeln Heubeck 2005G	Richttafeln Heubeck 2005G
Life expectancy in years of a pensioner retiring at age 65:				
For a Person aged 65 at closing date:				
- Male	22.5	22.5	18.75	18.61
- Female	22	22	22.83	22.7
(in years)				
Weighted average duration of the defined benefit obligation	9.0	9.0	16.1	16.3

The actual return on plan assets in % for 2013 for the Belgian segment corresponded to 5.17% and for the German segment to 4.87%.

The Group expects to contribute €11.5 million to its defined benefit pension plans in 2014 (no contribution by the German segment expected). The Group expects to contribute €5.44 million to its defined contribution plans in 2014 (of which €2.44 million by the German segment).

#### SENSITIVITY ANALYSIS

	Elia Transmission (Belgium)	50Hertz Transmission (Germany)
(in million EUR)	(+ = decrease / - = increase)	
Impact on the net defined benefit obligation of an increase in		
- Discount rate (0,5% movement)	9.5	(0.9)
- Average salary - excluding inflation (0,5 % movement)	(9.4)	0.1
- Inflation (0,25% movement)	(5.0)	0.4
- Healthcare care benefits (1 % movement)	(3.5)	(0.0)
- Tariff advantages (0,5 % movement)	(1.3)	(0.1)
- Life expectancy of pensioners (1 year)	(2.5)	0.3

#### ACTUARIAL GAINS AND LOSSES RECOGNISED IN OTHER COMPREHENSIVE INCOME

(in million €)	2013	2012
Cumulative amount at 1 January Recognised in the period	(13.9) 7.3	(4.0) (9.9)
Cumulative amount at 31 December	(6.7)	(13.9)

Below table represents the actuarial gains and losses recognized in other comprehensive income per nature:

(in million €)	Pensions*		Other	
	2013	2012	2013	2012
Actuarial gains/(losses) on defined benefit obligation arising from				
i) changes in demographic assumptions	4.0	0.0	0.3	0.0
ii) changes in financial assumptions	4.1	(14.5)	(3.4)	(1.9)
iii) changes from experience adjustments	4.0	0.0	0.1	0.0
Return on plan assets (excluding interest income on plan assets)	1.9	1.5	0.0	0.0
REMEASUREMENTS OF NET DEFINED BENEFIT (LIABILITY)/ASSET RECOGNISED IN OTHER COMPREHENSIVE INCOME (OCI)	14.0	(13.0)	(3.0)	(1.9)

<sup>\*</sup> Pensions also include the obligation for pre-retirement and exit mechanism "uitstapregeling", which was previously shown under the "post-employment benefits other than pensions".

#### Recoverable amount in future tariffs

In accordance with a study report issued by the CREG, management assumes it is virtually certain that some of the liability related to the pension scheme will be accepted by the CREG as reasonable expenses and will therefore be passed on in future

tariffs. Since this amount can be recovered by Elia from third parties, in application of the general definition and framework, it has been classified as an asset item. The amount of €71.1 million is included under other financial assets (see Note 6.5).

#### 6.13. Provisions

(in million €)	Environment	Litigation	Easement rights	Total
BALANCE AT 1 JANUARY 2012	19.0	17.6	41.5	78.1
Increase in provisions	3.5	9.5	2.3	15.3
Reversals of provisions	(0.3)	(5.6)	0.0	(5.9)
Utilization of provisions	(1.1)	(1.0)	(0.6)	(2.7)
Discounting of provisions	0.1	0.3	2.8	3.2
BALANCE AT 31 DECEMBER 2012	21.2	20.8	46.0	88.0
Long term portion	11.2	7.0	40.2	58.4
Short term portion	10.0	13.9	5.7	29.6
BALANCE AT 1 JANUARY 2013	21.2	20.8	46.0	88.0
Increase in provisions	1.7	4.5	2.0	8.2
Reversals of provisions	(1.1)	(5.4)	0.0	(6.5)
Utilization of provisions	(3.7)	(1.5)	(1.2)	(6.5)
Discounting of provisions	0.0	0.1	0.5	0.6
BALANCE AT 31 DECEMBER 2013	18.1	18.5	47.2	83.9
Long term portion	12.0	9.5	40.7	62.3
Short term portion	6.1	9.0	6.5	21.6

The utilization of provisions for environment are mainly related to further soil research and remediation on certain sites in Flanders, Brussels and Wallonia for a total amount of  $\in$ 3.4 million. The reversal is fully linked to sites in Flanders, for which an OVAM certification was received, and a change in the cost estimate for a site in Brussels. The increase in environmental provi-

sion of €1.7 million is mainly related to sites in Wallonia and the Flanders region, following on new estimates.

The estimates are based on the appraisal of an external expert bearing in mind the BATNEEC (Best Available Techniques Not Entailing Excessive Costs) principle.

The provision for litigation has been established to cover likely payment as a result of cases in which legal proceedings have been instituted against the Group by a third party or in which the Group is involved in a legal dispute.

The easement provision consists of likely compensation payments to landowners for easement rights related to overhead lines built in the past by the former owners of 50Hertz Transmission.

These estimates are based on the value of claims filed or on the estimated amount of the risk exposure.

The expected timing of the related cash outflow depends on the progress and duration of the associated procedures.

The changes in provisions are discussed in Note 5.3.3.

#### 6.14. Other non-current liabilities

(in million €)	2013	2012
Investments grants Other	7.9 10.2	8.3 11.1
Total	18.1	19.4

The other non-current liabilities remained in line compared to last year and consist of an accrual of €10.2 million related to an energy purchase contract (contract end date June 2026), for which at inception of the contract the full contractual amount was paid. The release occurs gradually upon buying the energy in accordance with the contractual terms.

The investment grants consist mainly of

- deferred income linked to received subsidies from the German government for the modernization of the East-German network, following on the fall of the Berlin wall; and other government subsidies (€4.9 million); and
- deferred income for capital subsidies received from different Governments for Elia Transmission (Belgium) (€3 million).

#### 6.15. Trade and other payables

(in million €)	2013	2012
Trade debts	227.1	223.7
VAT, other taxes	13.1	6.2
Remuneration & social security	27.0	25.2
Dividend	2.0	2.2
Levies	134.4	59.8
Other	67.6	34.7
Accrued liabilities*	35.5	63.0
Total	506.9	414.9
Total	300.0	1.4.0

<sup>\*</sup>As result of further alignment in the reporting and consolidation tool of the Group, certain prior year comparatives have been reclassified to conform to the current year's presentation. A reclassification for an amount of € 63 million took place from Accruals and deferred income (see below) to Trade debts.

The increase in trade and other payables by €92.0 million is mainly driven by the evolution in the levies' position. Compared to last year the Group was less in a pre-financing situations than last year (see also Note 6.8).

The decrease in accrued liabilities can mainly be explained by the fact that no accruals are outstanding anymore for horizontal offshore costs in 50Hertz Transmission (Germany), which used to be invoiced by TenneT until end of 2012 (amounting to €14.1 million), as these costs are now billed and paid in the same accounting year.

#### 6.16. Accruals and deferred income

(in million €)	2013	2012
Accruals and deferred income* Balance settlement mechanism Belgium Balance settlement mechanism Germany	7.9 105.9 184.8	6.0 131.2 79.7
Total	298.6	216.9

\*As result of further alignment in the reporting and consolidation tool of the Group, certain prior year comparatives have been reclassified to conform to the current year's presentation. A reclassification for an amount of € 63 million took place from Accruals and deferred income (amounting to € 69.1 million in the Group IFRS annual report of 2012) to Trade debts (amounting to € 223.7 million in the Group IFRS annual report of 2012).

The accruals and deferred income remained stable as compared to 2012.

The changes in the balance settlement mechanisms in Belgium and Germany in 2013 are described in the Notes 4.1 and 4.2.

The balance settlement mechanism 2013 is set out in the table here below:

(in million €)	Belgium	Germany
To be recovered from the tariffs of the current period	(31.6)	0.0
Balance period prior years to be refunded into the tariffs - period to be determined	99.7	184.8
Discount future tariffs	68.1	184.8
Moratorium interest on income tax	37.8	0.0
Balance settlement mechanism	105.9	184.8

#### 6.17 Financial instruments – fair values

The following table shows the carrying amounts and fair values of financial assets and liabilities, including their levels in the fair value hierarchy.

			Carr	ying am	ount			Fair	value	
(in million €)	Designated at fair value	Fair value - hedging instruments	Held-to-maturity investments	Loans and receivables	Other financial liabilities	Total	Level 1	Level 2	Level 3	Total
31 DECEMBER 2013										
Other financial assets	15.0	-	-	-	-	15.0	13.3	1.8	-	15.0
Trade and other receivables	-	-	16.6	385.3	-	402.0	-	16.6	-	16.6
Cash and cash equivalents	-	-	-	437.7	-	437.7	-	-	-	0.0
Interest rate swaps used for hedging	-	(27.5)	-	-	-	(27.5)	-	(27.5)	-	(27.5)
Unsecured financial bank loans and other loans	-	-	-	-	(629.3)	(629.3)	-	(629.3)	-	(629.3)
Unsecured bond issues	_	-	-	-	(2,542.3)	(2,542.3)	-	(2,542.3)	-	(2,542.3)
Trade and other payables	-	-	-	-	(506.9)	(506.9)	-	-	-	0.0
TOTAL	15.0	(27.5)	16.6	823.0	(3,678.5)	(2,851.3)	13.3	(3,180.7)	0.0	(3,167.4)
31 DECEMBER 2012										
Other financial assets	14.6	-	-	-	-	14.6	13.2	1.5	-	14.7
Trade and other receivables	-	-	-	625.6	0.0	625.6	-	-	-	0.0
Cash and cash equivalents	-	-	-	166.2	-	166.2	-	-	-	0.0
Interest rate swaps used for hedging	-	(36.7)	-	-	-	(36.7)	-	(36.7)	-	(36.7)
Unsecured financial bank loans and other loans	_		-	-	(781.7)	(781.7)	-	(781.7)	-	(781.7)
Unsecured bond issues	-	-	-		(2,295.3)	(2,295.3)	-	(2,295.3)	-	(2,295.3)
Trade and other payables	-	-	-	-	(414.9)	(414.9)	-	-	-	0.0
TOTAL	14.6	(36.7)	0.0	791.8	(3,491.9)	(2,722.2)	13.2	(3,112.2)	0.0	(3,099.0)

Above tables do not include fair value information for financial assets and liabilities not measured at fair value, such as cash and cash equivalents, major portion of trade and other receivables, as their carrying amount is a reasonable approximation of fair value.

For the details around the valuation techniques and risk management we refer to Note 7.2.

Fair value is the amount for which an asset could be exchanged or a liability settled in an arm's length transaction. IFRS 7 requires, for financial instruments that are measured in the balance sheet at fair value, the disclosure of fair value measurements by level of the following fair value measurement hierarchy:

 Level 1: The fair value of a financial instrument that is traded in an active market is measured based on quoted (unadjusted) prices for identical assets or liabilities. A market is considered as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis.

- Level 2: The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, either directly (i.e., as prices) or indirectly (i.e., derived from prices), the instrument is included in level 2.
- Level 3: If one or more of the significant inputs used in applying the valuation technique is not based on observable market data, the financial instrument is included in level 3.

### 7. Miscellaneous

#### 7.1. Effect of new acquisitions/ sales of shares

# ACQUISITION OF 2.25% STAKE IN EUROPEAN ENERGY EXCHANGE (EEX) IN 2013

On 3 May 2013 50Hertz acquired 700,000 shares in the European Energy Exchange (EEX) for €4.2 million and an additional 200,000 shares for €1.2 million in December 2013. As a result of these acquisitions 50Hertz now holds 2.25% of EEX. Additional acquisitions in 2014 are planned, to increase share above 4.2 %.

#### ACQUISITION OF 36.81% STAKE IN AMPACIMON IN 2013

The group holds a stake of 36.81% in Ampacimon NV, a Belgian company active in developing innovative monitoring systems which are put at the disposal of TSO's, in order for them to be able to anticipate more quickly on changes in energy demands and offer.

Elia System Operator converted her long term debt, which was provided to Ampacimon d.d. 24 June 2011, amounting to €200,000 into 2,200 shares, and paid an additional €120,000, good for 600 shares, to hold a stake of 36.81% since July 1 2013.

## SALE OF PORTION OF APX SHARES FOLLOWING PARTIAL DEMERGER OF THE COMPANY

As of 1 March 2013 APX-ENDEX has been split into a "power spot and clearing entity (APX)" and "a derivatives and spot gas entity (Endex)", which has been sold to Intercontinental Exchange Inc (ICE). As a result of this transaction, the amount invested in APX decreased from €25.5 million to €16.9 million but Elia System Operator SA/NV's stake in the share capital increased from 23.07% on 31 December 2012 to 29.2%. The remaining shares are held by TenneT Holding B.V. (70.8%). Both activities (power and gas) were valued in order to be able to demerge both activities. Taking into account the valuations and the sales price we received for the gas activity (€11.6 million), the stake decreased by €11.2 million versus last year.

#### ACQUISITION OF AN ADDITIONAL 3.07% STAKE IN APX-ENDEX HOLDING BV IN 2012

In November 2012 Elia finalized the acquisition of an additional 3.07% stake (or 40,000 shares) in APX-Endex Holding BV from Fluxys Europe BV. The acquisition price for all shares held by Fluxys Europe BV amounted to €3.07 million. As a result of this share purchase agreement Elia holds a 23.07% stake in APX-Endex Holding BV as per end of 2012.

# 7.2. Financial risk and derivative management

#### PRINCIPLES OF FINANCIAL RISK MANAGEMENT

The Group aims to identify each risk and set out strategies to control the economic impact on the Group's results.

The Internal Audit & Risk Management Department defines the risk management strategy, monitors the risk analysis and reports to the management and the Audit Committee. The financial risk policy is implemented by determining appropriate policies and setting up effective control and reporting procedures. Selected derivative hedging instruments are used depending on the assessment of risk involved. Derivatives are used exclusively as hedging instruments. The regulatory framework in which the Group operates considerably restricts their effects on profit or loss (see the 'Regulatory framework and tariffs' chapter). The major impact of increased interest rates, credit risk, etc. can be settled in the tariffs, in accordance with the applicable legislation.

#### **CREDIT RISK**

Credit risk encompasses all forms of counterparty exposure, i.e. where counterparties may default on their obligations to the company in relation to lending, hedging, settlement and other financial activities. The company is exposed to credit risk from its operating activities and treasury activities. In respect of its operating activities, the Group has a credit policy in place, which takes into account the risk profiles of the customers. The exposure to credit risk is monitored on an ongoing basis, resulting in a request to deliver bank guaranties from the counterparty for some major contracts.

At the end of the reporting period there were no significant concentrations of credit risks. The maximum credit risk is the carrying amount of each financial asset, including derivative financial instruments.

(in million €)	2013	2012
Loans and receivables Cash and cash equivalents Immediately claimable deposits	369.0 437.7 13.3	334.0 166.2 13.6
Interest rate swaps used for hedging: Liabilities	(27.5)	(36.7)
Total	792.5	477.2

The movement in the allowance for impairment in respect of loans and receivables during the year was as follows:

(in million €)	Bad debtors	Impairment losses	Remaining bal- ance
OPENING BALANCE	22.0	(21.7)	0.3
Changes during the year	(15.2)	15.2	(0.0)
BALANCE AT 31 DECEMBER 2012	6.8	(6.5)	0.3
OPENING BALANCE	6.8	(6.5)	0.3
Changes during the year	7.0	(7.0)	(0.0)
BALANCE AT 31 DECEMBER 2013	13.8	(13.5)	0.3

Trade and other receivables are recorded without taking into account receivables which have been impaired.

The impairment of 2013 mainly relates to impairment losses recorded on KWK receivables of the year 2002 (German segment) for an amount of €2.6 million.

The impairment loss recognised in 2012 is mainly related to a settlement of receivables, which finally could be recovered in the future tariffs.

The Group believes that the unimpaired amounts overdue by more than 30 days are still collectible, based on historic payment behaviour and extensive analysis of customer credit risk, including underlying customers' credit ratings, when available. The credit quality of trade and other receivables is assessed based on a credit policy.

#### **CURRENCY RISK**

The Group is not exposed to any significant currency risk, either from transactions or from exchanging foreign currencies into euro, since it has no foreign investments or activities and less than 1% of its costs are expressed in currencies other than the euro.

#### LIQUIDITY RISK

Liquidity risk is the risk that the Group may not be able to meet its financial obligations. The Group limits this risk by constantly monitoring cash flows and ensuring that there are always sufficient credit line facilities available.

The Group's objective is to maintain a balance between continuity of funding and flexibility through the use of bank loans, confirmed and unconfirmed credit facilities, commercial paper program, etc. For medium- to long-term funding, the Group uses bonds. The maturity profile of the debt portfolio is spread over several years. The Group Treasury frequently assesses its funding resources taking into account its own credit rating and general market conditions.

Referring to the bond issues in 2009, 2010 and 2013, access to sources of funding should sufficiently be available.

(in million €)	Closing Balance	Expected cash outflows	6 mths or less	6-12 mths	1-2 years	2-5 years	> 5 years
Non-derivative financial liabilities	3,491.8	(3,989.1)	(1,232.7)	(16.3)	(587.9)	(744.2)	(1,408.1)
Unsecured bond issues	2,295.3	(2,693.3)	(585.1)	(11.6)	(575.0)	(650.8)	(870.8)
Unsecured financial bank loans and other loans*	781.6	(880.9)	(232.7)	(4.7)	(12.9)	(93.4)	(537.3)
Trade and other payables**	414.9	(414.9)	(414.9)	0.0	0.0	0.0	0.0
Derivative financial liabilities	36.7	(23.6)	(4.0)	(4.1)	(3.9)	(11.6)	0.0
Interest rate swaps used for hedging	36.7	(23.6)	(4.0)	(4.1)	(3.9)	(11.6)	0.0
TOTAL AT 31 DECEMBER 2012	3,528.5	(4,012.7)	(1,236.7)	(20.4)	(591.8)	(755.8)	(1,408.1)
Non-derivative financial liabilities	3,678.5	(4,457.4)	(1,117.0)	(16.3)	(103.8)	(807.8)	(2,412.5)
Unsecured bond issues	2,542.3	(3,235.5)	(533.0)	(11.6)	(90.9)	(716.6)	(1,883.5)
Unsecured financial bank loans and other loans	629.3	(715.0)	(77.1)	(4.7)	(12.9)	(91.2)	(529.0)
Trade and other payables	506.9	(506.9)	(506.9)	0.0	0.0	0.0	0.0
Derivative financial liabilities Interest rate swaps used for hedging	<b>27.5</b> 27.5	<b>(31.0)</b> (31.0)	<b>(4.0)</b> (4.0)	<b>(4.1)</b> (4.1)	<b>(7.7)</b> (7.7)	<b>(15.3)</b> (15.3)	<b>0.0</b> 0.0
TOTAL AT 31 DECEMBER 2013	3,706.0	(4,488.4)	(1,121.0)	(20.4)	(111.4)	(823.1)	(2,412.5)

<sup>\*</sup> For comparison reasons the accrued interests on ST and LT borrowings were added (€70.9 million).

50Hertz Transmission (Germany) has established an Euro Medium Term Note Programme (the "EMTN Programme") in 2010 for the aggregate amount of 2.5 billion EUR, and under which a Eurobond issuance took place in 2010 for €500 million. Elia Transmission (Belgium) has established end of January 2013 an EMTN Programme for the aggregate amount of 3 billion EUR.

As part of this EMTN programme, Elia Transmission successfully issued a dual-tranche Eurobond, consisting of a  ${\in}550m$  15-year tranche and a  ${\in}200m$  20-year tranche. The order book was subscribed to the value of  ${\in}2.95$  billion by 210 investors from 21 countries. The 15-year and 20-year tranches were priced at mid-swap +117 bp (coupon of 3.25%) and +123.3 bp (coupon of 3.5%) respectively. The proceeds from the bond issue were used to refinance existing loans and for general corporate purposes.

In addition to the interest-bearing liabilities disclosed here above, the Group is backed by long term credit facilities provided by a diversified group of banks. Especially in 2012, Elia Transmission has set up bilateral back-up facilities with 4 banks BNP Paribas Fortis, JP Morgan, KBC and Rabobank, for the aggregate amount of €700 million with a maturity in 2015. These credit facilities, with a duration of 3 years, have been concluded in view of the refinancing of 2 bonds of €500 million each, of which one matured in April 2013 and one will expire in May 2014.

<sup>\*\*</sup> For comparison reasons all trade and other payables were shown on this line (+€223.7 million).

Details of the used and unused back-up credit facilities are set out here below:

(in million €)	Maturity	Available amount	Average basic interest	Am	ount
	-			used	not used
Confirmed credit line	30/06/2015	195.0	Euribor + 0,45 %	0.0	195.0
Confirmed credit line	30/06/2015	155.0	Euribor + 0,45 %	0.0	155.0
Confirmed credit line	30/06/2015	195.0	Euribor + 0,45 %	0.0	195.0
Confirmed credit line	30/06/2015	155.0	Euribor + 0,45 %	0.0	155.0
Confirmed credit line	1/06/2014	75.0	Euribor + margin when concluding the deal	0.0	75.0
Confirmed credit line	14/06/2014	210.0	Euribor + 0,55 %	0.0	210.0
Confirmed credit line	unlimited	90.0	Eonia +0,4%/0,45%	0.0	90.0
Confirmed credit line	17/02/2014	60.0	Euribor + 0,45 %	0.0	60.0
Confirmed credit line	17/03/2014	60.0	Euribor + 0,45 %	0.0	60.0
Uncommitted credit line facility	unlimited	100.0	Euribor + margin when concluding the deal	0.0	100.0
Belgian dematerialised treasury notes	unlimited	250.0	Euribor + margin when concluding the deal	0.0	250.0
TOTAL		1,545.0		0.0	1,545.0

#### INTEREST RATE RISK

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates.

The Group manages its interest rate risk by having a balanced portfolio of fixed and variable rate loans and borrowings. To manage this, the Group enters into interest rate swaps, in which the Group agrees to exchange, at specified intervals, the difference between fixed and variable rate interest amounts calculated by reference to an agreed-upon notional principal amount. These swaps are designated to hedge underlying debt obligations.

The table (see Note 6.11) shows the average interest rate at the balance sheet date.

#### SENSITIVITY ANALYSIS

Changes in the interest rates will not affect the consolidated result in the short and long term as the Group operates within a regulatory framework where the consequences of fluctuations in financial expenses are mainly recovered in tariffs, except for the items which are directly recognized through OCI.

# FAIR VALUE SENSITIVITY ANALYSIS FOR INTEREST RATE SWAPS

A change of 100 basis points in interest rates would have increased (decreased) other comprehensive income by the amounts shown below:

(in million €)	100 bp in- crease	100 bp de- crease
Interest rate swaps	16.6	1.7

#### **HEDGING**

All financial derivatives the Group enters into relate to an underlying transaction or forecasted exposure, depending on the expected impact on the income statement, and if the stringent IAS 39 criteria are met, the Group decides on a case-by-case basis whether hedge accounting will be applied. The following paragraphs describe the transactions whereby hedge accounting is applied. At 31 December 2013 the Group has no transactions which do not qualify for hedge accounting.

In accordance with the hedge accounting rules, all derivative financial instruments are accepted as cash-flow hedges and valued at fair value. Consequently, the portion of the gain or loss on the derivative financial instrument that can be considered an effective hedge is reflected directly in equity (hedging reserves net of tax).

Interest-rate swaps have an interest rate varying from 4.4% to 4.41%. As at 31 December 2013, the Group held hedging instruments with a contracted reference value of €200.0 million.

The net fair value of the swaps as at 31 December 2013 totalled €27.5 million and was entirely composed of liabilities. The amounts are included as derivatives at fair value.

As at 31 December 2013, no financial expenses resulting from ineffective cash-flow hedges are included in profit or loss.

#### Fair value

We refer to note 6.17 for the fair values and carrying amounts of the derivative financial instruments. As the loan has a variable interest rate, the carrying amount of the loan is equal to the fair value.

The fair value of the financial assets and liabilities, other than those presented in the above table, approximates their carrying amounts largely due to the short-term maturities of these instruments.

#### Fair-value hierarchy

The fair value of 'sicavs' belongs to level 1, i.e. valuation is based on the (unadjusted) listed market price on an active market for identical instruments.

The fair value of interest rate swaps belongs to level 2, which entails that valuation is based on input from other prices than the stated prices, where these other prices can be observed for assets or liabilities. This category includes instruments valued on the basis of listed market prices on active markets for such instruments; listed prices for identical or similar instruments on markets that are deemed less than active; or other valuation techniques arising directly or indirectly from observable market data.

#### Estimate of fair value

#### Derivatives

Brokers' statements are used for interest-rate swaps. The statements are controlled using valuation models or techniques based on discounted cash flows. The models incorporate various inputs including the credit quality of counterparties and interest rate curves at the end of the reporting period. As at 31 December 2013 the counterparty risk is nihil as a result of the negative market value of the IRS. The Group's own nonperformance risk (only for Elia Transmission (Belgium), segment having contracted IRS) has been estimated to be close to nihil as well.

#### Interest-bearing loans

The fair value is calculated on the basis of the discounted future redemptions and interest payments.

#### CAPITAL RISK MANAGEMENT

The purpose of the Group's capital structure management is to maintain the debt and equity ratios related to the regulated activities in line with the requirement of the regulatory framework (one-third equity and two-thirds debt capital). This approach allows the Group to manage the security of the liquidity at all

times via flexible access to capital markets, so as to be able to finance strategic projects and to offer an attractive remuneration to shareholders.

The company's dividend policy involves optimising dividend payments while still bearing in mind that there is a requirement to reserve a part of the profit resulting from decommissioning of fixed assets, included in the tariff. Reserving this part of the profit as equity boosts the company's self-financing capacity needed to carry out its legal mission.

The company offers the employees the opportunity to subscribe to capital increases that are exclusively reserved for them.

#### 7.3. Commitment and contingencies

#### OPERATING LEASE COMMITMENTS - GROUP AS A LESSEE

The Group entered into commercial leases on motor vehicles, IT equipment and office buildings. The leases related to leasing cars and IT equipment have an average life of three years; the contracts regarding the buildings have a normal term of nine years, with the possibility of renewing the lease after that. Renewals are at the option of the specific entity that holds the lease.

Future minimum rentals payable under non-cancellable operating leases are as follow:

(in million €)	<1	1-5	>5
	year	years	years
Buildings	6.7	11.4	0.2
Cars, it equipment and others	7.8	11.8	0.2
Total at 31 December 2012	<b>14.5</b>	<b>23.2</b>	<b>0.4</b>
Buildings	4.9	10.4	0.4
Cars, it equipment and others	8.3	12.6	0.1
Total at 31 December 2013	13.2	23.0	0.5

These lease commitments include the commitments of the German segment for an amount of €11.1 million (at 60% stake of Elia).

The following expenses related to these lease contracts were recognised in the income statement:

(in million €)	2013	2012
Buildings Cars, it equipment and others	6.7 8.7	7.2 8.5
Total	15.3	15.7

## OPERATING LEASE COMMITMENTS – GROUP AS A LESSOR

The Group has entered into commercial property leases on certain elements of property, plant and equipment, mainly consisting of optimising use of sites and high-voltage pylons. These leases have remaining terms of a minimum of nine years.

Future minimum rental receivables are as follows:

(in million €)	<1	1-5	>5
	year	years	years
Telecom	4.8	13.1	19.2
Buildings	0.4	0.6	0.0
Total at 31 December 2012	<b>5.2</b>	<b>13.7</b>	<b>19.2</b>
Telecom	12.8	12.9	17.3
Buildings	0.4	0.4	0.1
Total at 31 December 2013	13.2	13.3	17.3

The following revenue related to these lease contracts was recognised in the income statement:

(in million €)	2013	2012
Telecom Buildings	12.6 0.5	12.2 0.5
Total	13.2	12.7

The lease contingencies include the contingencies of the German segment for an amount of €1.2 million (at 60% stake of Elia).

#### **CONTINGENT RENTS - PURCHASE OPTION**

The Group has no contracts which include contingent rental payments. No purchase options were agreed in the significant lease contracts.

#### CAPITAL COMMITMENT

As at 31 December 2013, the Group has a commitment of €537.1 million relating to the purchase and installation of property, plant and equipment for further grid extensions. These capital commitments include the capital commitments of the German segment for an amount of €345.4 million (at 60% stake of Elia).

#### OTHER COMMITMENTS

As at 31 December 2013, the Group has a commitment of €134.5 million relating to different topics (e.g. repair commitments, operational purchase commitments, maintenance). These commitments include the commitments of the German segment for an amount of €0.3 million (at 60% stake of Elia).

#### CONTINGENCIES

#### Settlement mechanism

A calculation of the amount is given in the 'Regulatory framework and tariffs' chapter.

The group operates in a regulated context which states that tariffs must make it possible to realise total revenue consisting of:

- 1. a reasonable return on invested capital,
- 2. all reasonable costs which are incurred by the Group.

Since the tariffs are based on estimated figures, there is always a difference between the tariffs that are actually charged and the tariffs that should have been charged to cover all reasonable costs of the system operator and to provide shareholders with a reasonable profit margin on their investment.

If the applied tariffs result in a surplus or a deficit at the end of the year, this means that the tariffs charged to consumers/the general public could have been respectively lower or higher (and vice versa). The Group is convinced that a surplus or deficit arising from the settlement mechanism must not be classified as revenue or an expense, or as an item under equity.

On a cumulative basis, it could be argued that the public has made an advance payment (=surplus) for its future use of the network. As such, the surplus (deficit) is not a commission for a future loss (recovery) of income but instead a deferred/accrued revenue to (with regard to) consumers. On the basis of the Regulatory framework, the Group believes that the surplus (deficit) does not represent an item of revenue (cost). Consequently, the Group booked these amounts under section 'Accruals and deferred income' (see Note 6.16).

#### 7.4. Related parties

#### TRANSACTIONS WITH KEY MANAGEMENT PERSONNEL

The key management includes Elia's Management Committee. They are hired as employees and the components of their remuneration are set out below. Members of the Management Committee do not receive stock options, special loans or other advances from the Group.

(in million €)	2013	2012
Short term employee benefits	2.5	2.7
Basic remuneration	1.7	1.9
Variable remuneration	0.8	0.8
Post-employment benefits	0.5	0.8
Other variable remuneration	0.7	0.4
Total gross remuneration	3.6	3.9
Number of persons (in units)  Average gross remuneration per person  Number of shares (in units)	7 0.5 32,160	8 0.5 32,303

In addition Elia's Management Committee also assessed whether transactions occurred with entities in which they exercise a significant influence (e.g. positions as CEO, CFO, vice-presidents of the Management Committee, etc.). Significant transactions occurred in 2013, all at arms' length, with some distribution system operators. The total amount of realized sales equals to €86.4 million. The total amount of expenses equals to €0.4 million. As per 31 December 2013 there was an outstanding trade receivable position of €10.8 million and no significant outstanding trade debt position.

The disclosures relating to the Belgian Corporate Governance Code are included in the Corporate Governance Statement of this annual report.

#### TRANSACTIONS WITH ASSOCIATED COMPANIES

Transactions between the company and its subsidiaries which are related parties were eliminated during consolidation and therefore are not recognised in this note.

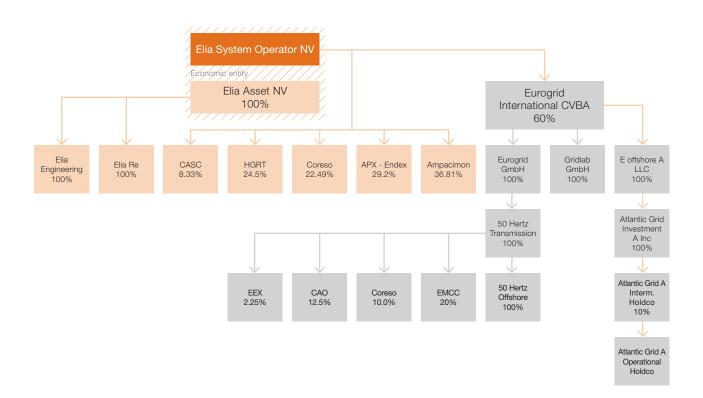
In the 2013 and 2012 financial years, there were no transactions between Elia and HGRT. All transactions are at arm's length.

Details of transactions with other related parties are shown below.

(in million €)	2013	2012
Transactions with joint ventures and associated companies	3.3	5.4
Sales of goods	6.6	8.1
Purchases of goods	(3.3)	(2.7)
Outstanding balances with joint ventures and associated companies	(0.1)	1.0
Long-term debtors	0.1	0.2
Trade debtors	0.7	0.9
Trade debts	0.9	0.1

#### 7.5. Subsidiaries, joint ventures and associates

#### **GROUP STRUCTURE OVERVIEW**



#### **SUBSIDIARIES**

Elia System Operator SA has direct and indirect control of the subsidiaries listed hereafter.

All the entities keep their accounts in euro (except E-Offshore A LLC and Atlantic Grid Investment A Inc, whose accounts are held in USD) and have the same reporting date as Elia System Operator SA (except Eurogrid International SCRL).

Name	Country of establishment	Headquarters	Sta	ke %
			2013	2012
Elia Asset SA	Belgium	Bd de l'Empereur 20 1000 Brussels	99.99	99.99
Elia Engineering SA	Belgium	Bd de l'Empereur 20 1000 Brussels	100.00	100.00
Elia Re SA	Luxembourg	Rue de Merl 65 2146 Luxembourg	100.00	100.00
JOINT VENTURES				
Eurogrid International SCRL	Belgium	Bd de l'Empereur 20 1000 Brussels	60.00	60.00
Eurogrid GmbH	Germany	Eichenstraße 3a 12435 Berlin	60.00	60.00
50Hertz Transmission GmbH	Germany	Eichenstraße 3a 12435 Berlin	60.00	60.00
50Hertz Offshore GmbH	Germany	Eichenstraße 3a 12435 Berlin	60.00	60.00
Gridlab GmbH	Germany	Sielowerstraße 5 03044 Cottbus	60,00	60,00
E-Offshore A LLC	U.S.	874, Walker Road, Suite C 19904 Dover, Delaware	60.00	60.00
Atlantic Grid Investment A Inc	U.S.	1209 Orange Street 19801 Wilmington, Delaware	60.00	60.00
ASSOCIATED COMPANIES ACCOUNTED FOR USING THE EQUITY METHOD				
H.G.R.T S.A.S. (Holding de Gestionnaires de Réseaux de Transport)	France	1 Terrasse Bellini 92919 La Défense Cedex	24.50	24.50
Coreso SA	Belgium	Avenue de Cortenbergh 71 1000 Brussels	28.49	28.49
APX Group	Netherlands	Strawinksylaan 729 1077 XX Amsterdam	29.16	23.07
Ampacimon S.A.	Belgium	Rue des Chasseurs Ardennais 3 4031 Angleur	36.81	0,00
OTHER PARTICIPATIONS				
CASC.EU SA	Luxembourg	2 Rue de Bitbourg 1273 Luxembourg-Hamm	8.33	8.33
EMCC European Market Coupling Company GmbH	Germany	Hopfenmarkt 31 20457 Hamburg	12.00	12.00
CAO Central Allocation Office GmbH	Germany	Gute Änger 15 85356 Freising	7.50	7.50
Atlantic Grid A LLC	U.S.	4445, Willard Av, Suite 1050 20815 Chevy Chase, Maryland	6.00	6.00
European Energy Exchange (EEX)	Germany	Augustusplatz 9 04109 Leipzig	2.25	0.00

#### 7.6. Subsequent events

There were no significant events subsequent to 31 December 2013, which would require adjustment to or disclosure in the consolidated financial statements.

#### 7.7. Relationship with auditors

The General Meeting of Shareholders appointed the joint auditors KPMG Bedrijfsrevisoren Burg. CVBA (represented by Alexis Palm) and Ernst & Young Bedrijfsrevisoren BCVBA (represented by Marnix Van Dooren) for the audit of the consolidated financial statements of Elia System Operator SA and the audit of the statutory financial statements of Elia System Operator SA, Elia Asset SA and Elia Engineering SA.

The Elia group paid to the joint auditors during the year 2013 an amount of €413,789.00 for the annual audit mandates, of which €239,000.00 has been paid to the statutory auditor of the German activities, Ernst & Young.

The fees paid to the joint auditors for other engagements prescribed by the Belgian Company Law and engagements other than those prescribed by the Belgian Company Law amounted to respectively €91,824.00 and €75,976.00 for the year ended 31 December 2013. The latter services related mainly to tax and VAT advice.

In addition an amount of €103,168.04 has been paid in 2013 for non-audit services in Germany. These fees can be detailed as follows:

(in €)	Ernst & Young	KPMG
Attestation missions Tax advisory services IT advisory services	69,480.00 0.00 0.00	0.00 33,688.04 0.00
Total	69,480.00	33,688.04

The services were approved by the Audit Committee.

# 7.8 Additional disclosure on reclassifications, correction of an error and change in accounting policy

In 2013 the Group changed the classification of some items in its financial statements, and therefore comparative amounts have also been reclassified in accordance with IAS 1.41. In addition in the note on employee benefits (note 6.12) a correction of an error in prior period occurred requiring additional disclosures which are also provided below.

Below we provide an overview of the reclassifications/correction of an error/change in accounting policy and the references to the detailed information:

- Consolidated income statement reclassification:
  - Note 5.3.1 Costs of materials, services and other goods;
- Consolidated statement of financial position reclassification:
  - Note 6.15 Trade and other payables;
  - Note 6.16 Accruals and deferred income;
- Consolidated statement of cash flows change in accounting policy (cfr footnote in the consolidated cash flow statement);
- Note 5.3.2 Personnel expenses reclassifications within the note; and
- Note 6.12 Employee benefits: the details are provided below instead of the note itself for transparency reasons. As mentioned above it is a combination of reclassifications and correction of an error.

The reclassifications find their origin in the fact that last year the disclosures were prepared using a split between on the one hand defined benefit plans (pension costs) and on the other hand post-employment benefits other than pensions. The defined benefit plans only included the pension provisions, and not the non-monetary benefits, such as medical care, tariff benefits...

An error in the comparative information was also corrected in the pension costs, without impact on the figures, only impacting the notes as shown below in the tables in the column "correction of a prior year error", resulting mainly from a misinterpretation of the reported input.

(in million €)	Pensions	Post- employment benefits other than pensions	Correction of a prior year error	Reclas- sification to pensions	Reclassification from post-employment benefits other than pensions to pensions (for "uitstapregeling" and pre-retirement)	Pensions	Other
	2012 as	reported				2012 re	evised
Present value of funded defined benefit obligation	(187.5)	(63.3)	7.4	(11.4)	11.4	(191.6)	(51.9)
Fair value of plan assets	126.5	4.8	(7.4)	(0.0)	0	119.1	4.8
Funded status	(53.9)	(58.5)	0.0	(11.4)	11.4	(72.4)	(47.1)
Net employee benefit liability	(53.9)	(58.5)	0.0	(11.4)	11.4	(72.4)	(47.1)
MOVEMENTS IN THE PR	ESENT VALU	JE OF THE DE	FINED BENEF	TT OBLIGATION	N		
At the beginning of the period	(177.2)	(60.2)	7.3	(10.3)	10.3	(180.3)	(49.8)
Current service cost	(3.9)	(2.1)	0.2	(0.4)	0.4	(4.1)	(1.8)
Interest cost/income	(6.9)	(2.4)	0.2	(0.3)	0.3	(7.0)	(2.0)
Contributions from plan participants	(0.6)	0.0	0.0	0.0	0.0	(0.6)	0.0
Cost of early retirement	0.0	(2.6)	0.0	(2.6)	2.6	(2.6)	0.0
Changes in financial assumptions	(15.0)	(1.9)	0.0	0.4	-0.4	(14.5)	(2.4)
Payments from the plan	16.0	6.0	(0.3)	1.9	-1.9	17.5	4.1
At the end of the period	(187.5)	(63.3)	7.4	(11.4)	11.4	(191.6)	(51.9)
MOVEMENTS IN THE FA	IR VALUE OF	THE PLAN AS	SSETS				
At the beginning of the period	123.5	5.2	(7.3)	(0.0)	0.0	116.2	5.2
Interest income	4.7	0.0	(0.2)	(0.2)	0.0	4.5	0.0
Return on plan assets (excluding amounts included in interest income)	1.5	(0.0)	0.0	0.0	0.0	1.5	(0.0)
Contributions from employer	12.0	4.6	(0.2)	1.7	-1.7	13.7	2.7
Contributions from plan participants	0.6	0.0	0.0	0.0	0.0	0.6	0.0
Benefit payments	(15.8)	(5.0)	0.3	(1.6)	1.6	(17.4)	(3.1)
At the end of the period	126.5	4.8	(7.4)	(0.1)	(0.1)	119.1	4.8
Actual return on plan assets	6.0	0.0	-	-	-	6.0	0.0

(22.8)

(6.6)

(in million €)	Pensions	Post- employment benefits other than pensions	Correction of a prior year error	Reclas- sification to pensions	Reclassification from post-employment benefits other than pensions to pensions (for "uitstapregeling" and pre-retirement)	Pensions	Other
	2012 as	reported				2012 re	evised
AMOUNTS RECOGNIZED	IN COMPRI	EHENSIVE INC	OME				
Service cost							
Current service cost	(4.3)	(2.4)	0.0	(0.4)	0.2	(4.7)	(2.2)
Cost of early retirement	0.0	(2.6)	0.0	(2.6)	2.6	(2.6)	0.0
Actuarial gains/(losses) on defined benefit obligation	0.0	(0.6)	0.0	0.0	0.2	0.0	(0.5)
Net interest on the net defined benefit liability/ (asset)							
Interest cost on defined benefit obligation	(6.7)	(2.4)	0.0	(0.3)	0.3	(7.0)	(2.0)
Interest income on plan assets	4.5	0.0	0.0	0.0	0.0	4.5	0.0
Defined benefit costs recognized in profit or loss	(6.5)	(8.0)	0.0	(3.3)	3.3	(9.8)	(4.7)
ACTUARIAL GAINS/(LOS	SES) ON DE	FINED BENEF	IT OBLIGATIO	N ARISING FR	ОМ		
i) changes in demo- graphic assumptions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ii) changes in financial assumptions	(15.0)	(1.9)	0.4	0.0	0.0	(14.5)	(1.9)
iii) changes from experi- ence adjustments	0.0	0.0	0.0	0.0	0.0	0.0	0.0
iv) others	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Return on plan assets (excluding interest income on plan assets)	1.5	(0.2)	0.2	0.0	0.0	1.5	0.0
Remeasurements of net defined benefit (liabil- ity)/asset recognised in Other Comprehensive Income (OCI)	(13.4)	(2.0)	0.6	0.0	0.0	(13.0)	(1.9)

0.6

(3.3)

(19.9)

TOTAL

(10.0)

# Joint auditors' report on the consolidated financial statements

KPMG Bedrijfsrevisoren BCVBA Bourgetlaan 40 1130 Brussels Belgium

Ernst & Young Bedrijfsrevisoren BCVBA

De Kleetlaan 2

1831 Diegem
Belgium

Statutory joint auditors' report to the general meeting of Elia System Operator NV/SA for the year ended December 31, 2013

In accordance with the legal requirements, we report to you on the performance of our mandate of statutory auditor. This report includes our opinion on the consolidated financial statements (the "consolidated financial statements") as well as our report on other legal and regulatory requirements. The consolidated financial statements include the consolidated statement of financial position as of December 31, 2013, the consolidated income statement, the statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year ended December 31, 2013 and the notes, comprising a summary of significant accounting policies and other explanatory information.

#### Report on the consolidated financial statements - unqualified opinion

We have audited the consolidated financial statements of Elia System Operator NV ("the company") and its subsidiaries (jointly "the group") as of and for the year ended December 31, 2013, prepared in accordance with International Financial Reporting Standards as adopted by the European Union, and with the legal and regulatory requirements applicable in Belgium. The total of the consolidated statement of financial position amounts to EUR 6.532,2 million and the consolidated income statement shows a profit (attributable to the owners of the company) for the year of EUR 175,8 million.

Board of directors' responsibility for the preparation of the consolidated financial statements

The board of directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union, , and with the legal and regulatory requirements applicable in Belgium, and for such internal control as the board of directors determines, is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Statutory joint auditors' responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the statutory auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the statutory auditor considers the internal control relevant to the group's preparation of the consolidated financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the group's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the board of directors, as well as evaluating the overall presentation of the consolidated financial statements. We have obtained from the company's officials and board of directors the explanations and information necessary for performing our audit and we believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our unqualified opinion.

#### KPMG Bedrijfsrevisoren BCVBA

#### Ernst & Young Bedrijfsrevisoren BCVBA

Joint statutory auditor's report to the general meeting of shareholders of Elia System Operator NV/SA on the consolidated financial statements for the year ended December 31, 2013

#### Unqualified Opinion

In our opinion, the consolidated financial statements give a true and fair view of the group's equity and consolidated financial position as at December 31, 2013 and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union, and with the legal and regulatory requirements applicable in Belgium.

#### Emphasis of certain matters

Without qualifying our opinion, the joint statutory auditors draw attention to note 5.5 and note 7.3 of the consolidated financial statements, that provide a description of the uncertainties resulting from the final settlements arising from the tariff regulation mechanisms to be approved by the competent authorities, and of the uncertainties resulting from the outcome of the tax audit.

#### Report on other legal and regulatory requirements

The board of directors is responsible for the preparation and the content of the report of the board of directors on the Consolidated Financial Statements, including the corporate governance statement, in accordance with article 119 of the Belgian Company code (Wetboek van vennootschappen/Code des sociétés).

In the context of our mandate and in accordance with the Belgian standard which is complementary to the International Standards on Auditing (ISAs) as applicable in Belgium, our responsibility is to verify, in all material respects, compliance with certain legal and regulatory requirements. On this basis, we make the following additional statement, which does not modify the scope of our opinion on the consolidated financial statements:

 The annual report on the consolidated financial statements includes the information required by law, is consistent in all material respects with the consolidated financial statements, and does not present any material inconsistencies with the information that we became aware of during the performance of our mandate.

Brussels, March 27, 2014

KPMG Bedrijfsrevisoren burg. BCVBA Joint statutory auditor

Represented by

Ernst & Young Bedrijfsrevisoren BCVBA Joint statutory auditor

Represented by

Alexis Palm Partner Marnix Van Dooren Partner

# Regulatory framework and tariffs

## 1. Regulatory framework in Belgium

#### 1.1 Federal legislation

The Electricity Act forms the overall basis and lays down the core principles of the regulatory framework governing Elia's activities as a transmission system operator in Belgium.

This Act was heavily amended on 8 January 2012 by the transposition at federal level of the 3rd package of European directives. The new Electricity Act:

- · strengthens the unbundling of transmission activities;
- sets out in greater detail the rules for operating and accessing the transmission system;
- redefines the transmission system operator's legal mission, mainly by expanding it to the offshore areas over which Belgium has jurisdiction; and
- strengthens the role of the regulatory authority, particularly as regards establishing methods for determining transmission tariffs.

A number of royal decrees implement the regulatory framework in more detail. Similarly, the decisions passed by the regulatory authority supplement this framework to create the regulatory framework in which Elia operates.

#### 1.2 Regional legislation

The three Belgian Regions are primarily responsible for the local transmission of electricity through grids with a voltage equal to or lower than 70 kv in their respective territories. The Regions are not responsible for setting electricity transmission tariffs, which falls under federal jurisdiction. Their impact on the liberalisation process is similar to the impact of the Electricity Act at the federal level. The Flemish Region and the Brussels Capital Region have also transposed into their legislative framework the provisions of the 3rd European package that apply to them. The Walloon Region is preparing to do so. The regional decrees have been complemented by several other rules on matters such as public services, renewable energy and authorisation procedures for suppliers.

#### 1.3 Regulatory agencies

As required by European Union law, the Belgian electricity market is monitored and controlled by independent regulators.

#### 1.3.1 FEDERAL REGULATOR

The Commission for Electricity and Gas Regulation (CREG) is the federal regulator and its powers with regard to Elia include:

- approving the standard terms of the three main contracts used by the company at the federal level: the connection contract, the access contract and the ARP contract;
- approving the capacity allocation system at the borders between Belgium and neighbouring countries;
- approving the appointment of the independent members of the Board of Directors;
- determining the tariff methodologies to be observed by the system operator to ensure that the tariffs for connection to and use of the grid and the tariffs for the provision of ancillary services by Elia are approved;
- certifying that the system operator actually owns the infrastructure that it operates and meets the regulatory requirements for independence from generators and suppliers.

#### 1.3.2 REGIONAL REGULATORS

Operation of electricity grids with voltages of 70 kV and less falls within the jurisdiction of the respective regional regulators. Each of them may require any operator (including Elia if it operates such grids) to abide by any specific provision of the regional electricity rules under the threat of administrative fines or other sanctions. The regional regulators are not empowered to set electricity transmission tariffs, as tariff setting falls under the sole jurisdiction of CREG for these grids.

#### 1.4 Tariff setting

#### **CHANGES IN TARIFF REGULATIONS**

On 24 November 2011, CREG adopted and published a decree setting out provisional calculation methods and establishing tariff conditions for connection and access to electricity grids performing a transmission function. Based on this provisional methodology, on 22 December 2011 CREG approved the 2012-2015 tariff proposal submitted by Elia on 30 June 2011 and adapted on 13 December 2011.

On 8 January 2012, the new Electricity Act removed the power to draw up tariff methodologies from the government and conferred this responsibility on the federal regulator, in accordance with the procedures and guidelines laid down by law.

On 28 March 2013, CREG modified the tariff method from 24 November 2011 after consulting the market parties, taking account of the developments in the legislation (specifically the publication of the new Electricity Act of 8 January 2012 transposing the provisions of the Third Package of European Energy Directives into Belgian legislation) and the ruling of the Brussels Court of Appeal of 6 February 2013 (which annulled the earlier decision to approve the transmission tariffs for the period 2012-2015). On 16 May 2013, the CREG Management Committee approved the amended tariff proposal for the period 2012-2015 that Elia had submitted on the basis of the modified method.

#### TARIFF REGULATIONS APPLYING IN BELGIUM

As the operator of grids performing a transmission function (covering the transmission grid and the local and regional transmission grids in Belgium), Elia makes most of its income from the regulated tariffs charged for use of these grids (tariff income), which are approved in advance by CREG. As of 1 January 2008, the prevailing tariff regulation mechanisms provide for the setting of approved tariffs for four-year periods, barring specific circumstances. The provisional tariff methodology established by CREG at the end of 2011 did not change this system. 2012 was therefore the first year of the second four-year regulatory period.

The tariff mechanism is based on accounts stated in accordance with Belgian accounting regulations (Be GAAP). The tariffs are based on budgeted costs, less a number of sources of non-tariff income. These costs are then divided based on an estimate of the volumes of electricity taken off the grid and, for the first time, in the case of some costs, of electricity injected into the grid, in accordance with the terms of the provisional tariff methodology drawn up by CREG.

The costs taken into account include the forecast value of the authorised fair remuneration and the predicted values of various cost categories, including those that are not subject to application of a productivity improvement factor ('group 1 costs' resulting in balances allocated to the total revenue of a future regulatory period) and those to which a productivity improvement factor is applied ('group 2 costs' whose budget discrepancies result in an increase or decrease of the gross margin).

#### FAIR REMUNERATION

Fair remuneration is the return on capital invested in the grid. It is based on the average annual value of the regulated asset base (RAB), which is calculated annually, taking into account new investments, depreciations and changes in working capital requirements.

In that context, the following formula, which has been applied since 1 January 2012, is used to calculate the fair remuneration, when consolidated capital and reserves account for more than 33% of the average regulated asset base, as is the case at present:

- A: [33% x average RAB x [(OLO n)+ (Beta x risk premium)]];
- B: [(S 33%) x average RAB x (OLO n + 70 base points)];
   where
  - OLO n is the interest rate for Belgian 10-year linear bonds for the year in question;
  - S = consolidated capital and reserves/RAB, in accordance with Belgian accounting standards (BE GAAP);
  - Beta is calculated based on Elia share prices, compared with the BEL 20 index, over a seven-year period. The value of the product of the beta parameter and the risk premium cannot be lower than 0.7.

#### PART A

The rate of remuneration (in %) as set by CREG for year 'n' is equal to the sum of the risk-free rate, i.e. the average rate of Belgian 10-year linear bonds and a premium for share market risk, weighted using the applicable beta factor.

The tariff regulations set the risk premium at 3.5%. The applicable beta factor is calculated based on the beta factor for Elia, compared with the BEL 20 index, over a seven-year period. CREG encourages a ratio between equity and regulated asset base that is as close as possible to 33%. The reference ratio of 33% is applied to Elia's average regulated asset base (RAB) to calculate Elia's reference equity.

#### PART B

If Elia's actual equity is higher than the reference equity, the surplus amount is balanced out with a rate of remuneration calculated using the following formula: [(OLO n + 70 base points)].

#### **Group 1 costs**

Costs that are not subject to application of the productivity and efficiency improvement coefficient ('group 1 costs') are an integral part of the costs taken into account when setting tariffs. The tariffs are set based on the forecast values of these costs. Alongside this, the balances (positive or negative), i.e. the difference between the actual costs and the forecast costs, are established ex-post and, in principle, allocated to the total revenue of a future regulatory period.

#### **Group 2 costs**

Group 2 costs are subject to an incentive regulation mechanism: in other words, they are subject to application of a productivity and efficiency improvement coefficient. This coefficient indicates the efforts that Elia must make to control such costs, i.e. the authorised costs used to determine the tariffs following application of this factor. Within the 2012-2015 period, the productivity improvement for 2012 was set at €10 million. The budget discrepancies in relation to group 2 costs (positive or negative), i.e. the difference – established ex-post – between the actual and authorised costs, are in principle either added to or deducted from the gross margin.

#### Incentive to make replacement investments

The CREG has introduced an incentive to ensure that the investments needed to maintain the quality of service provided by the system operator are carried out appropriately and on time. If the actual investment total for the year exceeds 90% of

the reference budget for the investments concerned, an additional gross margin equivalent to the excess amount is awarded to the system operator. This amount is capped at 10% of the reference investment budget. It is also subject to conditions regarding compliance with individual project budgets.

## 2. Regulatory framework in Germany

#### 2.1 Relevant legislation

The German legal framework is laid down in various pieces of legislation. The key law is the German Energy Act 2005 (Energiewirtschaftsgesetz – EnWG), which defines the overall legal framework for the gas and electricity supply industry in Germany. The EnWG is supported by a number of laws, ordinances and regulatory decisions, which provide detailed rules on the current regime of incentive regulation, accounting methods and network access arrangements, including:

- the Ordinance on Electricity Network Tariffs 2005 (Verordnung über die Entgelte für den Zugang zu Elektrizitätsversorgungsnetzen (Stromnetzentgeltverordnung – StromNEV)), as amended from time to time, which establishes, inter alia, principles and methods for the grid tariff calculations and further obligations of system operators;
- the Ordinance on Electricity Network Access 2005 (Verordnung über den Zugang zu Elektrizitätsversorgungsnetzen (Stromnetzzugangsverordnung StromNZV), as amended from time to time, which, inter alia, sets out the further detail on how to grant access to the transmission systems (and other types of grids) by way of establishing the balancing amount system (Bilanzkreissystem), scheduling of electricity deliveries, control energy and further general obligations, e.g. congestion management (Engpassmanagement), publication obligations, metering, minimum requirements for various types of contracts and the duty of certain system operators to manage the 'Bilanzkreissystem' for renewable energy;
- the Ordinance on Incentive Regulation 2007 (Verordnung über die Anreizregulierung der Energieversorungsnetze (Anreizregulierungsverordnung ARegV)), as amended from time to time, which sets out the basic rules for incentive regulation of TSOs and other system operators (as further described below). It also describes in general terms how to benchmark efficiency, which costs enter the efficiency benchmarking, the method of determining inefficiency and how this translates into yearly targets for efficiency growth.

#### 2.2 Regulatory agencies in Germany

The regulatory agencies for the energy sector in Germany are the Federal Network Agency (Bundesnetzagentur – BNetzA) in Bonn for grids to which over 100,000 grid users are directly or indirectly connected and the specific regulatory authorities in the respective federal states for grids to which fewer than 100,000 grid users are directly or indirectly connected. The regulatory agencies are, inter alia, in charge of ensuring non-discriminatory third-party access to grids and monitoring the grid-use tariffs levied by the TSOs. 50Hertz Transmission and 50Hertz Offshore are subject to the authority of the Federal Network Agency.

#### 2.3 Tariff setting in Germany

The current regulation mechanism is established in Germany by ARegV. According to ARegV, from 1 January 2009, grid tariffs are defined to generate a pre-defined 'revenue cap' as determined by the Federal Network Agency for each TSO and for each regulatory period. The revenue cap is principally based on the costs of a base year, and is fixed for the entire regulatory period, except when it is adjusted to account for specific cases provided for in the ARegV. The system operators are not allowed to retain revenue in excess of their individually determined revenue cap. Each regulatory period lasts five years, and the first regulatory period started on 1 January 2009 and will end on 31 December 2013. Tariffs are public and are not subject to negotiation with customers. Only certain customers (under certain fixed circumstances that are accounted for in the relevant legislation) are allowed to agree to individual tariffs according to Article 19 of StromNEV (for example, in the case of sole use of a network asset). The Federal Network Agency has to approve such individual tariffs.

For the purposes of the revenue cap, the costs incurred by a system operator are classified into two categories as follows:

- Permanently non-influenceable costs (PNIC): these costs are fully integrated into the 'revenue cap' and are fully recovered by the grid tariffs, albeit with a two-year time-lag. PNIC includes return on equity, imputed trade tax, cost of debt, depreciation and operational costs (currently at a fixed rate of 0.8 % of the capitalised investment costs of the respective investments) for what are called investment measures. The cost of debt related to investment budgets is currently capped at the lower value of the actual cost of debt or cost of debt as calculated in accordance with a published Federal Network Agency guideline. Since 2012, the costs associated with these investment measures have been based on forecast values. The differences between the forecast values and the actual values are reflected in the tariffs charged to customers the following year. In addition, PNIC includes costs relating to ancillary services, grid losses and redispatch costs, as well as European initiatives and income from auctions. These costs and income are included in the revenue cap based on a procedural regulation mechanism set by the Federal Network Agency in accordance with Article 11(2) ARegV (FSV). The regulation process relating to ancillary services, grid losses and redispatch costs gives the system operator an incentive to outperform the planned costs through a bonus/malus mechanism. The costs are based on planned costs (taking into account changes in both volume needs and prices) instead of incurred costs in the base year and, as such, only the productivity factor is applicable to such costs. Furthermore, this model will or change in the second regulatory period starting in 2014.
- Temporary non-influenceable costs (TNIC) and influenceable costs (IC): these costs include return on equity depreciation, cost of debt and of imputed trade tax and are subject to an incentive mechanism as set by the Federal Network Agency, which contains an efficiency factor (only applicable to IC), a productivity factor improvement and an inflation factor (applicable to both TNIC and IC) over a five-year period. In addition, the current incentive mechanism provides for the use of a quality factor, but the criteria and implementation mechanism for such a factor are yet to be described by the Federal Network Agency. The various defined factors give the TSOs a medium-term objective to eliminate what are deemed to be inefficient costs. As regards the cost of debt, the allowed cost of debt related to influence able costs needs to be proven as marketable.

- As for return on equity, the relevant laws and regulations set out the provisions relating to the allowed return on equity, which is included in the TNIC/IC for assets belonging to the regulatory asset base and the PNIC for assets approved in investment budgets. For the first regulatory period (2009-2013), the return on equity is set at 7.56 % for investments made before 2006 and 9.29 % for investments made since 2006, based on 40 % of the total asset value regarded as 'financed by equity' with the remainder treated as 'quasidebt'. The return on equity is calculated before corporate tax and after imputed trade tax. For the next regulatory period, the German regulator has calculated 2011 return at a value equal to 9.05 % for investments made since 2006, to foster attractive enough conditions for grid investment, vital for the timely implementation of German energy policy.
- In addition to the revenue cap, 50Hertz is compensated for costs incurred related to its renewable energy obligations, including EEG and CHP/KWKG obligations, subject to specific regulatory mechanisms aimed at a balanced treatment of costs and income.

#### **CHANGES IN TARIFF REGULATIONS**

Progress was made in 2012 following discussions with the regulator to improve the regulatory framework for new investments in grid infrastructure, the coverage of grid management and development costs, return on capital and the conditions under which new offshore farms should be connected.

As at 31 December 2013, 50Hertz had obtained approval for 69 out of 99 active investment measure requests made since 2008. Costs of approved investment measures account for  $\in$  3.6 billion.

#### **TARIFFS**

Grid access tariffs were calculated based on the respective revenue cap and published on a provisional basis on the 15th of October for the year 2014. In principle the grid fees are a bit lower than in 2013 reflecting the relative stable cost basis.

# Information about the parent company

Extracts from the statutory annual accounts of Elia System Operator SA, drawn up in accordance with Belgian accounting standards, are given hereafter in abbreviated form.

Pursuant to Belgian company legislation, the full financial statements, the annual report and the joint auditors' report are filed with the National Bank of Belgium.

These documents will also be published on the Elia website www.elia.be and can be obtained on request from Elia System Operator SA, Boulevard de l'Empereur 20, 1000 Brussels, Belgium. The joint auditors made an unreserved statement with an explanatory paragraph in the statutory financial statements.

## 1. Statement of position after distribution of profits

ASSETS	2013	2012
		(in million €)
FIXED ASSETS	3,605.0	3,615.8
Financial fixed asset	3,605.0	3,615.8
Affiliated companies	3,583.0	3,583.0
Participating interests	3,583.0	3,583.0
Other enterprises linked by participating interests	22.0	32.8
Participating interests	21.7	32.5
Other participating interests	0.3	0.3
CURRENT ASSETS	1,188.4	895.6
Amounts receivable after more than one year	93.8	94.0
Other amounts receivable	93.8	94.0
Inventories and contracts in progress	7.3	5.6
Contracts in progress	7.3	5.6
Amounts receivable within one year	852.6	669.6
Trade debtors	160.9	141.7
Other amounts receivable	691.6	527.9
Investments	88.0	70.0
Other term deposits	88.0	70.0
Cash at bank and in hand	136.5	47.9
Deferred charges and accrued income	10.3	8.5
TOTAL ASSETS	4,793.4	4,511.4

EQUITY AND LIABILITIES	2013	2012
		(in million €)
CAPITAL AND RESERVES	1,661.8	1.634.9
	·	7
Capital	1,510.7	1,510.4
Issued capital	1,510.7	1,510.4
Share premium account	8.8	8.8
Reserves	116.5	97.2
Legal reserve	116.5	97.2
Profit carried forward	25.8	18.5
PROVISIONS, DEFERRED TAXES	0.3	3.1
Provisions for risks and charges	0.3	3.1
Other risks and charges	0.3	3.1
LIABILITIES	3,131.3	2,873.5
Amounts payable after one year	2,303.0	2,054.6
Financial debts	2,303.0	2,054.6
Unsubordinated debentures	1,747.5	1,498.8
Credit institutions	60.0	60.0
Other loans	495.8	495.8
Amounts payable within one year	721.5	688.6
Current portion of amounts payable after more than one year	499.9	500.0
Financial debts	0.0	0.0
Credit institutions	0.0	0.0
Trade debts	109.9	83.1
Suppliers	99.7	73.3
Advances received on contracts in progress	10.3	9.7
Amounts payable regarding taxes, remuneration and social security costs	8.0	7.4
Taxes	0.0	0.0
Remuneration and social security	8.0	7.4
Other amounts payable	103.7	98.1
Accrued charges and deferred income	106.4	130.2
TOTAL EQUITY AND LIABILITIES	4,793.4	4,511.4

## 2. Income statement

(in million €)	2013	2012
OPERATING INCOME	797.3	772.4
Turnover Increase (+), decrease (-) in inventories of finished goods, works and contracts in progress Other operating income	789.5 1.7 6.1	<b>764.8</b> 0.6 6.9
OPERATING CHARGES	(645.7)	(622.7)
Services and other goods Remuneration, social security costs and pensions Provisions for liabilities and charges	(611.3) (37.2) 2.7	(585.2) (37.4) 0,0
OPERATING INCOME	151.5	149.7
Financial income Income from financial fixed assets Income from current assets	111.6 100.7 10.9	91.1 79.9 11.2
Financial charges Interest and other debt charges Other financial charges	(130.3) (125.6) (4.7)	(131.2) (128.3) (2.9)
PROFIT ON ORDINARY ACTIVITIES BEFORE TAXATION	132.8	109.6
Extraordinary income Proceeds from sale of investments	0.5 0.5	0.0 0.0
Extraordinary charges Other extraordinary charges	(1.5) (1.5)	(0.1) (0.1)
PROFIT FOR THE FINANCIAL PERIOD BEFORE TAXATION	131.8	109.5
Income taxes Income taxes Adjustments of income taxes and write-back of provisions	(11.9) (12.0) 0.0	(12.1) (12.1) 0.0
PROFIT FOR THE FINANCIAL PERIOD	119.8	97.4

# Reporting parameters

#### **Head office**

This report is limited to Elia System Operator and Elia Asset, which operate as a unique economic entity under the name Elia, and 50Hertz Transmission.

The registered office of

Elia System Operator and Elia Asset is located at
Boulevard de l'Empereur, 20
1000 Brussels, Belgium

The registered office of **50Hertz GmbH** is located at Eichenstraße 3A 12435 Berlin, Germany

The registered office of **Eurogrid International** is located at Avenue de Cortenbergh, 71 1000 Brussels, Belgium

#### Reporting period

This annual report covers the period from 1 January 2013 to 31 December 2013.

It incorporates the principles from the sustainable development report as required by the GRI.

#### Contact

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This edition of the 2013 annual report could not have been written without the active participation of many members of the Elia Group. We hereby wish to thank warmly, hoping not to have forgotten anyone:

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# Key figures

Consolidated results	2013	2012	2011	2010¹	2009
(in millions €)					
Total revenues and other income	1,389.5	1,306.6	1,278.4	1,037.5	771.3
EBITDA*	486.9	455.5	448.9	687.9	327.9
REBITDA*	486.9	455.5	448.9	409.4	327.9
Operating profit (REBIT*)	345.4	305.4	308.0	281.9	225.8
Operating profit (EBIT*)	345.4	305.4	308.0	560.4	225.8
Net finance costs	(108.5)	(134.8)	(128.6)	(123.2)	(120.5)
Income tax expenses	(61.5)	(16.2)	(43.3)	(34,0)	(20.0)
Profit attributable to the Owners of the Company	175.8	155.0	137.5	401.7	84.0
Basic earnings per share, incl. non- recurring elements (€)	2.90	2.57	2.28	7.36	1.75
Basic earnings per share, excl. non- recurring items (€)	2.90	2.57	2.28	2.26	1.75
Dividend per share (€)	1.54	1.47	1.47	1.40	1.38
Consolidated statement					
of financial position	31.12.2013	31.12.2012	31.12.2011	31.12.2010	31.12.2009
(in millions €)					
Total assets	6,532.2	6,187.0	5,843.8	5,904.0	4,451.9
Equity, attributable to the	0,002.2	0,101.0	0,010.0	0,001.0	1, 101.0
Owners of the Company	2,209.1	2,108.5	2,046.9	2,007.2	1,365.4
Net financial debt	2,733.8	2,910.8	2,532.9	2,551.4	2,444.4
Equity per share (€)	36.5	34.9	33.9	36.8	28.4
Number of shares (end of period)	60,568,229	60,555,809	60,355,217	60,355,217	48,270,255

<sup>\*</sup> EBIT = earnings before interest and taxes - EBITDA = EBIT + depreciation / amortization / impairment and changes in provisions - REBIT = Recurring EBIT - REBITDA = Recurring EBITDA.

1 The results of 50Hertz Transmission, consolidated at Eurogrid International level for the period from June to December 2010, were included in the consolidated Elia Group IFRS figures as at 31 December 2010 (60% proportionate consolidation). The first five months were booked as shareholders' equity (opening balance), thereby benefitting Elia shareholders.



### Legend

Switchgear (in large part with transition to distribution system operators)

220 kV

380 kV

380 kV planned / under construction

380/220 kV 🔘

380 kV ----

0

0

**⊚** 

0

Other companies O

Other companies

line 380 kV -

line planned/ under construction

line 220 kV ——

Operating voltage (kV) 110

Other companies 380/220 kV —

HVDC/DC link 400 kV → I

Grid connection offshore ... kV -

Grid connection offshore ... kV ----planned / under construction

#### System users:

Our customers include the regional distribution system operators as well as power plants, pump storage plants, wind farms and big industry connected to the transmission grid.

Conventional power plant (lignite- or hard-coal fired, or gas turbine power plant)

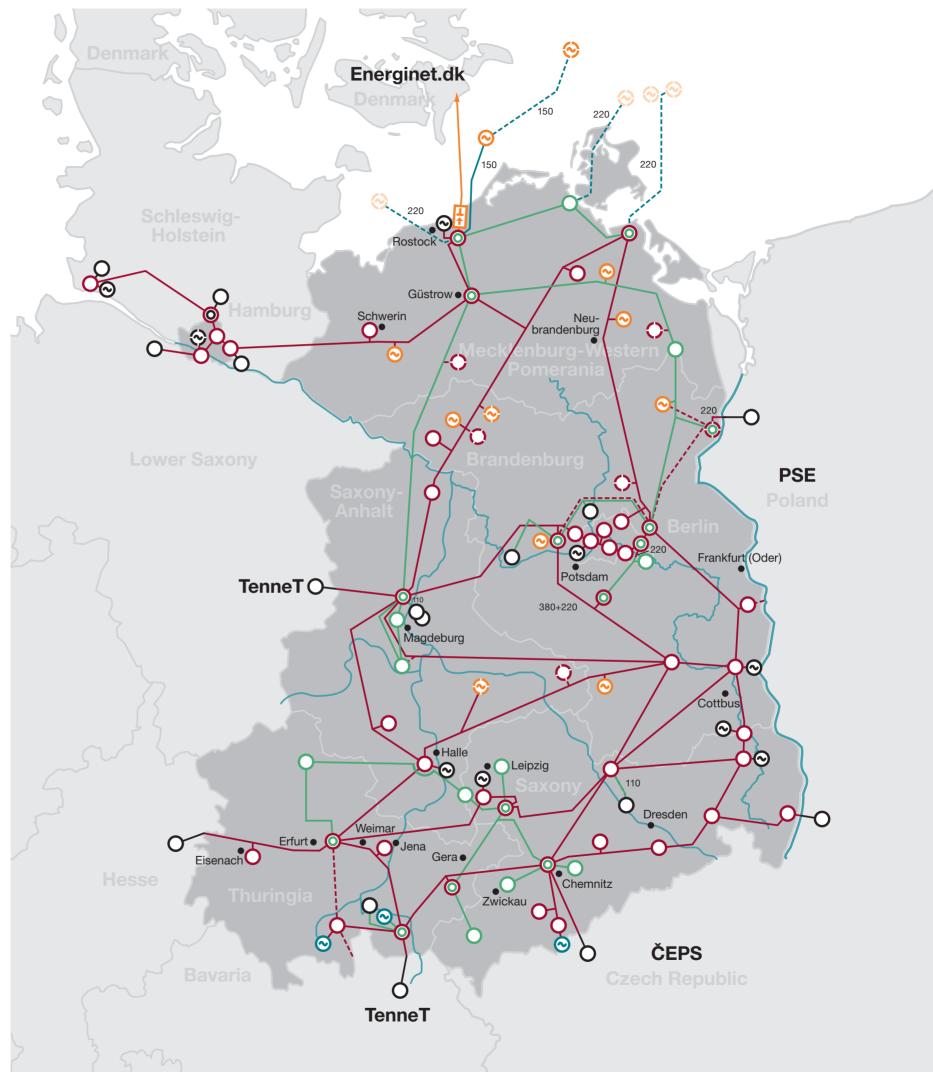
under construction

Pump storage plant

Wind farm onshore/offshore
Onshore planned/under construction

Offshore under construction

Offshore-Wind farms planned



Grid 50Hertz

# Head office Elia Boulevard de l'Empereur 20, B-1000 Bruxelles T +32 2 546 70 11 - F +32 2 546 70 10 info@elia.be Contacts Barbara Verhaegen, T +32 2 546 73 78 Axelle Pollet, T +32 2 546 75 11 Concept and editorial staff Elia, departement Communication Graphic design and coordination Photos Elia Antonio Caliaro (Elia), Marianne Celis (Elia), Gaëtan Delcuve (Elia), Guy Van Hooveld, Marc Van Eyken (Bozo), Julien De Wilde (Reporters), Michel Gouverneur (Reporters), Wim Beddegenoodts (Reporters), Olivier Polet (Reporters), Eric Herschaft (Reporters), Photothèque Elia **Photos 50Hertz** Picture of Stephan Singer: © WWF Heike Müller © UfU Dr. Klaus Kleinekorte © Amprion Archiv 50Hertz, Jan, Pauls, Andreas Teich **Editor** llse Tant Ce document est également disponible en français. Dit document is ook beschikbaar in het Nederlands. April 2014 MIX FSC\* C021474 www.eliagroup.eu www.elia.be www.50hertz.com