Elia

System and market overview 2012

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I. Energy

I.1 Energy balance on the Elia grid in 2012[1]

Energy balance on the Elia grid in 2012[1]

(All values in GWh)

Imports	
France:	7,453.0
Luxembourg:	1,385.5
Netherlands:	8,010.1

Exports	
France:	2,340.5
Luxembourg:	879.1
Netherlands:	3,691.7

Net Import: 9,937.3

Net Injection	
Power stations:	61,661.0
Local generation on Elia-grid:	9,904.9
From distribution networks:	785.8
Total:	**72,351.8**

Offtake	
Direct customers	28,595.9
Distribution:	52,247.6
Total:	**80,843.5**

Energy losses: 1,445.5

Energy balance on the Elia grid in 2011

(All values in GWh)

Imports	
France:	7,221.0
Luxembourg:	1,531.9
Netherlands:	4,514.5

Exports	
France:	2,330.1
Luxembourg:	1,318.1
Netherlands:	7,003.8

Net Import: 551,7

Net Injection	
Power stations :	70,746.6
Local generation on Elia-grid:	9,646.5
From distribution networks:	653.5
Total:	**81,046.6**

Offtake	
Direct customers:	28,938.6
Distribution:	53,264.6
Total:	**82,203.2**

Energy losses: 1,458.7

The energy balance provides an overview of imports and exports, injections into the Elia grid in Belgium, the load on the Elia grid and losses during transmission. Net injections cover net injections into the Elia grid from power stations connected to the grid (including pumped-storage power stations) and net injections from distribution grids and local generation units that inject energy into the grid at a voltage of at least 30 kV. Injections from generation units connected to a voltage lower than 30 kV are only counted if a net injection into the Elia grid is measured.

A customer with a local generation unit draws electrical energy from the grid at the same point where the local generation unit injects energy into the grid.

The balance for 2012 clearly shows the effect of the unavailability of Doel 3 and Tihange 2 from the summer months onwards owing to flaw indications in the reactor vessels. The reduced generation at these units was largely offset by an increase in net energy imports from both France and the Netherlands.

1 Figures as of 19/02/2013

I.2 Elia grid load[2]

Elia grid load in 2011 and 2012 (by month)
In the past, the load recorded on the Elia grid gave a quite accurate image of electricity consumption in Belgium. This is no longer the case following the growth in decentralised generation injected into and drawn from the distribution grids (mainly onshore wind farms and photovoltaic solar power).

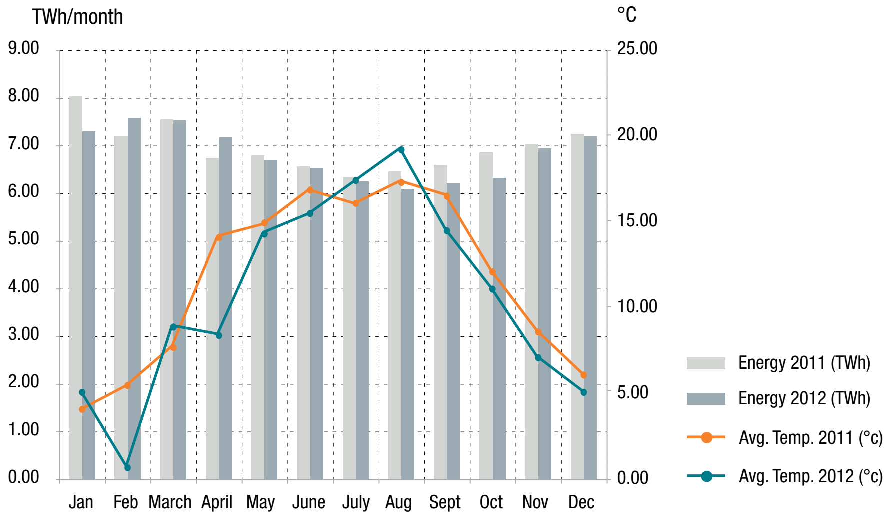
Elia publishes figures related to grid load. Load is divided into two categories: 1/ offtakes and local generation by customers connected directly to the Elia grid (industrial customers); 2/ offtakes by distribution system operators, which in turn transmit electricity to customers connected to their grids (small and medium-sized businesses, organisations and residential customers).

The amount of energy is stated in gigawatt-hours (GWh) or in terawatt-hours (TWh = 1000 GWh). By way of example, one gigawatt-hour is the amount of power needed to light 50 million 20 W energy-efficient lamps for one hour.

The graph herafter shows the load on the Elia grid per month for each month in the period 2011-2012, and the average temperatures in °C. Grid load is influenced to a large extent by temperature and season.

The load on the Elia grid decreased by 2%, from 83.4 TWh in 2011 to 81.7 TWh in 2012. On an annual basis the load reachd its highest value in 2005 (89.5 TWh). Overall, in 2012, consumption by industrial customers connected directly to the Elia grid fell by 1.8% and consumption by distribution system operators fell by 1.9% compared with 2011.

As in 2011, the values recorded for all months in 2012 (except February and April) were lower than the values for the same months in the previous year. The decline that began in 2011 was therefore continued in 2012. However, recorded values are still higher than those for 2009, at the height of the economic and financial crisis that erupted in late 2008.



2 The load on the Elia grid is based on injections of electrical energy into the Elia grid. It comprises the net generation of units injecting power into the Elia grid (at a voltage of at least 30 kV), the balance of imports and exports at the borders with the Elia control area, and net injections from distribution networks. The energy needed to pump water into the reservoirs of pumped-storage power stations connected to the Elia grid is subtracted.

The Elia grid includes grids with a voltage of at least 30 kV in Belgium as well as the Sotel/Twinerg grid in the south of Luxembourg.

The load recorded on the Elia grid differs more and more from consumption in Belgium due to the growth of decentralised generation connected to the distribution grids (with a voltage lower than 30 kV).

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Energy 2012 (TWh)	7.30	7.58	7.52	7.17	6.69	6.53	6.25	6.09	6.21	6.32	6.94	7.20
Energy 2011 (TWh)	8.03	7.20	7.55	6.74	6.79	6.56	6.34	6.46	6.60	6.85	7.04	7.24
Avg. temp. 2012 (°c)	5.10	0.70	8.90	8.40	14.30	15.40	17.30	19.20	14.50	11.10	7.10	5.10
Avg. temp. 2011 (°c)	4.00	5.40	7.70	14.10	14.80	16.80	16.00	17.30	16.50	12.10	8.60	6.10

I.3 Net offtake

The net offtake of electrical energy is the sum of the net energy taken off the grid at all access points, including the net offtake (measured at the Belgian border) of Luxembourg system operator Sotel. It does not include local generation by industrial customers connected directly to the Elia grid.

The net offtake per region is based on the location of the offtake points and hence is an approximation of the real net offtake per region.

Net offtake in the Elia control area per region

GWh	2009	2010	2011	2012
Flanders	43,884	45,472	42,806	41,452
Brussels	5,863	5,907	5,711	5,688
Wallonia (Sotel included)	24,044	25,010	24,527	24,103
Total Belgium	**73,791**	**76,390**	**73,044**	**71,243**

Net offtake in the Elia control area per type of customer

GWh	2009	2010	2011	2012
Direct customers	18,559	20,143	19,779	18,996
Distribution networks	55,232	56,247	53,265	52,248
Total	**73,791**	**76,390**	**73,044**	**71,243**

II. Power

II.1 Peak load on the Elia grid in 2012

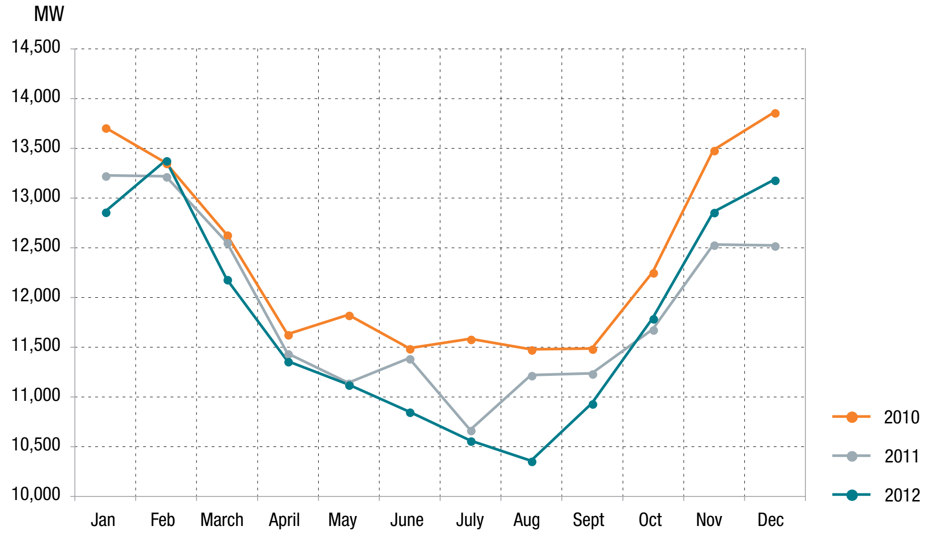
The maximum load on the Elia grid was 13,362 MW, recorded between 6.45 p.m. and 7 p.m. on 8 February 2012. This is 4.8% lower than the all-time record, set on 17 December 2007 (14,033 MW) but 1.2% higher than the maximum value recorded in 2011 (13,208 MW on 11 January 2011).

The lowest load level (5,845 MW) was recorded between 2.30 p.m. and 2.45 p.m. on 22 July 2012. This annual low was 6.2% lower than the minimum value in 2011 (6,232 MW on 24 July). NB: this is the first time that the minimum load has occurred during the day rather than at night.

II.2 Peak load on the Elia grid and temperature trend

The table and graph below show the maximum load on the Elia grid (in MW) for every month during the period 2010-2012.

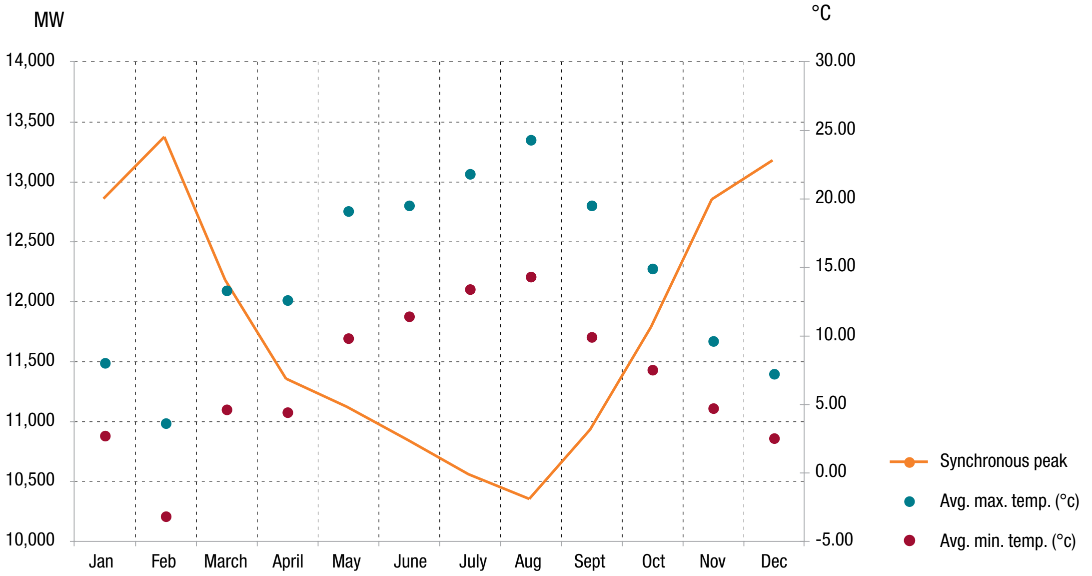
Maximum load on the Elia grid in 2010, 2011 and 2012 (synchronous peak)



MW	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2012	12,844	13,362	12,167	11,342	11,107	10,832	10,545	10,340	10,917	11,773	12,841	13,167
2011	13,208	13,201	12,536	11,420	11,123	11,370	10,650	11,202	11,217	11,660	12,514	12,507
2010	13,692	13,335	12,616	11,613	11,808	11,472	11,567	11,459	11,468	12,236	13,467	13,845

Maximum load on the Elia grid and average temperatures[3] per month in 2012

The differences in maximum load can be explained mainly by the differences in temperature and intensity of economic activity in Belgium. The graph and table below show the maximum load per month as well as average maximum and minimum temperatures for each month (in °C).



2012	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Synchronous peak in MW	12,844	13,362	12,167	11,342	11,107	10,832	10,545	10,340	10,917	11,773	12,841	13,167
Avg. max. temp. (°c)	8.00	3.60	13.30	12.60	19.10	19.50	21.80	24.30	19.50	14.90	9.60	7.20
Avg. min. temp. (°c)	2.70	-3.20	4.60	4.40	9.80	11.40	13.40	14.30	9.90	7.50	4.70	2.50

Average temperature per month[3]

2012	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Avg. temp. 2012 (°c)	5.10	0.70	8.90	8.40	14.30	15.40	17.30	19.20	14.50	11.10	7.10	5.10
Avg. temp. 2011 (°c)	4.00	5.40	7.70	14.10	14.80	16.80	16.00	17.30	16.50	12.10	8.60	6.10

3 Source: Belgian Royal Meteorological Institute

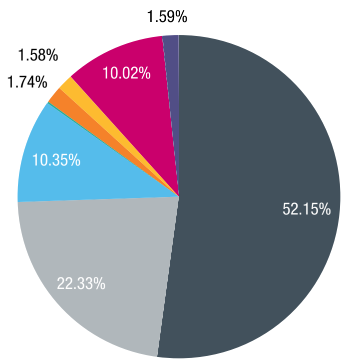
II.3 Generating facilities

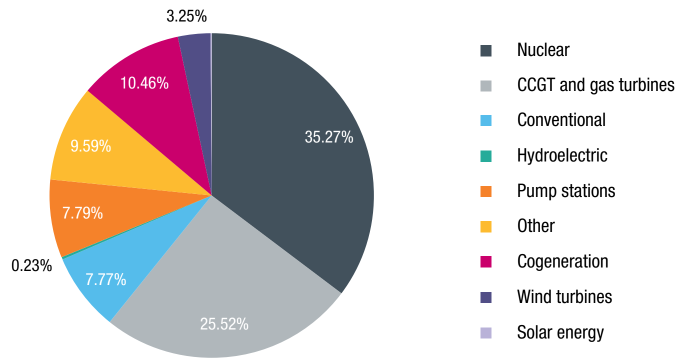
Production per type of generation facility in 2012

Type	MWh
Nuclear power plants	38,393.301
CCGT and gas turbines	16,440.439
Conventional power plants	7,616.962
Multifuels	175,100
One fuel	7,441.861
Hydroelectric	118,321
Pump stations	1,278.660
Other	1,163.470
Diesel engines	3,901
Turbojets	16,720
Incinerators	1,098.194
Other	44.654
Cogeneration	7,375.294
Wind turbines	1,167.571
Solar energy	19,985
Total with pump stations	73,574.002
Total without pump stations	72,275.357

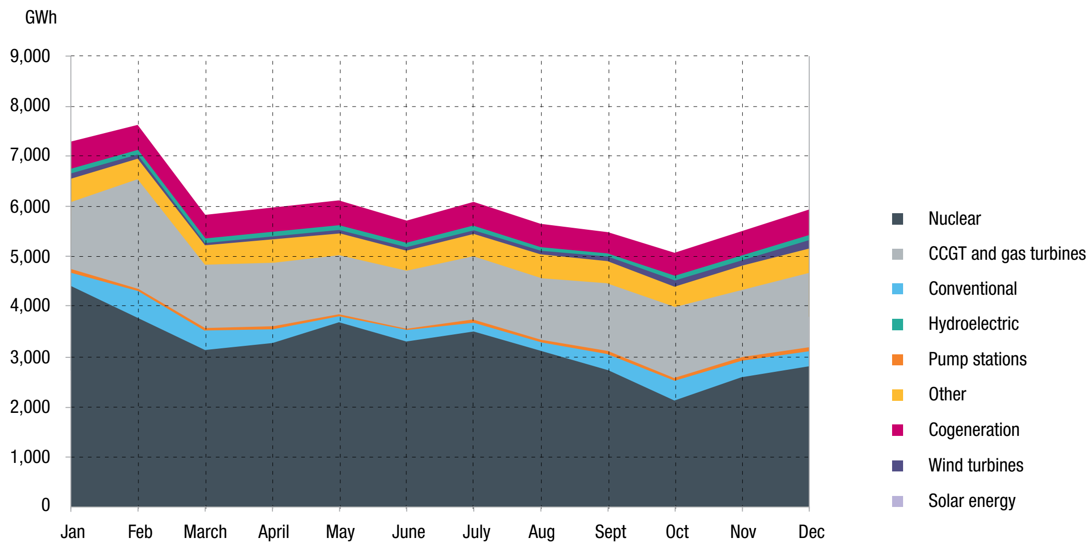
Installed power per type of generation facility in 2012

Type	MW
Nuclear power plants	5,926
CCGT and gas turbines	4,288
Conventional power plants	1,305
Multifuels	305
One fuel	1000
Hydroelectric	39
Pump stations	1,308
Other	1,612
Diesel engines	70
Turbojets	210
Incinerators	1,152
Other	180
Cogeneration	1,758
Wind turbines	547
Solar energy	19
Total with pump stations	16,8012
Total without pump stations	15,475





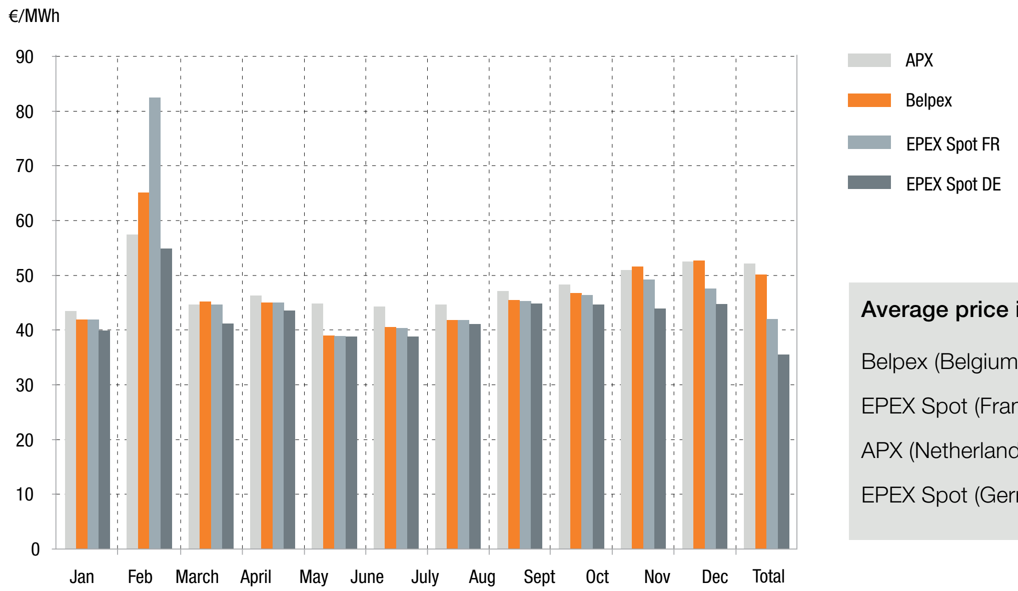
Monthly generation of electricity by type of generation unit in 2012



III. International markets and flows

III.1 Belpex day-ahead market in 2012

Price trends on the Belpex day-ahead market in 2012



Source: APX, Belpex, EPEX Spot

Average price in 2012

Belpex (Belgium):	46.98 €/MWh
EPEX Spot (France):	46.94 €/MWh
APX (Netherlands):	48.00 €/MWh
EPEX Spot (Germany):	42.60 €/MWh

Price convergence with energy exchanges in neighbouring countries – Two years of CWE and ITVC market coupling

Price coupling enables the volumes of electricity traded and market prices to be simultaneously 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 November 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, as well as based on slightly different technical arrangements, to Scandinavia. This mechanism enables optimum 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.

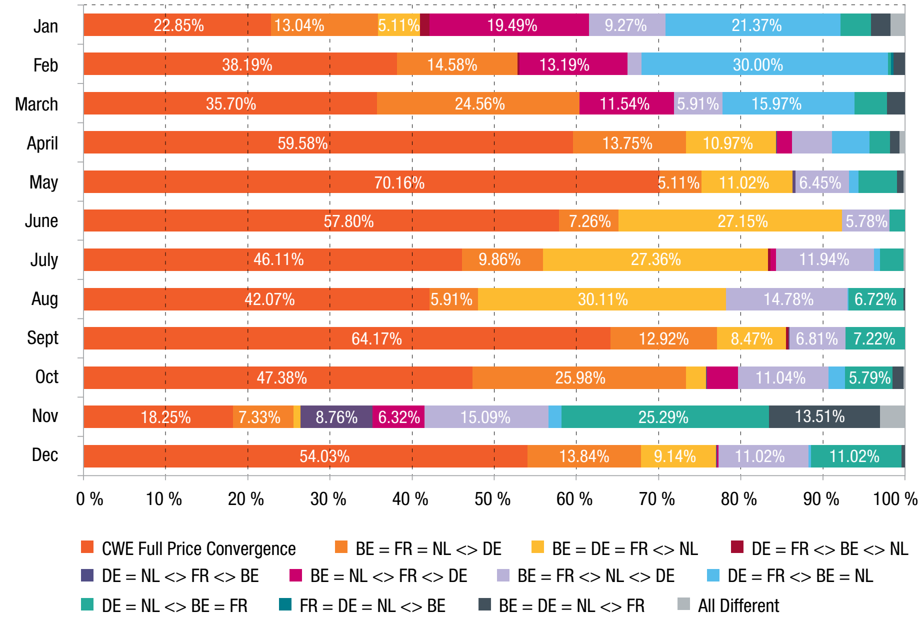
In 2012, the prices of the four coupled intraday markets in CWE converged some 45.08% of the time (with a maximum of 70.16% in August and a minimum of 18.25% in February); prices in Belgium and France were the same 84.18% of the time, while in Belgium and the Netherlands they converged 72.18% of the time.

Overall price convergence in CWE was lower in 2012 than 2011 due to:

- a price divergence with the Netherlands at the start of the year: gas units were not operational there for economic reasons;
- a price divergence with France following a consumption peak during the cold snap in February;
- the unavailability of two nuclear reactors in Belgium since the summer.

The coupling of CWE markets has resulted in significantly lower wholesale 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 utilisation of import/ export capacities at Belgium's borders on a day-to-day basis, with volumes of 15.5 TWh for imports and 6 TWh for exports.

Price convergence between the day-ahead markets in Belgium, the Netherlands, France and Germany from 1 January to 31 December 2012



Volumes traded on Belpex

The growth in volumes on the day-ahead market continued in 2012, accounting for 20.4% of the Elia grid compared with 14.8% in 2011. The volume traded was also up, from a daily average of 33,839 MWh in 2011 to 44,988 MWh in 2012 – an increase of 33%.

The record volume, recorded on 30 October 2012, was 88,180 MWh, i.e. 37.32% of the load on the Elia grid.

III.2. Imports and exports

Physical flows of energy with neighbouring countries

Volumes imported and exported (2011-2012)

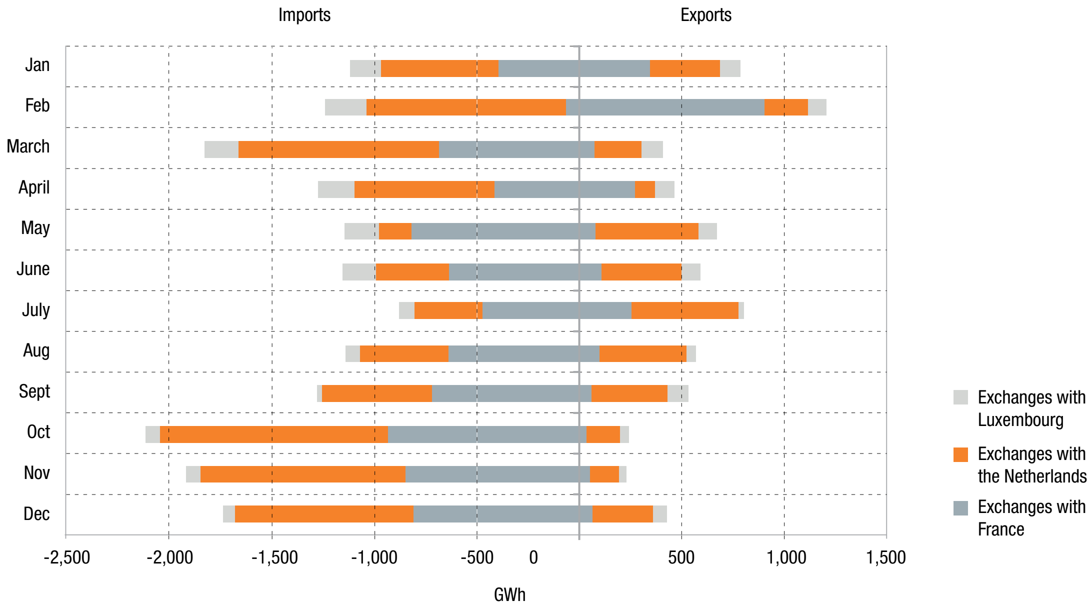
The table hereafter gives an overview of physical flows of electrical energy measured at the borders each year. Physical flows do not necessarily correspond to contractual flows, as electrical energy is divided up over the grid on the basis of resistance, always choosing the path of least resistance, and does not take account of the contents of commercial agreements. However, the grid operator must take account of the actual physical flows at Belgium's borders in order to ensure the safe operation of the electricity system.

2012	Lux Export	Lux Import	Fr Export	Fr Import	Nl Export	Nl Import
Jan	99.0 GWh	-148.7 GWh	343.0 GWh	-396.5 GWh	341.9 GWh	-574.3 GWh
Feb	89.3 GWh	-202.7 GWh	902.9 GWh	-66.2 GWh	210.9 GWh	-974.2 GWh
March	102.4 GWh	-164.0 GWh	75.2 GWh	-685.3 GWh	227.2 GWh	-978.6 GWh
April	94.3 GWh	-177.4 GWh	272.0 GWh	-415.0 GWh	97.9 GWh	-683.5 GWh
May	88.3 GWh	-165.5 GWh	78.1 GWh	-822.0 GWh	503.8 GWh	-158.7 GWh
June	92.8 GWh	-161.5 GWh	107.8 GWh	-636.3 GWh	388.8 GWh	-357.4 GWh
July	26.5 GWh	-73.8 GWh	254.6 GWh	-476.0 GWh	522.1 GWh	-330.5 GWh
Aug	44.0 GWh	-69.5 GWh	97.2 GWh	-639.6 GWh	427.2 GWh	-431.7 GWh
Sept	99.8 GWh	-25.2 GWh	58.8 GWh	-720.7 GWh	371.3 GWh	-536.9 GWh
Oct	42.5 GWh	-70.1 GWh	33.7 GWh	-934.2 GWh	164.3 GWh	-1,113.7 GWh
Nov	33.9 GWh	-69.0 GWh	52.0 GWh	-850.1 GWh	141.7 GWh	-1,000.9 GWh
Dec	66.2 GWh	-58.1 GWh	65.2 GWh	-811.2 GWh	294.6 GWh	-869.8 GWh

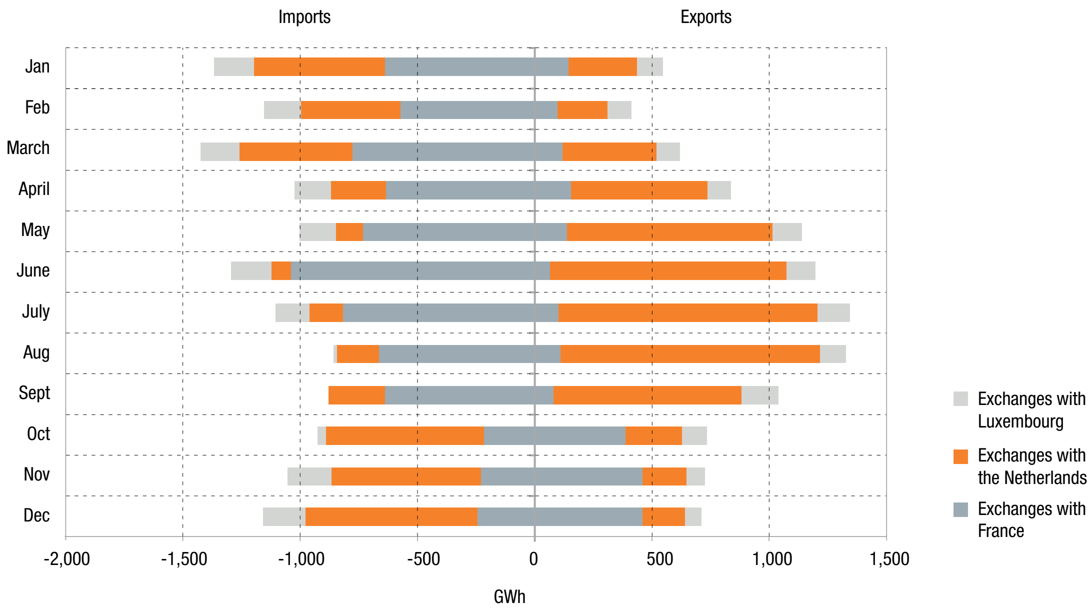
2011	Lux Export	Lux Import	Fr Export	Fr Import	Nl Export	Nl Import
Jan	111.6 GWh	-169.0 GWh	145.4 GWh	-641.2 GWh	291.9 GWh	-558.2 GWh
Feb	101.3 GWh	-156.5 GWh	98.8 GWh	-574.3 GWh	212.0 GWh	-424.9 GWh
March	99.6 GWh	-165.6 GWh	120.0 GWh	-778.4 GWh	401.0 GWh	-483.1 GWh
April	98.6 GWh	-155.3 GWh	155.6 GWh	-636.7 GWh	585.1 GWh	-234.4 GWh
May	123.9 GWh	-154.4 GWh	138.6 GWh	-733.1 GWh	877.1 GWh	-117.3 GWh
June	123.0 GWh	-170.6 GWh	65.1 GWh	-1,041.7 GWh	1.010.6 GWh	-85.0 GWh
July	137.5 GWh	-143.5 GWh	101.8 GWh	-819.3 GWh	1.107.8 GWh	-144.0 GWh
Aug	110.7 GWh	-14.1 GWh	110.5 GWh	-665.0 GWh	1.109.2 GWh	-180.6 GWh
Sept	157.0 GWh	0.0 GWh	81.4 GWh	-638.6 GWh	803.2 GWh	-242.3 GWh
Oct	107.1 GWh	-36.2 GWh	389.3 GWh	-218.3 GWh	239.2 GWh	-672.4 GWh
Nov	78.5 GWh	-186.0 GWh	461.6 GWh	-229.8 GWh	186.4 GWh	-637.9 GWh
Dec	69.3 GWh	-180.6 GWh	461.9 GWh	-244.6 GWh	180.2 GWh	-734.3 GWh

The charts below show resulting physical exchanges of electricity with neighbouring countries (in GWh) in 2012 and 2011. Negative volumes indicate imports while positive volumes indicate exports.

Import and export volumes in 2012



Import and export volumes in 2011



Net balance of electricity imports in 2012

In 2012, the balance of imports and exports on the Elia grid in the Belgian control area yielded a net import of 9.94 TWh, very substantially higher than the net import of 2.61 TWh and 0.55 TWh recorded in 2011 and 2010 respectively. This difference is primarily a direct result of the unavailability of Doel 3 and Tihange 2 power plants from the summer of 2012 onwards owing to safety concerns about the reactor vessels. A significant portion of the electricity not generated by those plants was procured from neighbouring countries via cross-border capacity, resulting in a substantial net import position for Belgium in annual terms.

Despite this increase in net imports, physical exchanges of electricity with neighbouring countries via the Elia grid fell slightly to 23.76 TWh, down less than 1% compared to the 2011 total of 23.92 TWh.

In other words, Belgium was less active as a transit country for conveying power between its neighbouring countries but consumed a large part of the import volumes itself.

Commercial energy exchanges with neighbouring countries

Use of cross-border capacities

Commercial transmission capacity at the borders is divided into three categories and allocated to the market players on an annual, monthly and daily basis. The market players can use their annual and monthly capacity by nominating it today for the next day (day-ahead). Allocated annual and monthly capacity which is not nominated is once again made available to the market in the form of additional daily capacity.

The principle of netting has been used since 2008 to define the quantity of daily capacity available. This involves "netting out" import and export nominations of annual and monthly capacities, thereby freeing up additional available daily capacity.

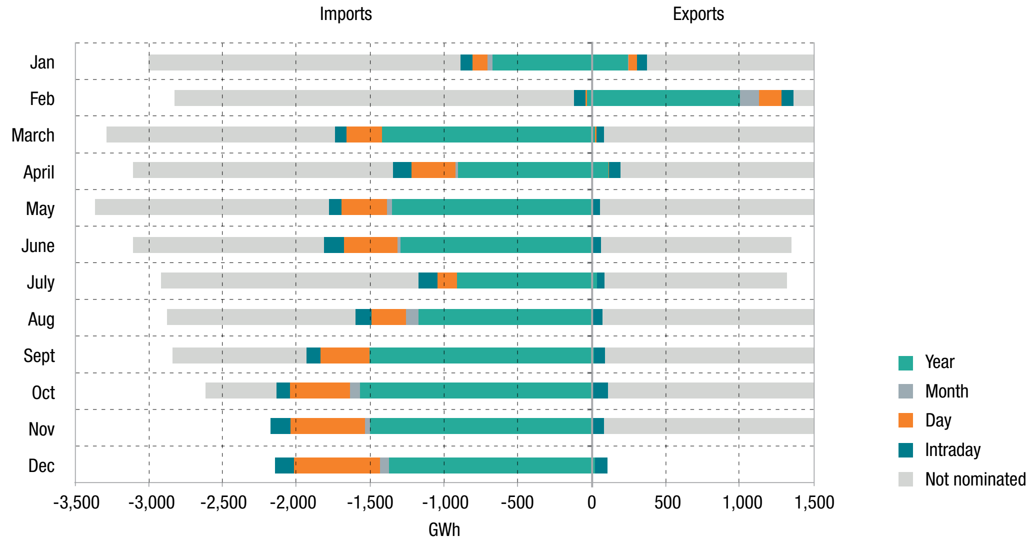
Since 2007, it has also been possible to acquire and use intraday border capacity on the day of delivery at the border between France and Belgium. This system was also introduced at the Dutch-Belgian border in May 2009.

The amount of intraday capacity available is mainly determined by the level of unused daily capacity.

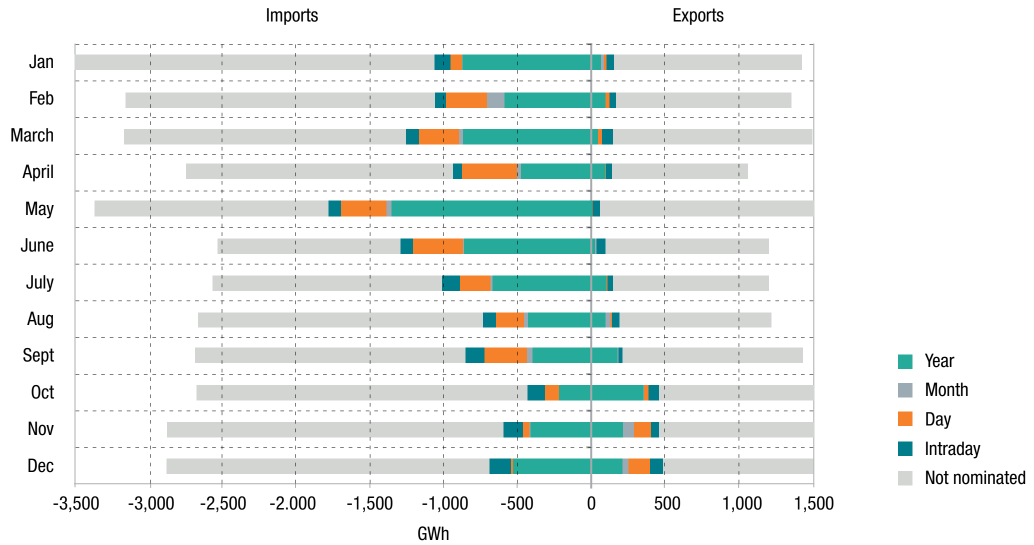
Since 17 February 2011, intraday capacity has been allocated at the north border via an implicit mechanism based on continuous trading on the APX and Belpex intraday markets. This happens via the Elbas trading platform.

The charts below illustrate the average nominations of annual, monthly, daily and intraday capacity each month at each border. Nominations are compared to the capacity physically available to the market (net transmission capacity, or NTC). The monotonic curve for the use of the commercial cross-border capacity represents the use of the commercial cross-border capacity over the course of one year, with all hours of the year listed in descending order, from the hour with the highest load to the hour with the lowest.

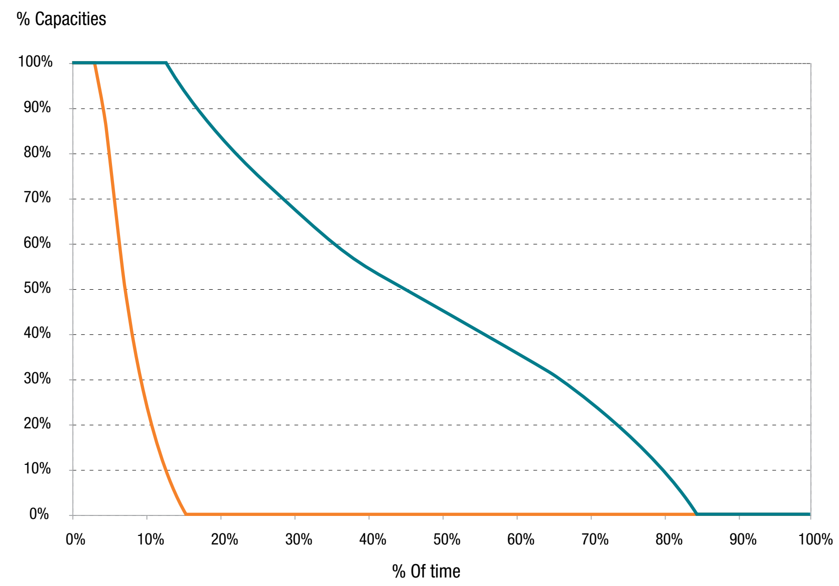
Use of commercial transmission capacity at Belgium's south border in 2012



Use of commercial transmission capacity at Belgium's south border in 2011



Monotonic curve for the use of commercial transmission capacity at Belgium's south border in 2012

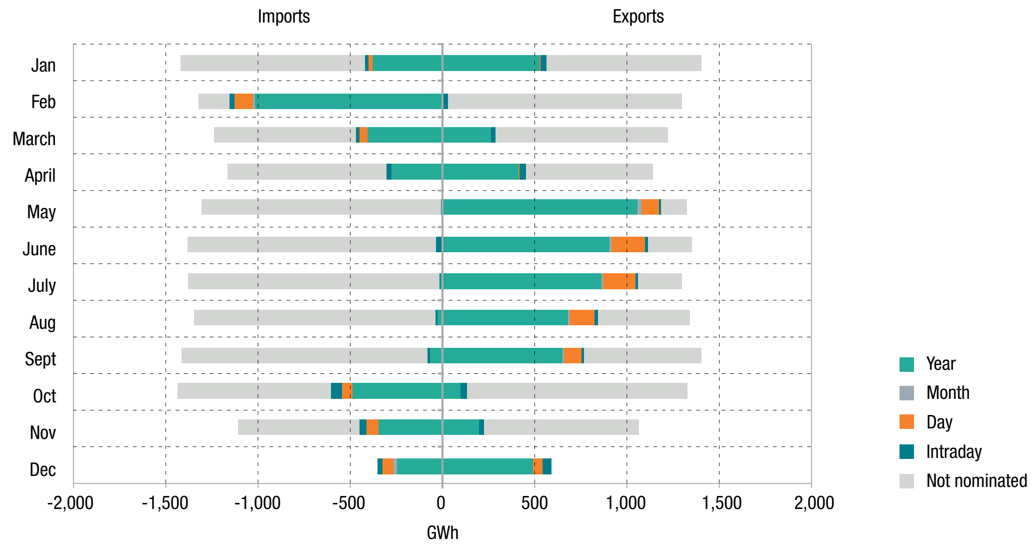


The monotonic curve for the use of commercial cross-border capacity represents the use of available capacity over the course of one year, with all hours of the year listed in descending order, from the hour with the highest load to the hour with the lowest.

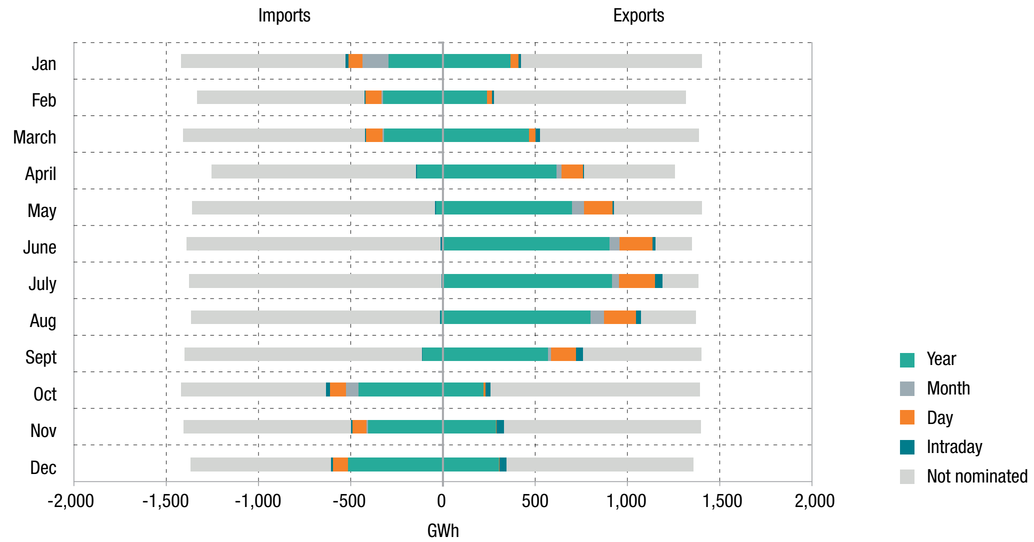
- The year's 8,784 hours are shown on the x-axis (as percentage),
- while the y-axis represents the percentage of capacity used for imports and exports.

The monotonic curve makes it possible to determine the period of time during which a given usage of cross-border capacity took place.

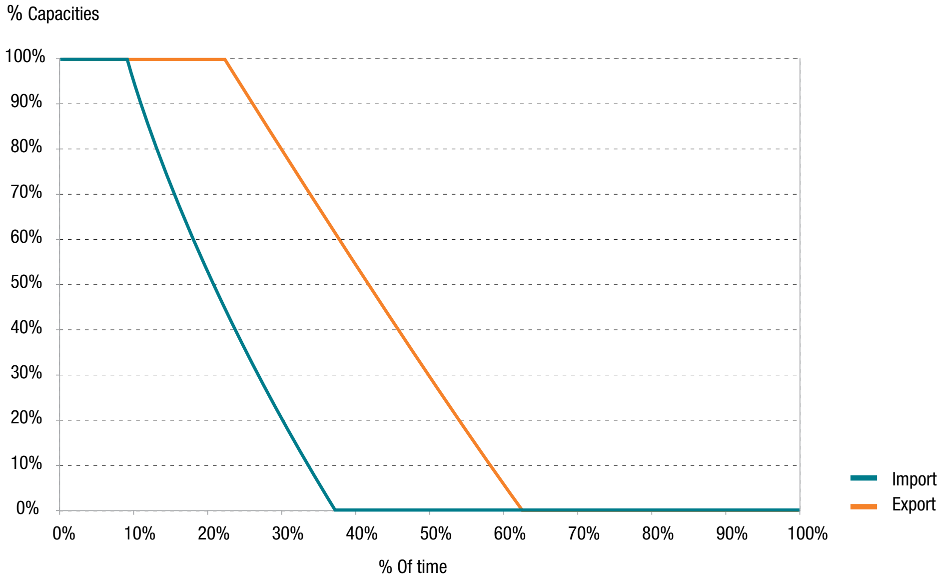
Use of commercial transmission capacity at Belgium's north border in 2012



Use of commercial transmission capacity at Belgium's north border in 2011



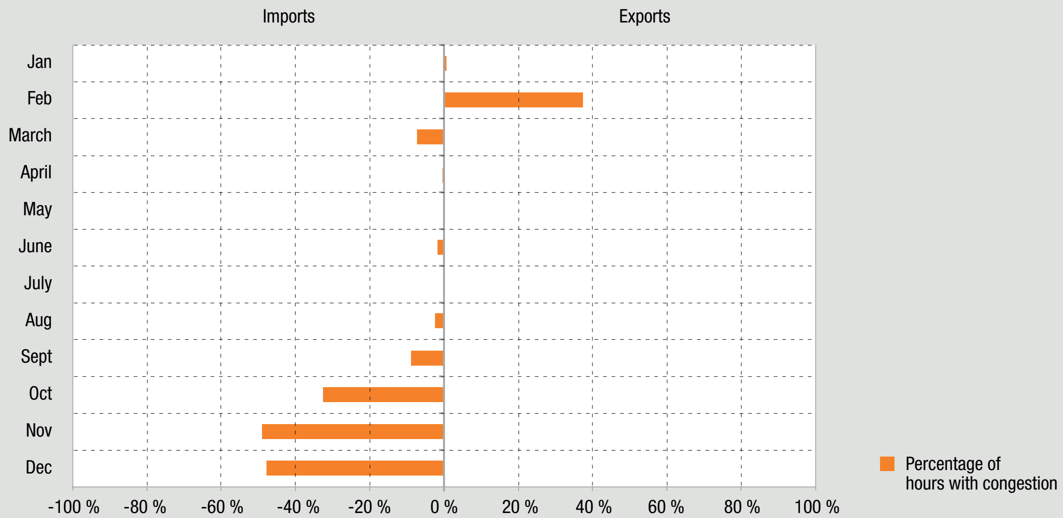
Monotonic curve for the use of commercial transmission capacity at Belgium's north border in 2012



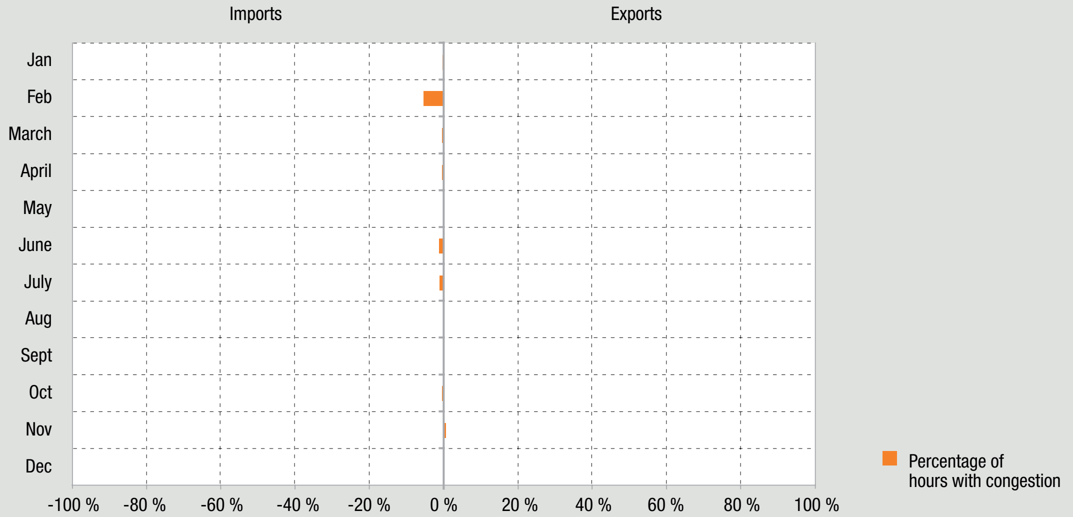
Congestion

The graphs show in percentage and in both directions the average number of hours per month with congestion on a border, as against the total number of hours during the month. Imports are on the left, exports on the right.

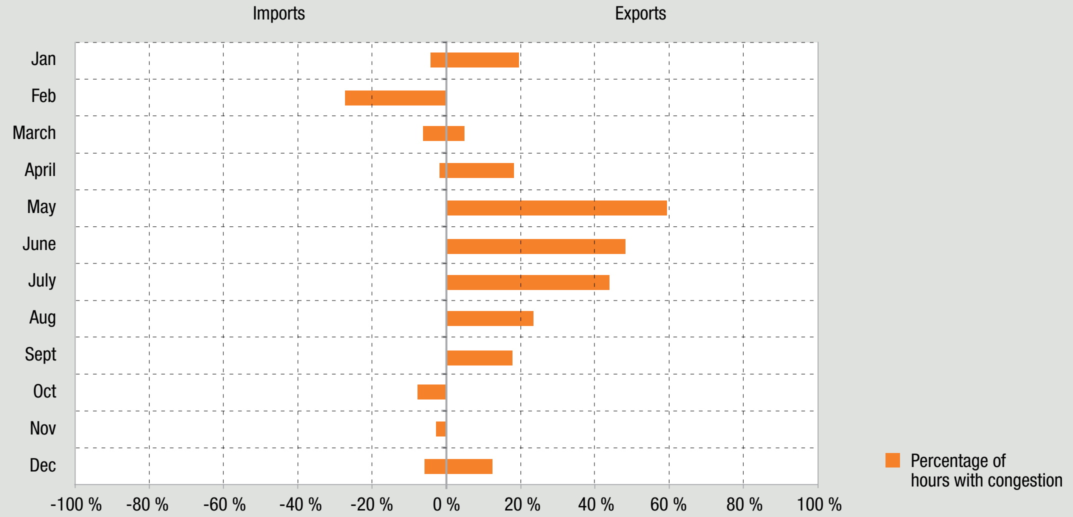
Congestion at the south border in 2012



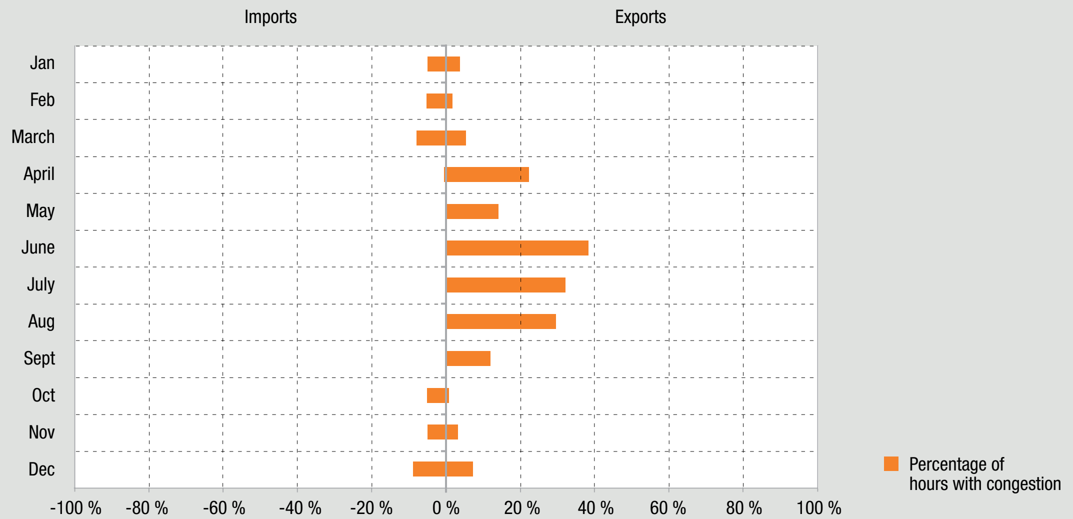
Congestion at the south border in 2011



Congestion at the north border in 2012



Congestion at the north border in 2011



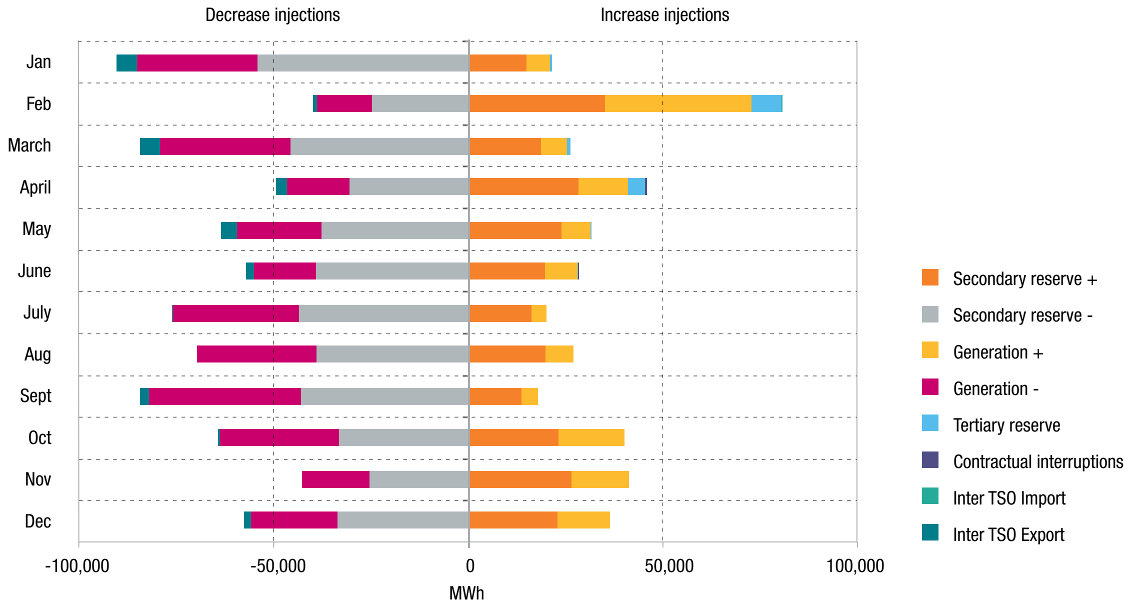
IV. System management
IV.1 Balancing

Every balance responsible party is responsible for the quarter-hourly balance of his injection and offtake portfolio. As the operator of the electricity transmission grid, Elia oversees total balance within its control area between injections and offtakes of electricity. To that end, Elia contracts reserve power. Where necessary, Elia can decrease or increase injections of energy or reduce offtake by 'interruptible' customers.

Reserve power is broken down into primary, secondary and tertiary categories primarily according to response time and the period during which the reserve is made available. In addition to tertiary reserve power activated via generation units, Elia can also deploy reserves acquired under contracts signed with interruptible customers. Interruptible customers are prepared to temporarily reduce their offtake at Elia's request and according to contractually defined conditions.

The table and chart below outline the amounts of electricity used by Elia to balance the grid each month.

Activated volumes for balancing in 2012



Month 2012	Secundary reserve +	Secundary reserve -	Generation+ (free offers) [4]	Generation - (free offers) [5]	Tertiary reserve	Contractual interruptions	Inter TSO Import	Inter TSO Export
Jan	14,951 MWh	-54,284 MWh	6,009 MWh	-30,825 MWh	482 MWh	0 MWh	0 MWh	-5,185 MWh
Feb	35,209 MWh	-24,816 MWh	37,550 MWh	-14,129 MWh	7,699 MWh	0 MWh	200 MWh	-975 MWh
March	18,761 MWh	-45,702 MWh	6,602 MWh	-33,521 MWh	881 MWh	0 MWh	0 MWh	-5,000 MWh
April	28,265 MWh	-30,613 MWh	12,767 MWh	-16,079 MWh	4,346 MWh	415 MWh	0 MWh	-2,675 MWh
May	23,974 MWh	-37,731 MWh	7,486 MWh	-21,685 MWh	145 MWh	0 MWh	0 MWh	-4,025 MWh
June	19,750 MWh	-39,151 MWh	8,317 MWh	-15,985 MWh	232 MWh	156 MWh	0 MWh	-1,900 MWh
July	16,309 MWh	-43,494 MWh	3,693 MWh	-32,299 MWh	0 MWh	0 MWh	0 MWh	-250 MWh
Aug	19,824 MWh	-39,088 MWh	7,119 MWh	-30,622 MWh	0 MWh	0 MWh	0 MWh	0 MWh
Sept	13,677 MWh	-43,035 MWh	4,197 MWh	-39,119 MWh	0 MWh	0 MWh	0 MWh	-2,175 MWh
Oct	23,140 MWh	-33,212 MWh	16,902 MWh	-30,564 MWh	0 MWh	0 MWh	0 MWh	-450 MWh
Nov	26,472 MWh	-25,456 MWh	14,795 MWh	-17,271 MWh	0 MWh	0 MWh	0 MWh	0 MWh
Dec	22,880 MWh	-33,568 MWh	13,506 MWh	-22,340 MWh	0 MWh	0 MWh	0 MWh	-1,650 MWh

Load-shedding in the context of the load-shedding plan and activated volumes for congestion management are not included in the activated volumes for balancing.

4- 5 Free offers under the CIPU contract.

Trend in imbalance prices in 2012

	Negative imbalance price			Positive imbalance price		
2012	**Min** (€/MWh)	**Max** (€/MWh)	**Avg.** (€/MWh)	**Min** (€/MWh)	**Max** (€/MWh)	**Avg.** (€/MWh)
Jan	-30.04	166.74	40.96	-41.47	159.2	37.54
Feb	0	381.49	91.44	-24.82	309.45	88.37
March	-8.8	1410.12	43.91	-29.31	1408.9	41.21
April	-14.52	323.38	62.75	-38.17	311.93	60.79
May	-13.95	212.06	49.68	-52.79	208.8	47.73
June	-100	164.54	49.59	-107.25	152.8	48.09
July	-100	162.49	38.99	-128.87	159.9	37.27
Aug	-100	166.75	47.61	-113.06	163.7	46.19
Sept	-100	169.18	42.29	-129.62	164.9	40.04
Oct	-100	189.16	57.84	-116.04	174.8	55.17
Nov	-222	331.06	66.57	-238.35	315	64.9
Dec	-222	321.9	59.66	-224.3	315	57.42

Contracted reserve power in 2012

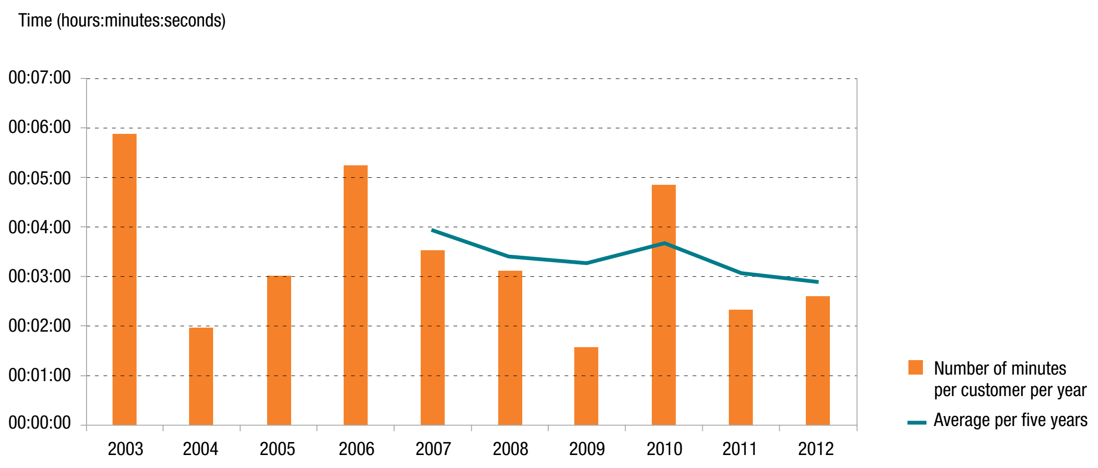
Summary of reserves in 2012	
Reservation	**MW**
Primary reserve R1	95
Secondary reserve R2	140
Tertiary reserve R3	400
Interruptible customers	261
Inter-TSO reserve	2 x 250 *(Not guaranteed)*

IV.2 Reliability

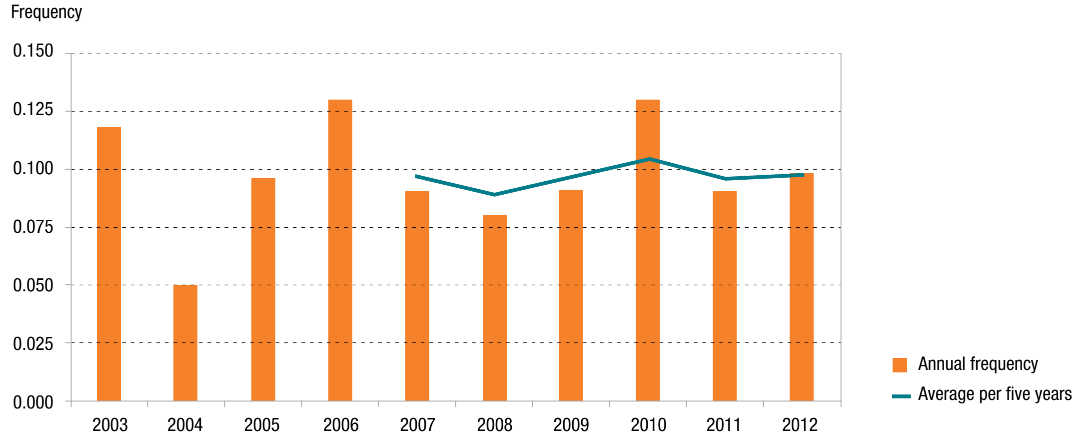
Reliability indicators

The Elia grid is very reliable. Reliability is measured using three statistical parameters: the annual average interruption time on the Elia grid, spread across all customers (given in minutes per customer and per year), the annual average number of interruptions to an Elia grid customer's electricity supply and the average duration (in minutes) per interruption on the Elia grid and per year. In percentage terms, the Elia grid achieves an average reliability rate of over 99.999 %.

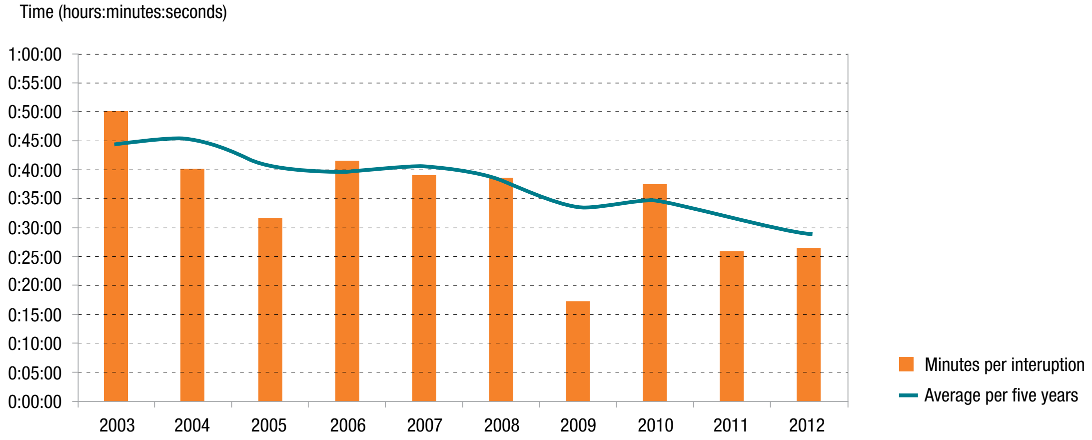
Annual average interruption time (AIT)[6]



Annual average interruption frequency per customer (AIF)[7]



Average interruption duration per affected customer (AID)[8]



	Average Interruption Time[6]	Average Interruption Frequency[7]	Average Interruption Duration[8]	Reliability Elia grid	Number of days per year
1999	00:04:12	0.1160	0:36:00	99.99920 %	365
2000	00:06:42	0.1240	0:54:00	99.99873 %	366
2001	00:04:00	0.0850	0:47:00	99.99924 %	365
2002	00:02:26	0.0690	0:35:00	99.99954 %	365
2003	00:05:53	0.1180	0:50:00	99.99888 %	365
2004	00:01:58	0.0500	0:40:00	99.99963 %	366
2005	00:03:01	0.0960	0:31:27	99.99943 %	365
2006	00:05:14	0.1300	0:41:23	99.99900 %	365
2007	00:03:32	0.0904	0:39:07	99.99933 %	365
2008	00:03:07	0.0800	0:38:29	99.99941 %	366
2009	00:01:34	0.0910	0:17:12	99.99970 %	365
2010	00:04:51	0.1300	0:37:24	99.99908 %	365
2011	00:02:19	0.0903	0:25:44	99.99956 %	365
2012	00:02:35	0.0980	0:26:22	99.99951%	366

6 Average Interruption Time is the average duration of power cuts spread across all customers.

7 Average Interruption Frequency is the annual average number of power interruptions per customer. A value of 0.09 indicates that on average a customer experiences a power cut every 11 years.

8 Average Interruption Duration is the average duration of a power cut experienced by a customer.

B. Public service obligations

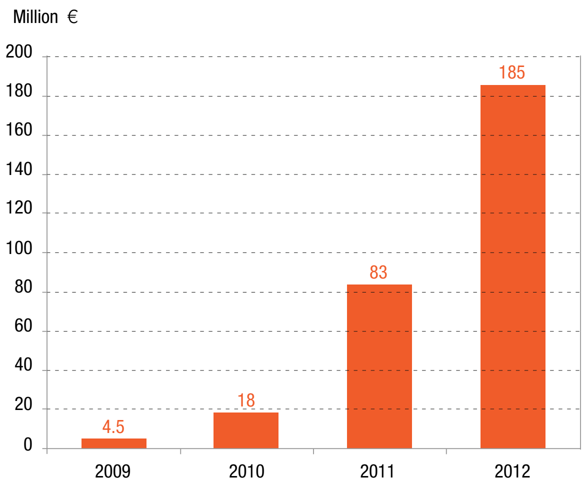
I.1 Renewable energy: green certificates and cogeneration certificates

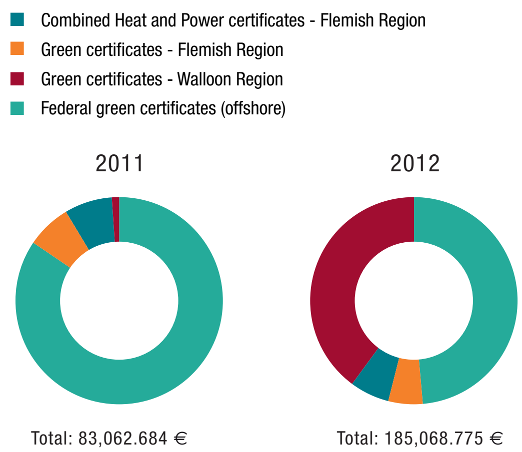
Green certificates

The Belgian federal and regional governments have developed support mechanisms in order to boost investments in electricity generation from renewable energy sources. One of these is the system of "green certificates" and "cogeneration certificates" (the latter only in Flanders) issued to generators by the regulators, proving the green origin of the electricity they generate. These certificates can then be sold on the electricity supplier market or purchased by Elia or distribution system operators. Each year, suppliers must present a certain number of green certificates to the regulator. The required number is based on their power sales.

As the transmission system operator, Elia has a legal obligation to purchase the certificates offered at a minimum price defined by law. For green certificates and cogeneration certificates in Flanders, Elia places acquired green certificates on the market. Federal green certificates (offshore wind power generation) and green certificates for the Walloon Region and Brussels Capital Region may not be resold by Elia and must be removed from the market permanently. The cost of federal, Walloon and Brussels certificates, as well as the balance corresponding to the difference between the price at which Elia purchases the certificates and the price at which they are sold on the market in Flanders, is factored into transmission tariffs in the form of public service obligations, taxes and levies.

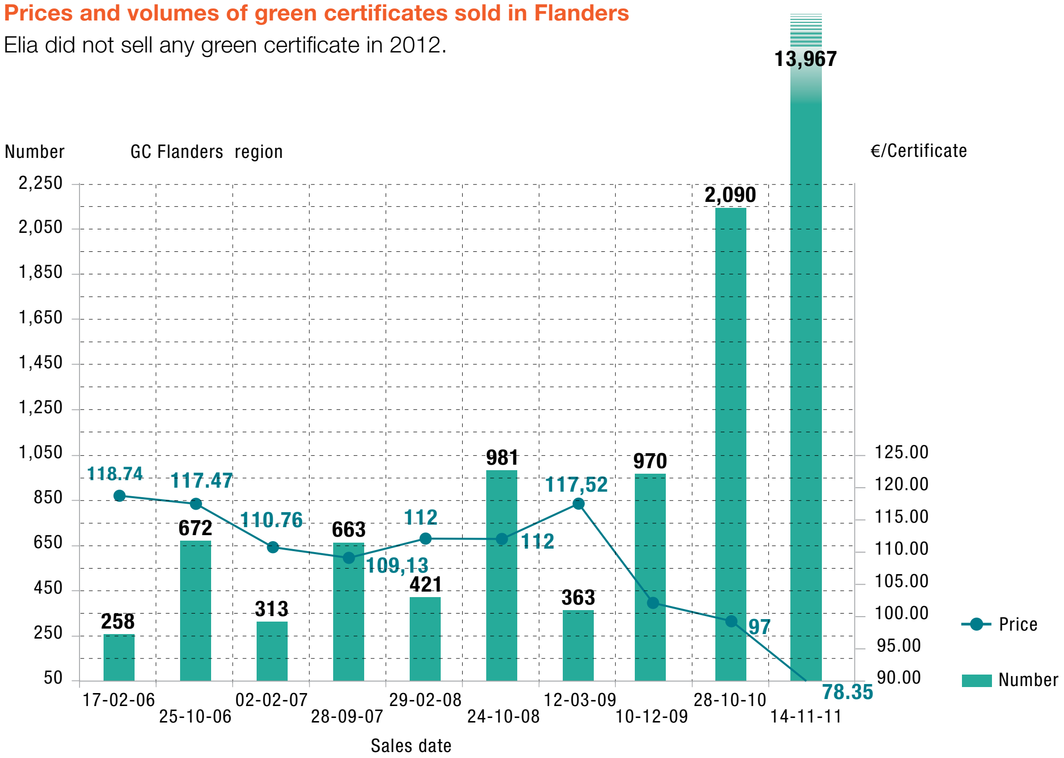
Green certificates and cogeneration certificates purchased by Elia





Prices and volumes of green certificates sold in Flanders

Elia did not sell any green certificate in 2012.



Prices and volumes of cogeneration certificates sold in Flanders

Elia did not sell any WKK- certificate in 2012. In 2011 Elia for the first time resold 12,100 certificates at an average unit price of € 18,83.

I.2 Saving energy: rational use of energy

Promoting rational use of energy by our customers

As part of its public service obligations in Flanders, Elia implements an action plan each year to promote rational use of energy (RUE) by its industrial customers connected at voltages between 30 and 70 kV.

Actual savings of electric power amounted to 18.9 GWh. Thirty-three projects were submitted and our customers pledged to invest in 10 energy-saving projects. Thanks to Elia's initiatives targeting its industrial customers, cumulative energy savings since 2003 stood at 515 GWh at the end of December 2012, i.e. some 168,000 tonnes of CO_2.

www.elia.be

Powering a world in progress

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