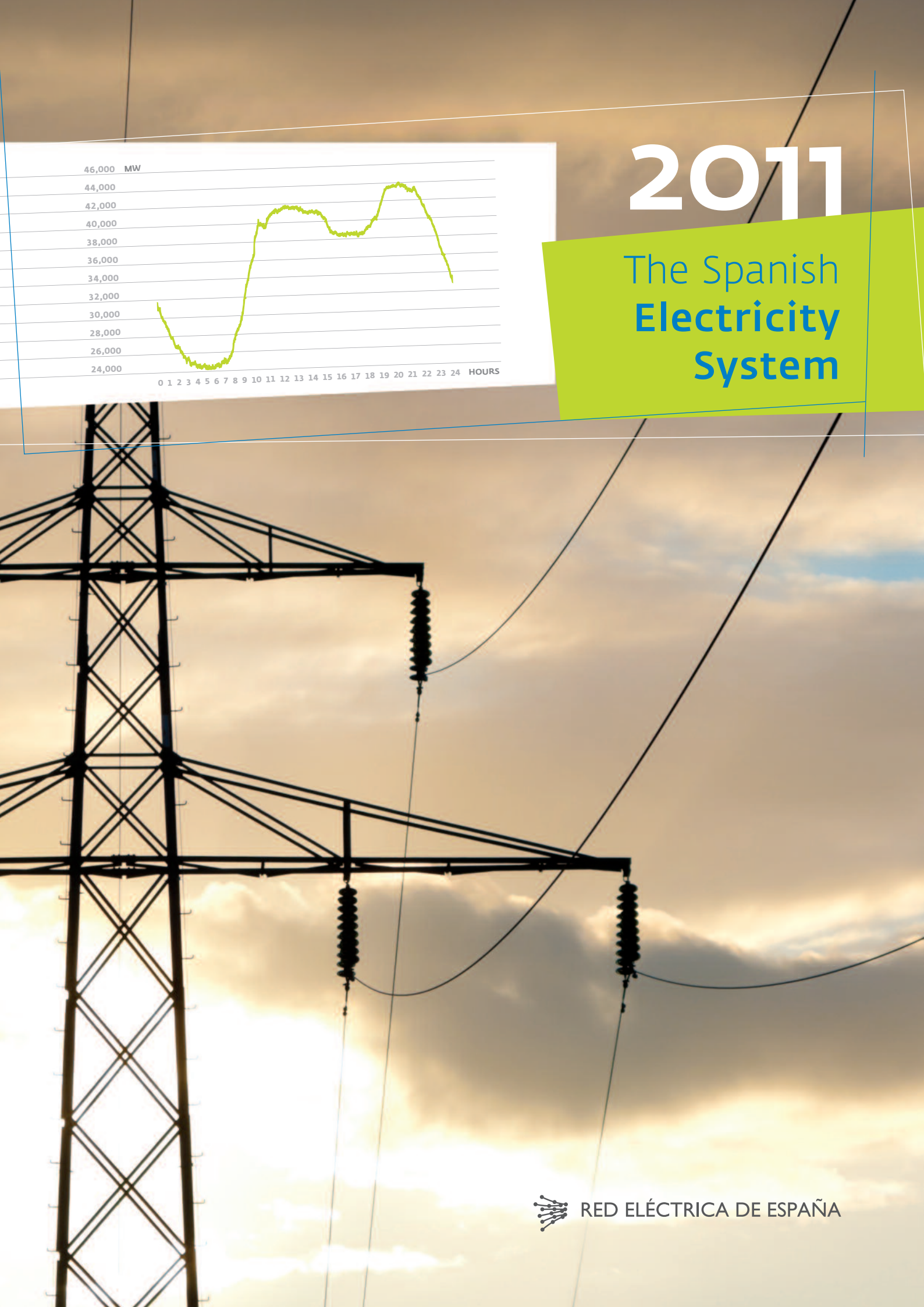

2011

The Spanish **Electricity System**

RED ELÉCTRICA DE ESPAÑA

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RED ELÉCTRICA DE ESPAÑA

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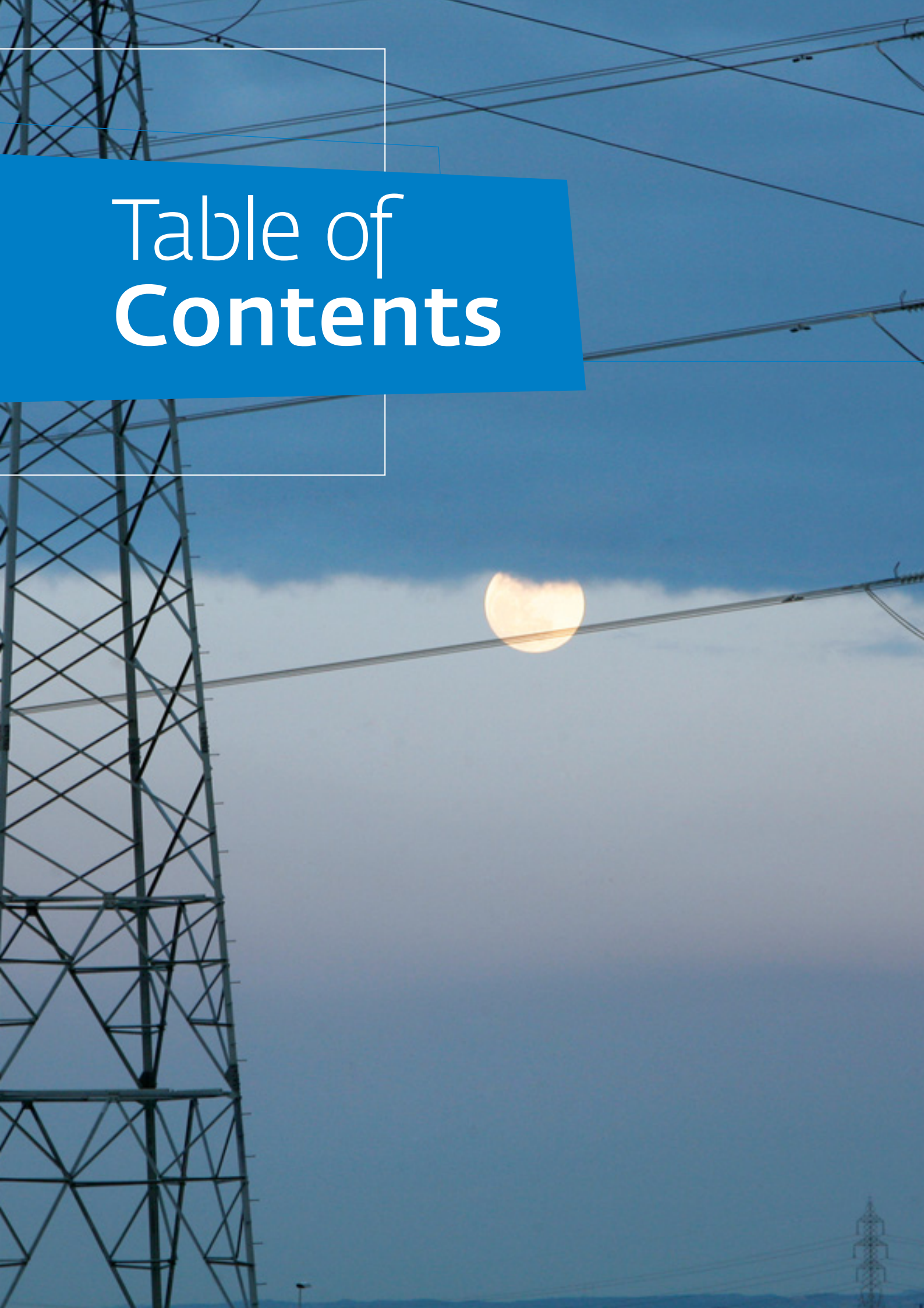
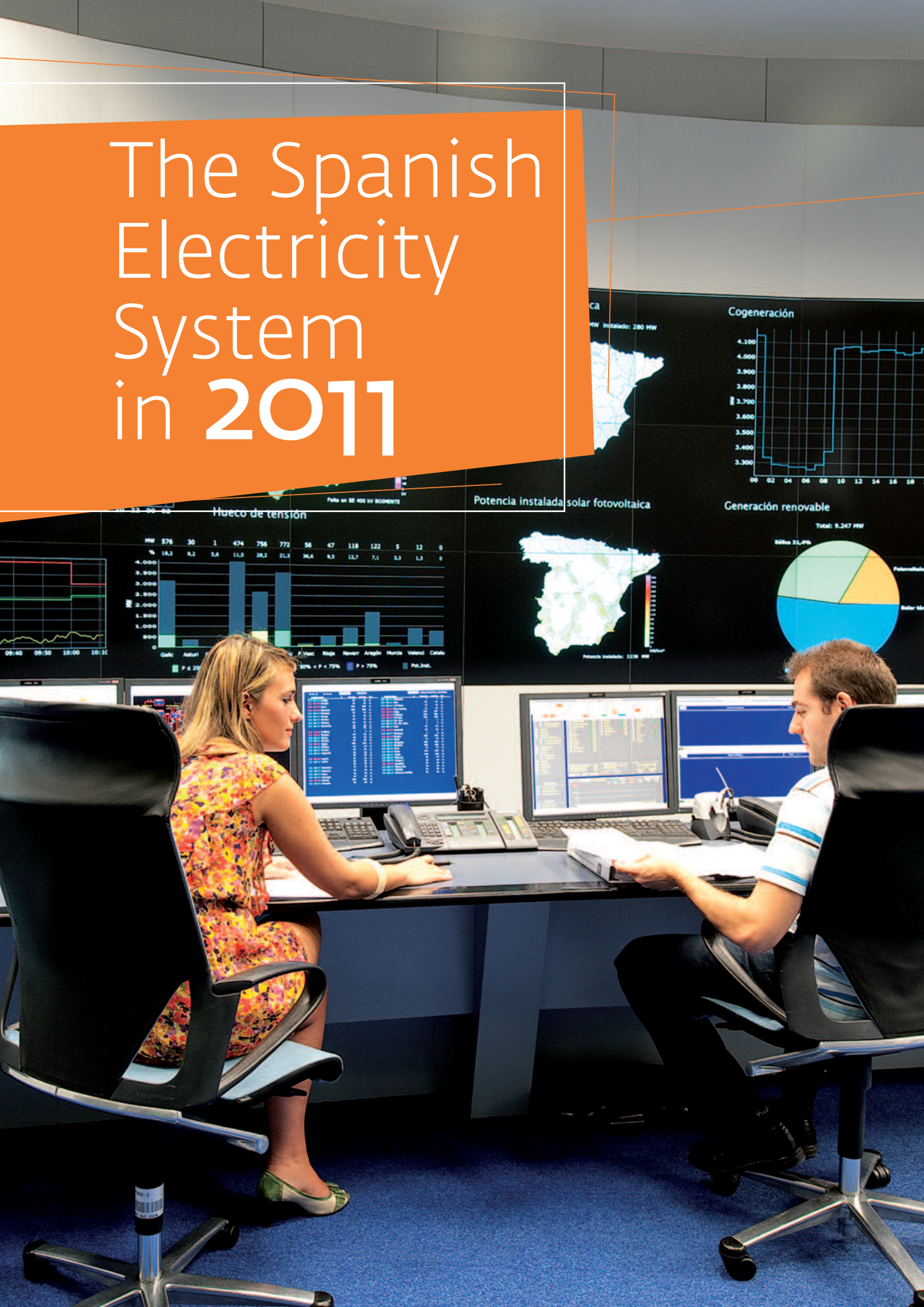


The Spanish Electricity System in 2011



The most significant aspect of the performance of the Spanish electricity system in 2011 was the decline in demand for electricity which fell to a level comparable to that of 2006. This decrease was due to the accumulation of two factors: on one hand, the progressive reduction of the economic activity in Spain and on the other, the mild temperatures that characterised 2011 as a whole.

Specifically, the annual national electricity demand recorded a decline of 2.1% throughout the year compared to 2010. This decline is slightly higher than the 1.7% registered by the complete set of EU countries belonging to the Continental Europe Group of ENTSO-E (European Network of Transmission System Operators for Electricity).

With regard to generation, worth highlighting was the notable rise of electricity generation obtained from coal-fired power stations, whilst combined cycle power stations showed a significant decrease in production that, on the whole, absorbed the decrease in energy demand. Conditioned by both scarce water reserves and the reduced availability of wind registered in 2011, renewable energy generated less power than the previous year.

In line with that of recent years, in 2011 a number of measures regarding regulation were approved that were relevant to the electricity sector.

Regulatory framework

The most important regulation from a legal standpoint, approved in 2011, was the *Sustainable Economy Law 2/2011, of March 4*, which sets out several measures related to the electricity sector in line with Spain's backing of a sustainable energy model, that incorporates into the national regulation the fulfilment of the 20-20-20 objectives by the year 2020, established in Directive 2009/28/EC, and fosters R&D&i activities and energy projects such as the development of Smart grids, active demand-side management, reduction of CO_2 emissions and the development of the hybrid and electric vehicle.

Also in the Sustainable Economy Law important reforms are regulated regarding the functioning of the Spanish National Energy Commission (CNE), noteworthy are those regarding the reduction of Board members, the accountability to the Parliament, the introduction of measures to provide it with greater transparency and autonomy, as well as the modification of CNE Function 14, regarding the acquisition of shares by companies and CNE Function 15, which provides for the issuance by the CNE of a binding report on operations regarding mergers and acquisitions of companies.

In addition, during 2011, numerous electricity sector regulatory measures were published, amongst which the following are noteworthy:

- *Royal Decree 647/2011, of May 9, regulates the activities of managers of electricity charging points for the provision of electricity recharging services.* This regulation governs industry agents/ commercial companies within the electricity system whose activity is oriented towards providing electricity for the recharging of electric vehicles, and establishes a new super off-peak access fee addressed to this activity for power supply between 10 and 15kW, and modifies at the same time the Last Resort Tariff so as to include this super off-peak hourly discrimination.

- *Royal Decree 1544/2011, of 31 October, establishes the access fee to the transmission and distribution networks that must be paid by electricity generators for energy delivered into the system.* This regulation establishes a uniform access fee of €0.5/MWh. This regulation, of a transitory nature until a specific allocation methodology is developed, is applicable as of 1 January 2011 to each generation facility, both for ordinary regime and special regime, and will be collected by the transmission and distribution companies, and made available for the settlement procedure regarding the electricity sector's regulated revenues and costs.

- *Royal Decree 1623/2011, of 14 November, regulates the effects of the commissioning and putting in operation of the link between the peninsular electricity system and the system on the Balearic Islands, and modifies other regulations of the electricity sector.* This regulation establishes the regulatory framework for the technical and economic management of the new electricity link between the Spanish peninsula and the island of Majorca, as

well as for the settlement of the energy that flows through the link.

- *Royal Decree-Law 20/2011, of 30 December, 2011, on urgent budgetary, fiscal and financial measures to correct the public deficit*, whose main measure for the electricity sector was to reduce the amount of funding for the extra cost of the insular and extra-peninsular electricity systems charged to the State Budget for the years 2011 and 2012, which is set at 17% of the additional cost in 2011, compared to that of 51% previously in force, and in a maximum amount of €256.4 million for 2012, replacing the previously established rate of 75% of the additional cost for 2012.

Electricity demand

The demand for electrical energy on the Spanish peninsular showed a fall of 2.2% with respect to the previous year, standing at 254,786 GWh at the end of 2011. This decrease on the previous year is due to the accumulation of two clearly negative factors: the temperature and the decline in economic activity.

Annual evolution of the Spanish GDP and the demand for electrical energy on the peninsula (%)

	GDP	Demand	
		Per economic activity	Demand
2007	3.6	4.2	2.9
2008	0.9	0.7	1.1
2009	-3.7	-4.7	-4.7
2010	-0.1	2.7	3.1
2011	0.7	-1.3	-2.2

Components of the peninsular demand variation at power station busbars (%)

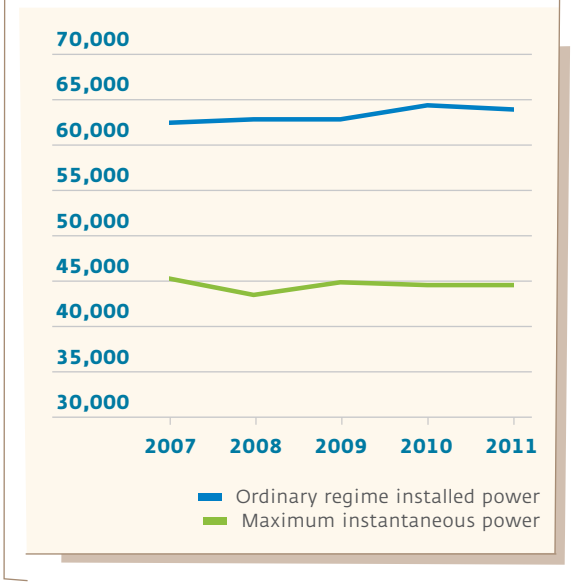
	%10/09	%11/10
Demand at power station busbars	**3.1**	**-2.2**
Components (1)		
Temperature effect (2)	0.2	-1.0
Working pattern effect	0.2	0.1
Economic activity effect and others	2.7	-1.3

(1) The sum of the effects is equal to the percentage of variation in the total demand.
(2) Average daily temperatures below 15ºC in winter and above 20ºC in summer produce an increase in demand.

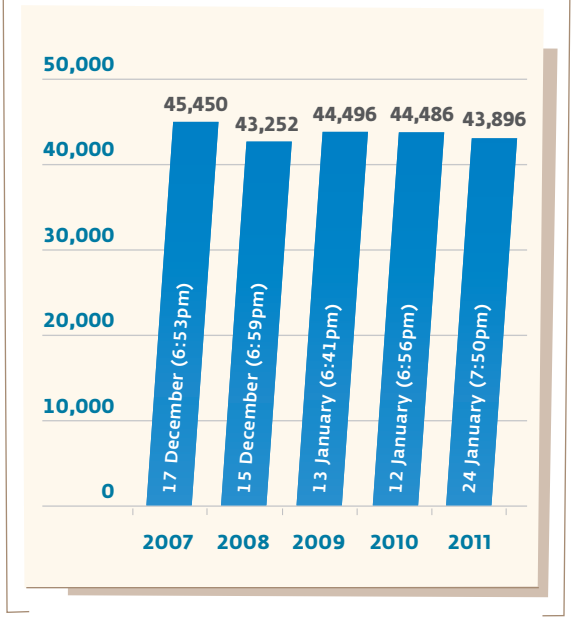
The temperatures recorded during 2011 were milder than those in 2010 in almost every month of the year, reducing the growth in demand by one point, whilst working patterns were similar to the previous year. Discounting these effects, growth in electricity demand attributable to economic activity registered a negative rate of 1.3%. This decrease is the result of a progressive decline in electricity consumption throughout the year that intensified in the final four months following the trend of the Spanish economy during said period.

In the set of the extra-peninsular systems – the Balearic Islands, the Canary Islands, Ceuta and Melilla – electricity demand decreased for the third consecutive year, ending 2011 with a total demand of 15,030 GWh, 0.9% less than the previous year. In the Balearic Islands, the Canary Islands and Ceuta the falls were 1.7%, 0.3% and 6.7% respectively, whilst Melilla grew by 0.7%.

Comparison between maximum instantaneous power and installed power attributable to ordinary re-gime on the peninsula (MW)



Maximum instantaneous power on the peninsula (MW)



As a result, national demand registered a rate of decrease of 2.1% compared to 2010, with an energy demand of 269,816 GWh.

The annual maximum of instantaneous, hourly and daily demand for the peninsular system again stood below the all-time maximums recorded four years ago. On January 24, at 7:50 pm there was a maximum demand for instantaneous power of 43,896 MW (the record set in 2007 was 45,450 MW). On January 24, between 7:00 pm and 8:00 pm, the maximum demand of hourly power of 44.107 MW was reached, 1.7% below the record maximum achieved in 2007. Similarly, on January 25, the annual maximum of daily energy was reached of 883 GWh, 2.5% below the all-time maximum also reached in 2007.

Regarding the summer period, on 28 June at 1:24 pm the maximum annual power demand for instantaneous power of 40,139 MW was reached, a value below the all-time maximum record of 41.318 MW registered in July 2010. On the 27 June between 1:00 pm and 2:00 pm the maximum annual average hourly power demand of 39,537 MW was reached (the record of 40,934 MW was registered in 2010).

In the extra-peninsular systems, a maximum average hourly power in 2011 of 1,159 MW was set (all-time record of 1,226 MW set in 2008) and 1,450 MW for the Canary Islands (all-time record of 1,752 MW set in 2010). The equivalent maximums for Ceuta and Melilla were set at 36 MW and 39 MW respectively, (all-time records 41 MW and 39 MW).

Power balance as at 31.12.2011. National electricity system

	Peninsular system		Extra-peninsular systems		National total	
	MW	%11/10	MW	%11/10	MW	%11/10
Hydroelectric	17,563	0.0	1	0.0	17,564	0.0
Nuclear	7,777	0.0	-	-	7,777	0.0
Coal(1)	11,700	2.8	510	0.0	12,210	2.7
Fuel/gas	1,492	-34.6	2,884	0.7	4,376	-15.0
Combined Cycle	25,269	0.1	1,854	-0.5	27,123	0.1
Total ordinary regime	**63,801**	**-0.7**	**5,249**	**0.2**	**69,050**	**-0.6**
Hydroelectric	2,041	0.3	0.5	0.0	2,041	0.3
Wind	21,091	7.0	149	1.7	21,239	7.0
Solar photovoltaic	4,047	10.7	202	8.8	4,249	10.6
Solar thermoelectric	1,049	97.1	-	-	1,049	97.1
Renewable thermal	858	14.0	1	-96.8	859	8.5
Non-renewable thermal	7,282	1.3	119	0.9	7,401	1.3
Total special regime	**36,367**	**7.4**	**471**	**-3.8**	**36,838**	**7.2**
Total	**100,168**	**2.1**	**5,720**	**-0.1**	**105,888**	**2.0**

(1) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the guarantee of supply.

National electricity balance

	Peninsular system		Extra-peninsular systems		National total	
	GWh	%11/10	GWh	%11/10	GWh	%11/10
Hydroelectric	27,571	-28.7	0	-	27,571	-28.7
Nuclear	57,731	-6.9	-	-	57,731	-6.9
Coal(1)	43,488	96.8	3,031	-10.4	46,519	82.6
Fuel/gas(2)	0	-	7,479	-3.2	7,479	-21.7
Combined Cycle	50,734	-21.5	4,406	10.4	55,140	-19.6
Ordinary regime	**179,525**	**-5.1**	**14,915**	**-1.2**	**194,440**	**-4.8**
- Generation consumption	-7,247	8.6	-882	-1.9	-8,129	7.4
Special regime	**91,815**	**1.1**	**996**	**3.2**	**92,811**	**1.1**
Hydroelectric	5,283	-22.6	1	-	5,284	-22.6
Wind	41,799	-3.3	361	7.1	42,160	-3.2
Solar photovoltaic	7,081	15.3	333	17.7	7,414	15.4
Solar thermoelectric	1,823	163.6	-	-	1,823	163.6
Renewable thermal	3,792	19.5	33	-79.4	3,825	14.8
Non-renewable thermal	32,037	4.1	268	45.3	32,305	4.3
Net generation	**264,092**	**-3.4**	**15,030**	**-0.9**	**279,121**	**-3.2**
- Pumped storage consumption	-3,215	-27.9	-	-	-3,215	-27.9
+ Peninsula-Balearic Islands' link(3)(4)	-0.5	-	0.5	-	0	-
+ International exchanges(4)	-6,090	-26.9	-	-	-6,090	-26.9
Demand (at power station busbars)	**254,786**	**-2.2**	**15,030**	**-0.9**	**269,816**	**-2.1**

(1) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the guarantee of supply. (2) Generation from auxiliary generating units is included In the Balearic Islands' electricity system. (3) Testing phase. (4) Positive values indicate an import exchange balance and negative values show an export exchange balance.

Demand coverage

In 2011, the installed **power** in the generating facilities of the Spanish peninsular electricity system registered a net increase of 2,057 MW, a figure that at year end establishes the total capacity of the system at 100,168 MW. This increase corresponds primarily to new renewable energy installations that have registered a growth in power of 2,397 MW.

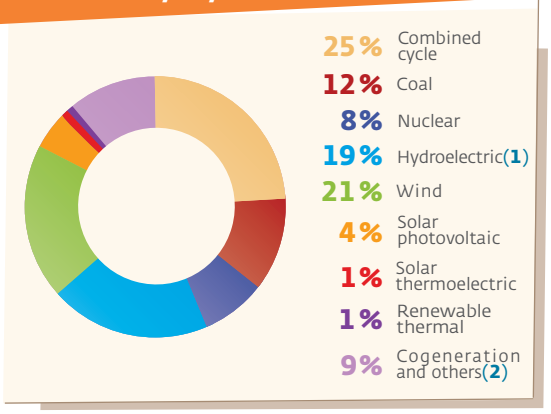
The set of wind farm generating facilities finished 2011 with an installed capacity of 21,091 MW (1,380 MW more than in 2010), accounting for 21.1% of the total capacity on the Spanish peninsula. Meanwhile, solar technologies have continued to increase their production capacity with respect to the previous year (a new 390 MW of photovoltaic and a new 517 MW of thermoelectric) together exceeding 5,000 MW of installed capacity in late 2011.

The remaining technologies did not register significant variations in power compared to 2010, with the exception of fuel gas that continued its process of decline with the closing of two additional generation units which had a total power of 470 MW.

Demand coverage in 2011 was conditioned by the low rainfall recorded during the year and the application of RD 134/2010 which determines the mandatory use of national coal in a new system adjustment service.

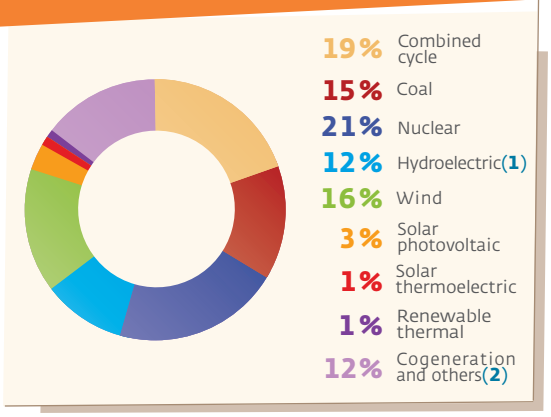
Nuclear topped the list covering 21% of the demand (22% in 2010), whilst combined cycle dropped to second place with a

Installed power as at 31.12.2011. Spanish peninsula electricity system



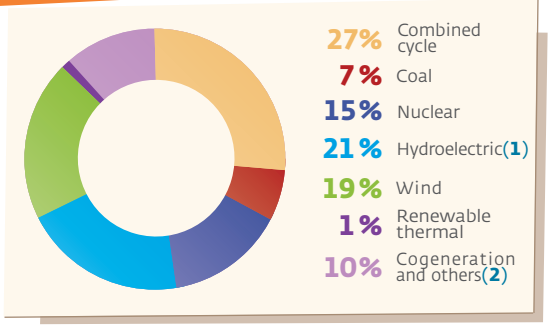
(1) Includes power obtained from pure pumped storage. (2,747 MW).(2) Includes non-renewable thermal and fuel/gas.

Annual demand coverage of peninsular electricity demand



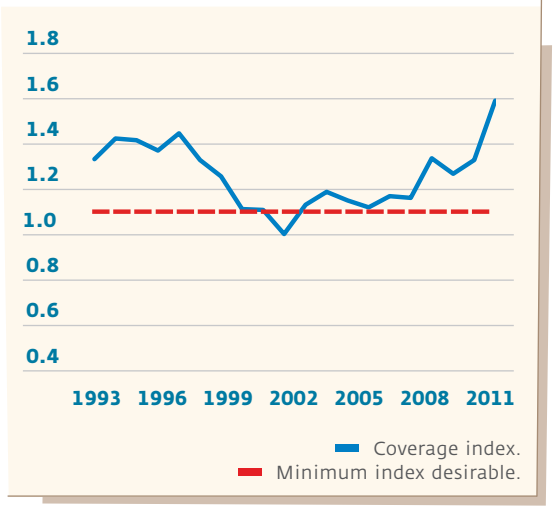
(1) Does not include pumped storage generation.
(2) Includes non-renewable thermal and fuel/gas.

Coverage of peninsular peak power demand 44,107 MW (°)



(1) Does not include pumped storage generation.
(2) Includes non-renewable thermal and fuel/gas.
(°) 24 January 2011 (7:00 pm – 8:00 pm)

Evolution of the coverage index on the peninsula



IC = Pd/Ps **IC**: Coverage index
Pd: Available power in the system
Ps: Peak level of power demanded from the system

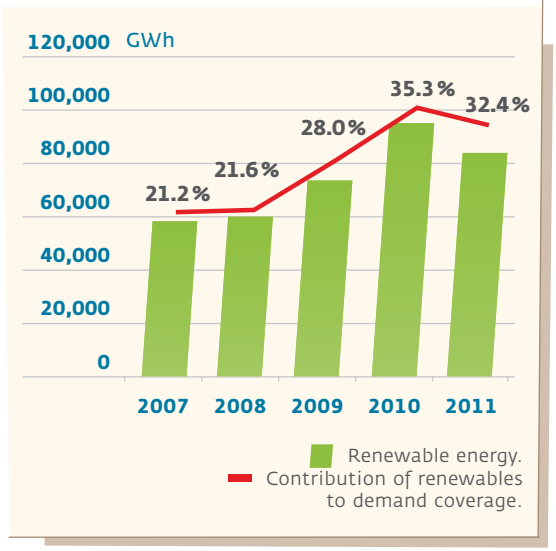
contribution of 19% compared to 23% in 2010. Wind power maintained a share of 16% of the demand, whilst hydroelectric fell four points covering just 12% of the demand in 2011 falling from 16% in 2010.

In contrast, coal rose from a contribution of 8% in 2010 to 15% in 2011. The remaining technologies maintained a similar contribution to that of the previous year with a slight variation of about one point in each of the two solar technologies.

In 2011, the set of renewable technologies classified as renewable covered 32.4% of the demand, compared to 35.3% the previous year. This decline line breaks the trend of upward growth these technologies showed in previous years due to the accumulation of two factors: scarce rainfall and less wind available compared to the previous year, which determined a lower hydro and wind generation in 2011.

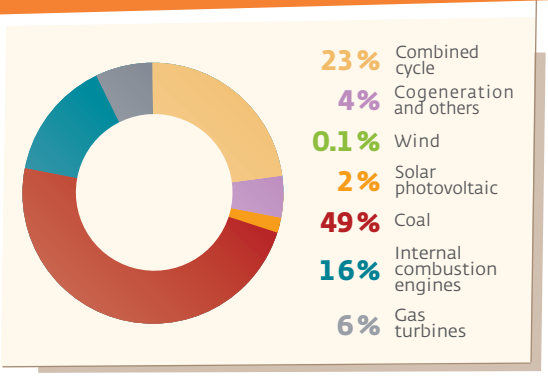
The fall in clean energy (lower contribution of renewable energy and nuclear in

Evolution of renewable energies on the peninsula

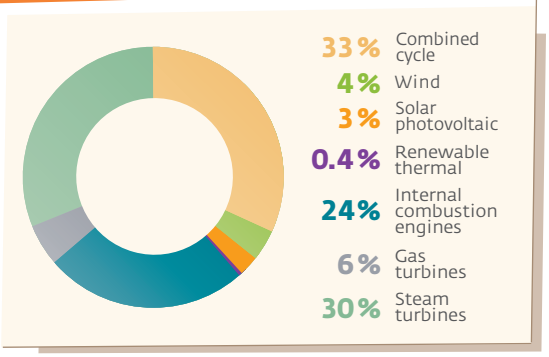


Evolution of the emissions factor associated to electricity generation on the peninsula (tCO_2/MWh)

Annual electricity demand coverage of the Balearic Islands



Annual electricity demand coverage of the Canary Islands



electricity generation), coupled with a significant increase in coal generation has resulted in a surge of CO_2 emissions in the electricity sector in 2011 that was estimated at 73 million tonnes, 25% higher than the previous year.

In the extra-peninsular systems, demand in 2011 was covered mostly by coal (49%) and combined cycle (23%) on the Balearic Islands and combined cycle (33%), steam turbines (30%) and internal combustion engines (24%) on the Canary Islands.

Regarding energy exchanges with other countries, in 2011 the balance of international exchanges was as an exporter for the eighth consecutive year (6,090 GWh), representing 2.3% of the total generation on the peninsula.

Ordinary regime

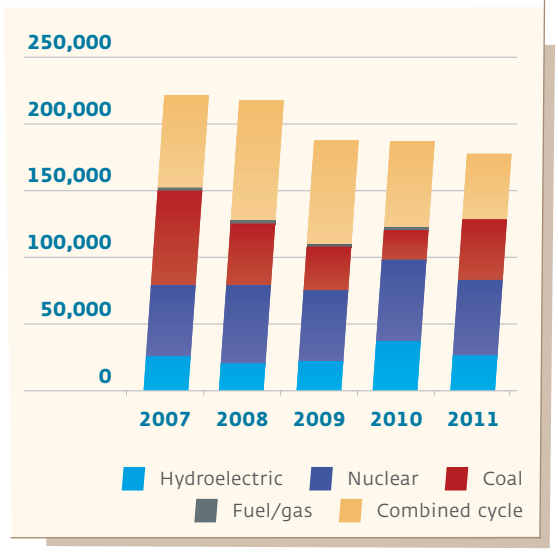
Power stations classified as ordinary regime continued a downward trend which began in 2008 regarding production. In 2011, a gross production of 179,525 GWh was registered a figure comparable to that recorded in 2000 and 5.1% lower than in 2010.

- The hydroelectric power stations generated 27,571 GWh, 28.7% lower than in 2010, a year noteworthy due to its high rainfall. This notable fall reduced the contribution of hydroelectricity towards the gross generation from ordinary regime to 15.4% (20.4% in 2010).

- The production by combined cycle has continued to fall since 2009 and registered 50,734 GWh in 2011, down 21.5% on the previous year. This decline reduces its share in the gross generation from ordinary regime to 28.3% compared to 34.2% in 2010.

- Nuclear power stations produced 57,731 GWh, which is down 6.9% compared to 2010. Despite this decline, this technology led generation from ordinary regime facilities providing 32.2% of its gross generation (32.8% in 2010).

Evolution of gross production (measured at power station busbars) from ordinary regime on the peninsula (GWh)



- Coal-fired generation increased by almost 100% from 22,097 GWh in 2010 to 43,488 GWh in 2011, representing 24.2% of gross production from ordinary regime (11.7% in 2010).

From a hydrological point of view, 2011 was basically a dry year. The scarce rainfall throughout much of the year reduced the producible hydroelectric on the peninsula to 22,506 GWh. This producible value is 19.4% lower than the historical average and 37.8% less than that recorded in 2010 (a year noteworthy for its high rainfall).

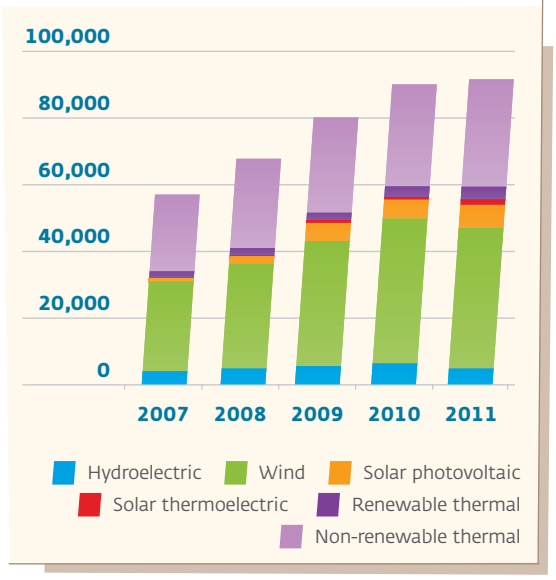
The hydroelectric reserves in the set of reservoirs on the peninsula, as a whole, finished the year at 52% of their total capacity, compared to 66% at the end of 2010.

Special regime

Energy produced by facilities classified as special regime grew by 1.1% compared to 2010, reaching 91,815 GWh. Of this energy, 65.1% corresponded to renewable technologies that, in 2011, produced 59,777 GWh of generation, 0.4% below the previous year. As for non-renewables, they generated 32,037 GWh, 34.9% of the total production from special regime.

Wind power is the technology that contributes the most amongst renewables representing in this period almost 70% of the total renewable generation from special regime. In 2011, the total set of wind farm generating facilities increased its installed capacity by 7% compared to 2010, whilst its generation (41,799 GWh) fell 3.3% in the same period. This decrease was due to

Evolution of net production from special regime on the peninsula (GWh)



the wind factor or wind available in 2011 which was significantly lower than in 2010, within the relatively narrow ranges of variability of this technology in terms of calculating the annual energy produced. However, on 6 November 2011 at 2.00 am a new maximum of demand coverage using wind power was set (59.6% from the previous high of 54%), when an important wind production coincided with both a low demand and a significant export balance.

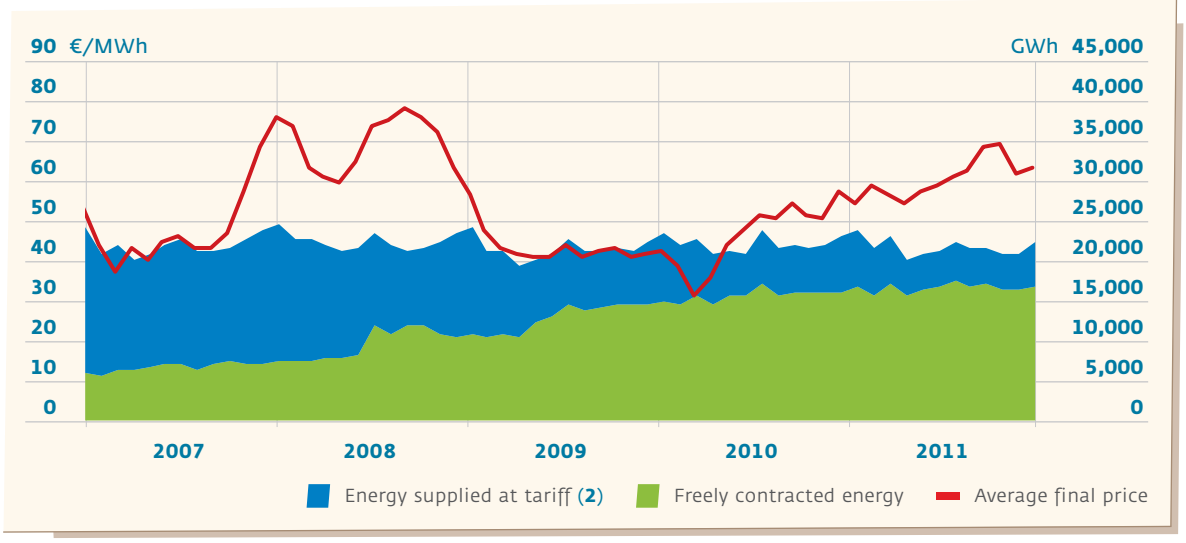
The set of solar farm generating facilities has maintained its strong growth reaching 5,095 MW of energy in late 2011 (photovoltaic 4,047 MW and thermoelectric 1,049 MW). Photovoltaic energy stood at 7,081 GWh (15.3% more than the previous year) and thermoelectric energy at 1,823 GWh compared to 692 GWh in 2010). These increases have raised the joint participation of these technologies in renewable generation from special regime to 14.9% (11.4% in 2010).

Renewable thermal generation (biogas and biomass) increased by 19.5% compared to 2010, reaching 3,792 GWh, representing 6.3% of the total of renewables from special regime.

System operation

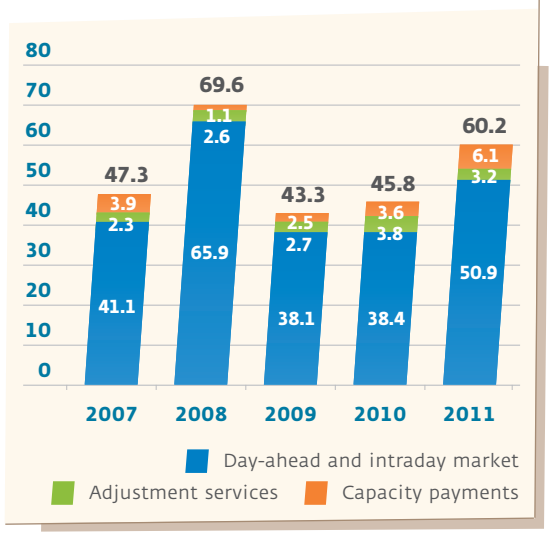
During 2011, the energy contracted in the electricity market (national demand – energy supply at tariff plus free market contracting – and the balance of exchanges) was 2.2% lower than the previous year. Of this total, 76.5% corresponded to free market contracting and 23.5% to energy supply at tariff.

Evolution of monthly energy and prices in the electricity market (1)



(1) National demand data. (2) RD 485/2009 of 3 April determines the removal of integral tariffs as of 1 July 2009 and the introduction, as of that date, of the Last Resort Tariff.

Evolution of the components of the average final price in the electricity market (€/MWh)



The average final purchase price of energy in the electricity market was €60.15/MWh, 31.3% higher than in 2010.

The total price of the day-ahead and intraday markets represented 84.5% of the total, whilst the resultant cost of the system adjustment services represented 5.3% and the remaining 10.1% from costs derived from capacity payments.

In the day-ahead market a total of 182,290 GWh was managed, with a weighted average price of €50.7/MWh. Compared to the previous year, the price increased by 33.5%, whilst the energy acquired in the day-ahead market showed a negative growth of 5.7%.

In the intraday market, the volume of energy traded reached 45,731 GWh of which 28.2% represented a net increase in demand and / or pumped-storage consumption. The weighted average price of managed energy in the intraday market stood at €49.79/MWh, 1.9% below that of the day-ahead market.

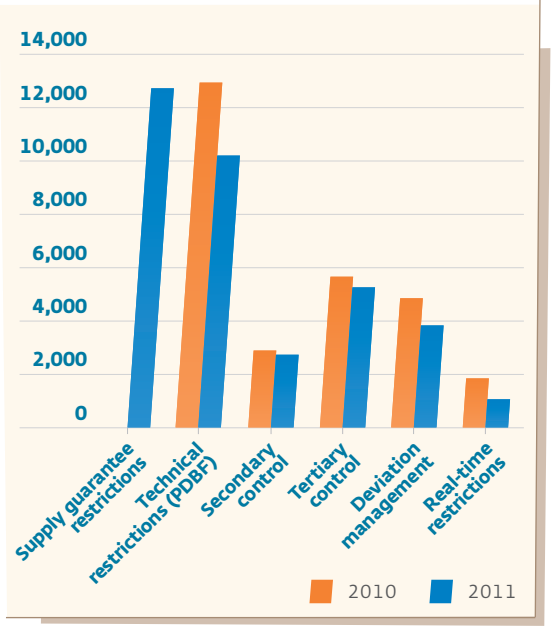
The energy managed in the system adjustment services markets in 2011 was 35,999 GWh, 27.6% higher than the previous year. The impact of these services, excluding the restrictions regarding the security of supply in the final price of energy was of €3.20/MWh, 14.8% lower than in 2010.

On February 25, 2011, for the scheduling of the following day, Royal Decree 134/2010 of February 12 came into effect, as amended by Royal Decree 1221/2010 of 1 October, establishing the procedure for the resolution of the restrictions regarding the security of supply. In 2011, the energy scheduled to resolve restrictions regarding the security of supply represented a total of 12,773 GWh.

The energy scheduled to resolve technical restrictions of the Daily Base Operating Schedule (PDBF) was 9,998 GWh upward and 228 GWh downward, with an impact on the final average price of €1.85/MWh compared to €2.29/MWh in the previous year.

In 2011, the average hourly power band for secondary control grew to 1,243 MW, with an impact on the final average price of €0.76/MWh, which is 9.0% higher than the previous year.

Energy managed in the system adjustment services (GWh)



The management of ancillary services and deviation management, plus real-time constraints, meant an impact of €0.60/MWh on the average final price of energy, a value below that of €0.77/MWh in 2010.

The energy managed in the secondary control market in 2011 amounted to 2,727 GWh, the energy in the tertiary control amounted to 5285 GWh, the energy of deviation management amounted to 3,821 GWh and that of real-time constraints to 1,167 GWh.

The net deviations measured (the difference between the energy measured at the busbars in power stations and the scheduled energy in the market) that the system had to manage through market adjustment services reached a total of 8,042 GWh upward and 6,619 downward, with an average price of €39.87/MWh upward and €52.97 downward.

International exchanges

The volume of energy traded through exchange schedules with other countries stood at 18,363 GWh, 18.3% more than in 2010. 66.6% of this energy corresponded to export transactions which meant that, for the eighth consecutive year, the annual balance of exchange schedules were as an exporter with a value of 6,097 GWh in 2011, down by 26.8 % on that reached in 2010.

For interconnections, noteworthy is the reversal in the balance of scheduled exchanges through the interconnection with France, with a value of 1,511 GWh as an importer in 2011, compared to 1,523 GWh as an exporter in 2010. This shift is the

Net scheduled international exchanges (GWh)

	2011
Transactions (market + physical bilateral contracts)	**-6,103**
Traders/retailers	-3,293
Interconnection balance with Portugal	-2,810
Counter-Trading France – Spain	**6**
Counter-Trading Portugal - Spain	**0**
Support exchanges	**0**
Total	**-6,097**

Import balance (positive value).
Export balance (negative value).

Evolution of scheduled international exchanges (GWh)

result of a significant increase in the volume of imports scheduled in this interconnection, 140.9% more than in 2010, whilst exports fell by 12%.

The evolution of the scheduled annual balances in other interconnections showed, in all cases, increases on the previous year, with values of 6.7%, 15.1% and 15.6% in the interconnections with Portugal, Morocco and Andorra respectively.

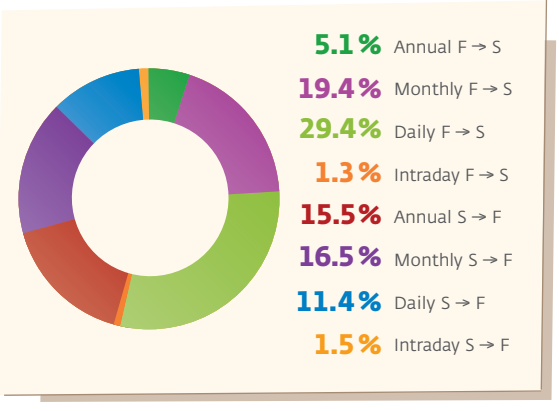
The utilisation level of commercial capacity in the interconnection with France increased from an importer point of view, reaching a value close to 40%, and decreased from an exporter point of view, with respect to 2010. Moreover, the interconnection with Portugal reached a average value of 33% as an exporter and 11% as an importer. Finally, there were increases in the average values of utilisation regarding capacity as an exporter, compared to 2010, for the interconnections with Morocco (60%) and Andorra (28%).

Exchange capacity management system of the Spain-France interconnection

During 2011, the number of agents authorised to participate in the exchange capacity auction system reached a total of 23, by 31/12/2011.

The amount of congestion rents collected during 2011 was €60.7 million, with 50% of this amount corresponding to the Spanish electricity system.

Congestion rents from capacity auctions in the interconnection with France (60,664 € thousand)



The marginal price of the annual capacity auction for 2011 in the direction Spain - France was €6.69/MW, three times higher than the value reached in the direction France - Spain (€2.11/MW).

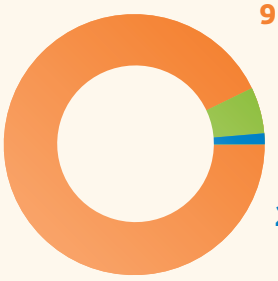
The maximum price of the capacity allocation in the monthly auctions registered in January, in the direction Spain - France, was €17.07/MW, 26% above the maximum price reached in the direction France - Spain which was €13.50/MW in August.

In 2011, it was deemed necessary to apply countertrading measures (establishment of exchange schedules, in a counter direction, when faced with reductions in capacity in order to assure already established commercial schedules) for a total of 7,201 MWh, in the months of January, February, April, May, July and November.

Congestion rents from market splitting in the interconnection with Portugal

	Thousands of €	(%)
Day-ahead market	4,083	97.88
Intraday market	88	2.12
Total	**4,171**	**100.00**

Hours with/without congestion in the interconnection with Portugal



91% Hours without congestion (same price in both directions in the day-ahead MIBEL market)

7% Hours with congestion (price in Spanish zone < price in Portuguese zone).

2% Hours with congestion (price in Spanish zone > price in Portuguese zone).

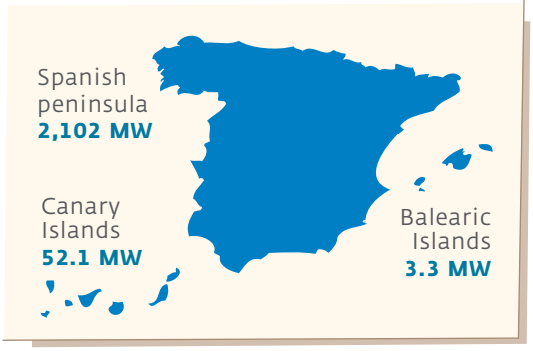
Exchange capacity management system of the Spain-Portugal interconnection

In 91% of the hours of 2011, the day-ahead MIBEL market price was unique (without congestion in the interconnection between Spain and Portugal). In cases where congestion was identified in this interconnection, the maximum price difference was observed in the direction Spain - Portugal with a value of €60.00/MWh, a price much higher than the maximum registered in the direction Portugal - Spain (€21.57/MWh).

Congestion rents collected in this interconnection in 2011 amounted to €4.17 million, with 50% of this amount corresponding to the Spanish electricity system.

In 2011, it was not deemed necessary to apply countertrading measures (establishment of exchange schedules, in a counter direction, when faced with reductions in capacity in order to assure already established commercial schedules). It is the first year since the implementation of MIBEL (01/07/2007) in which it was not necessary to schedule these measures.

Interruptible power in periods of maximum demand (MW)



Demand-side management

The demand-side management interruptibility service came into force on 1 July 2008, pursuant to that set out in ITC Order 2370/2007, of 26 July, which regulates the demand-side management interruptibility service for consumers that purchase their energy in the generation market. In this way, industrial consumers who satisfy the pre-requisites established by law, become suppliers of this system operation service, after passing a prequalification and authorisation process by the system operator and subsequent formalisation of a contract between the parties.

At the end of 2011, there were 156 interruptibility contracts in force, of which 142 correspond to the Spanish peninsular system, 13 to the Canary Island system and 1 to the Balearic Island system.

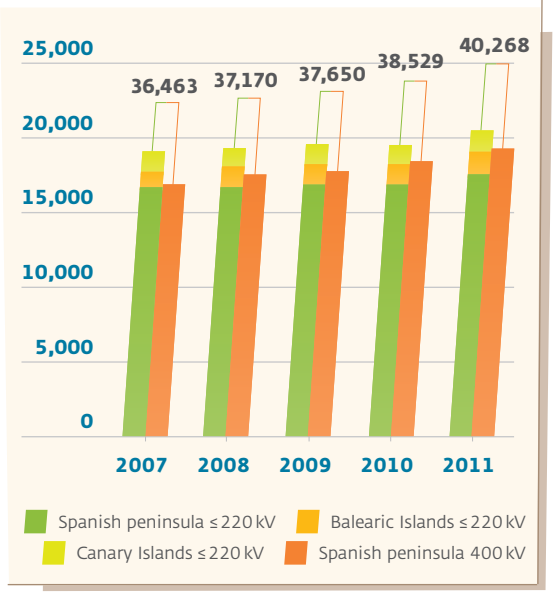
The total interruptible power manageable by the system operator during periods of maximum demand reaches approximately 2,157 MW, of which 2,120 MW correspond to the peninsular system, 52.1 MW to the Canary Island system and 3.3 MW to the Balearic Island system.

Transmission grid

In 2011, the electricity transmission grid experienced a significant boost in its development with the commissioning of facilities that strengthen the reliability and the degree of meshing of the grid and that allows new renewable power to be incorporated.

During 2011, some 1,738 km of circuit was commissioned (1,478 km correspond to the Spanish peninsula grid). This increase signifies that at year end the transmission grid on the peninsula had 37,428 km of circuit and the national transmission grid had 40,268 km of circuit. Amongst the infrastructures put in service, noteworthy is the electricity link between the Spanish

Evolution of the transmission grid in Spain (km)



Transmission grid facilities in Spain (km)

	400 kV	≤ 220 kV			
	Peninsula	Peninsula	Balearic Islands	Canary Islands	Total
Total lines (km)	**19,622**	**17,806**	**1,540**	**1,300**	**40,268**
Overhead lines (km)	19,566	17,261	1,088	1,023	38,939
Submarine lines (km)	29	236	306	15	586
Underground lines (km)	26	309	146	261	743
Transformer capacity (MVA)	**70,984**	**63**	**2,248**	**1,625**	**74,920**

Accumulated data regarding km of circuit and transformer capacity as at 31 December 2011.

peninsula and the Balearic Islands with 448 km of circuit. This transmission link is the first direct current submarine interconnection that exists in Spain.

Additionally, transformer capacity grew by 2,700 MVA, increasing the total installed transformer capacity to 74,920 MVA.

Service quality

The results of the service quality indicators registered for 2011 show the good performance of the transmission grid, evaluated according to the availability of facilities that make up the grid and electricity supply interruptions due to incidents in said grid.

The availability rate of the transmission grid elements on the Spanish peninsula, a figure which provides data regarding how long each line has been out of service due to different actions, was 97.74%, a value almost identical to that of 2010 which was 97.73%.

Regarding the continuity-of-supply indicators, 32 planned facility outages in the peninsular transmission grid were registered during 2011, bringing the total figure of energy not supplied to 280 MWh for the year. Meanwhile, the average interruption time value stood at 0.58 minutes, the lowest level since 1992 and well below the reference value of 15 minutes established in article 26.2 of Royal Decree 1955/2000 of 1 December 2000.

Transmission grid quality

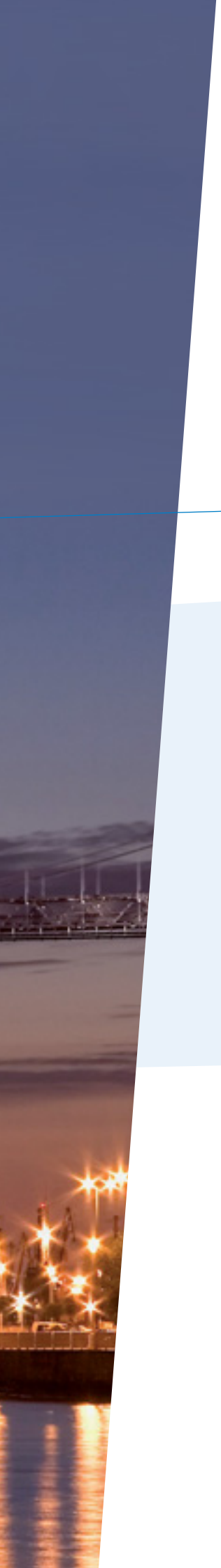
	ENS (MWh)			AIT (minutes)		
	Peninsula	Balearic Islands	Canary Islands	Peninsula	Balearic Islands	Canary Islands
2007	757	326	281	1.52	28.73	16.03
2008	574	7	1,043	1.15	0.64	58.94
2009	437	39	1,679	0.91	3.41	96.89
2010	1,570	9	4,090	3.17	0.77	241.68
2011	280	39	17	0.58	3.54	1.02

ENS: Energy not supplied. **AIT:** Average interruption time.

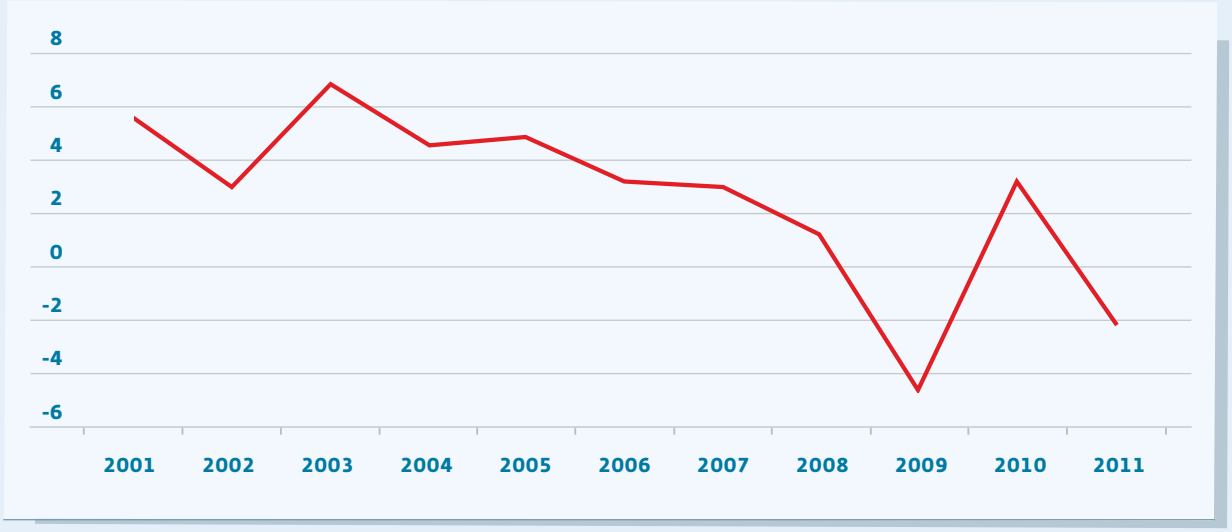
01

Electricity **Demand**

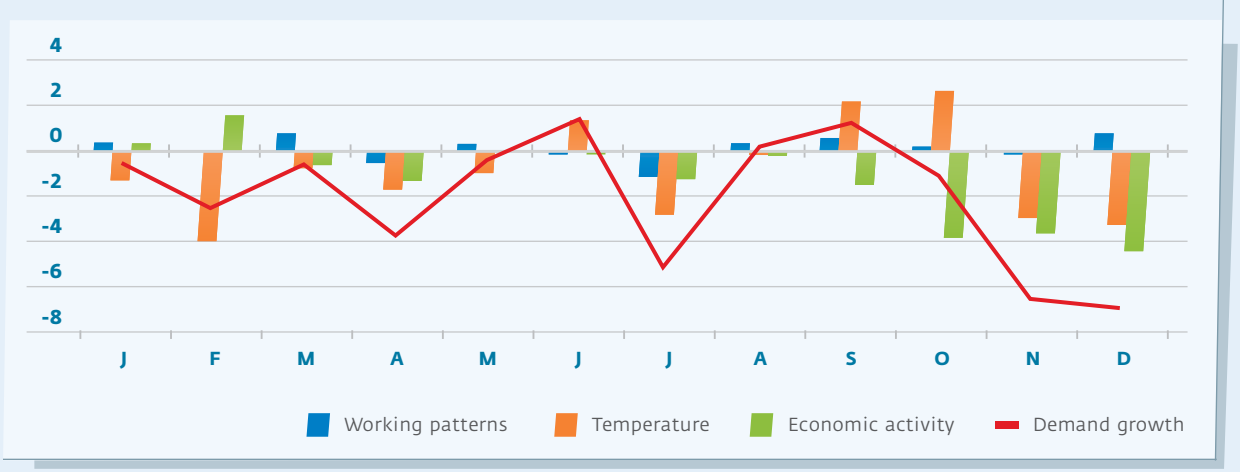
PENINSULAR SYSTEM



Evolution of the annual growth of the electricity demand at power station busbars (%)



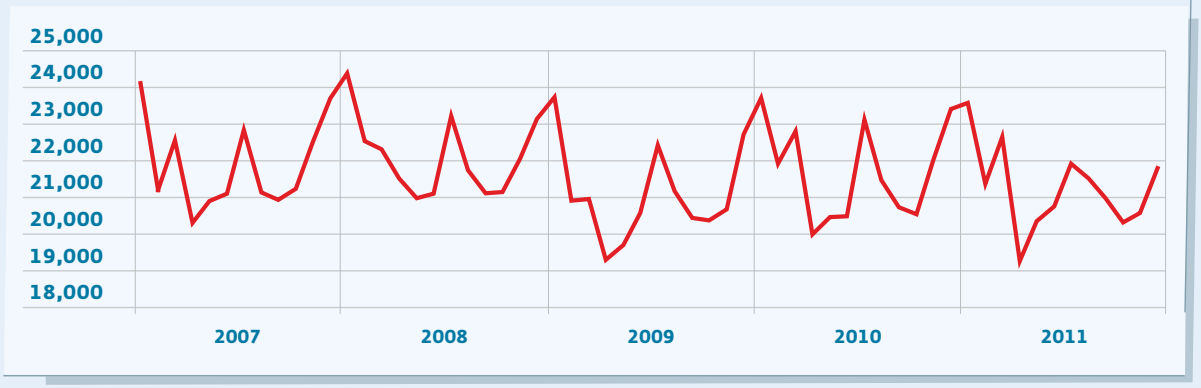
Components of the monthly growth in demand (%)



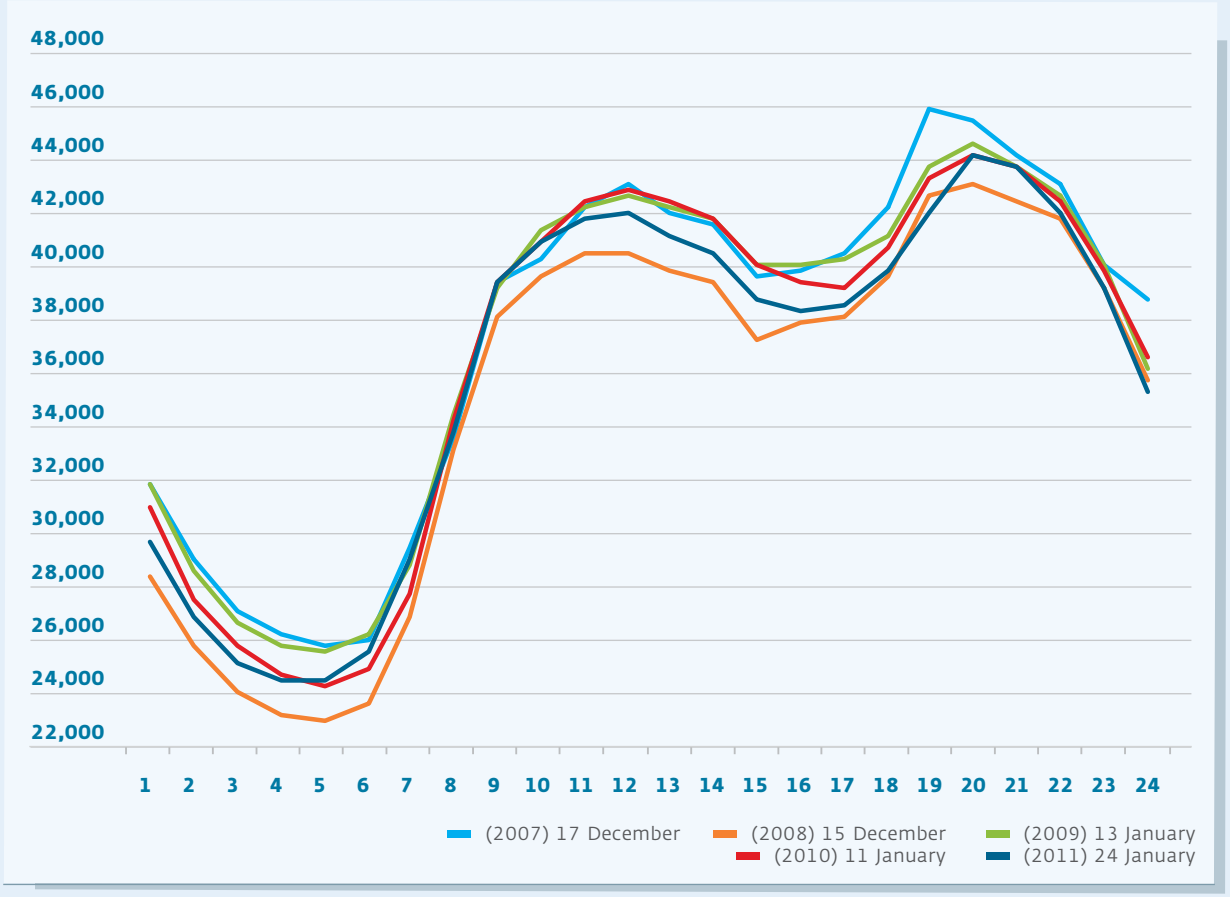
Monthly distribution of the electricity demand at power station busbars

	2007		2008		2009		2010		2011	
	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%
January	24,159	9.2	24,433	9.2	23,771	9.4	23,751	9.1	23,614	9.3
February	21,183	8.1	22,547	8.5	20,885	8.3	21,911	8.4	21,353	8.4
March	22,566	8.6	22,312	8.4	20,926	8.3	22,816	8.8	22,655	8.9
April	20,261	7.7	21,496	8.1	19,228	7.6	19,935	7.7	19,191	7.5
May	20,864	7.9	20,951	7.9	19,642	7.8	20,423	7.8	20,301	8.0
June	21,080	8.0	21,081	7.9	20,540	8.1	20,439	7.8	20,723	8.1
July	22,852	8.7	23,240	8.8	22,425	8.9	23,145	8.9	21,913	8.6
August	21,112	8.0	21,730	8.2	21,149	8.4	21,456	8.2	21,497	8.4
September	20,899	8.0	21,082	7.9	20,401	8.1	20,702	7.9	20,944	8.2
October	21,214	8.1	21,124	8.0	20,325	8.0	20,499	7.9	20,274	8.0
November	22,512	8.6	22,047	8.3	20,644	8.2	22,012	8.4	20,538	8.1
December	23,734	9.0	23,164	8.7	22,725	9.0	23,444	9.0	21,783	8.5
Total	**262,436**	**100.0**	**265,206**	**100.0**	**252,660**	**100.0**	**260,530**	**100.0**	**254,786**	**100.0**

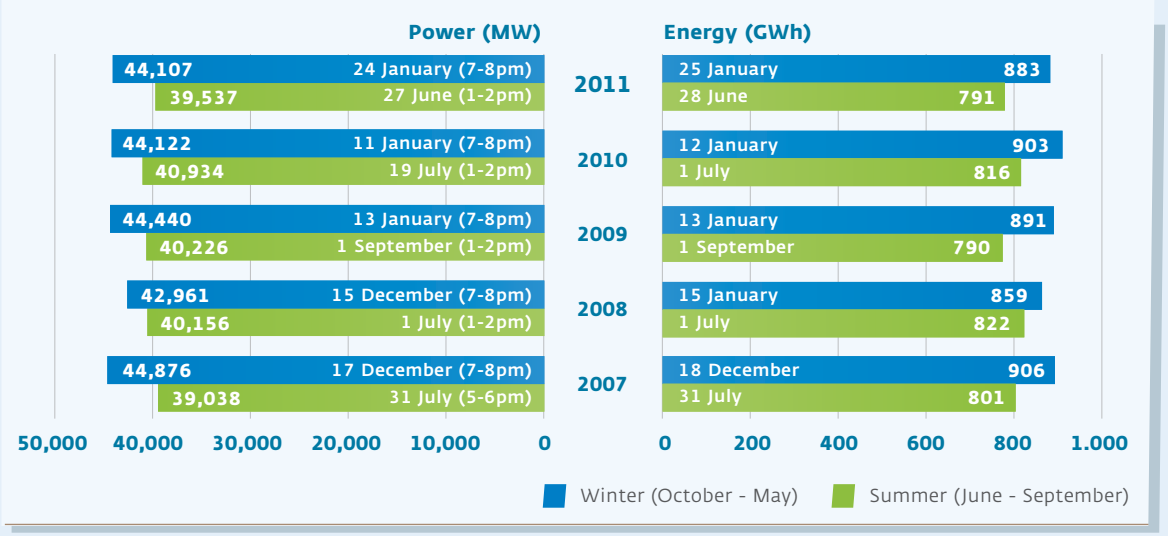
Monthly evolution of the electricity demand at power station busbars (GWh)



Load curves for the days of maximum average hourly power demand (MW)



Maximum average hourly power demand and daily energy



Maximum instantaneous power (MW)

02

Demand **Coverage**

PENINSULAR SYSTEM

Average hourly power demand coverage for peak periods (MW)

	2007 17 December 19-20h	2008 15 January 19-20h	2009 13 January 19-20h	2010 11 January 19-20h	2011 24 January 19-20h
Hydroelectric	**5,082**	**5,940**	**5,947**	**8,512**	**9,733**
Hydroelectric	3,779	4,683	4,306	6,946	8,469
Pumped storage	1,303	1,257	1,641	1,566	1,264
Thermal	**34,484**	**25,891**	**32,279**	**27,104**	**20,951**
Nuclear	7,392	6,367	7,344	5,410	6,486
Coal	8,394	7,121	7,633	5,021	2,878
Fuel / gas	2,469	350	264	389	0
Combined cycle	16,229	12,052	17,038	16,284	11,586
Total scheduled production	**39,565**	**31,831**	**38,226**	**35,616**	**30,683**
Differences due to control	**-596**	**-**	**-**	**-**	**-**
Total ordinary regime	**38,969**	**31,831**	**38,226**	**35,616**	**30,683**
International physical energy exchange balance (1)	**524**	**-1,682**	**-1,594**	**-1,504**	**-667**
Andorra	-43	-82	-59	-23	-59
France	567	-400	-400	-500	-300
Portugal	0	-500	-435	-381	442
Morocco	0	-700	-700	-600	-750
Special regime	**5,383**	**12,812**	**7,809**	**10,010**	**14,091**
Demand at power station busbars	**44,876**	**42,961**	**44,440**	**44,122**	**44,107**

(1) Positive value: import balance Negative value: export balance

Annual evolution of installed power (MW)

	Installed power as at 31 December				
	2007	2008	2009	2010	2011
Conventional and mixed hydroelectric	14,760	14,808	14,808	14,816	14,816
Pumped storage	2,747	2,747	2,747	2,747	2,747
Hydroelectric	**17,506**	**17,554**	**17,554**	**17,563**	**17,563**
Nuclear	**7,716**	**7,716**	**7,716**	**7,777**	**7,777**
Coal (1)	**11,356**	**11,359**	**11,359**	**11,380**	**11,700**
Fuel / gas (1)	**4,768**	**4,401**	**3,008**	**2,282**	**1,492**
Combined cycle	**20,962**	**21,677**	**23,066**	**25,235**	**25,269**
Total ordinary regime	**62,309**	**62,707**	**62,703**	**64,237**	**63,801**
Hydroelectric	1,871	1,979	2,022	2,035	2,041
Wind	13,529	15,977	18,712	19,710	21,091
Solar photovoltaic	612	3,207	3,249	3,657	4,047
Solar thermoelectric	11	61	232	532	1,049
Renewable thermal	550	590	718	753	858
Non-renewable thermal	6,543	6,803	7,024	7,187	7,282
Total special regime	**23,115**	**28,618**	**31,957**	**33,875**	**36,367**
Total	**85,424**	**91,324**	**94,660**	**98,112**	**100,168**

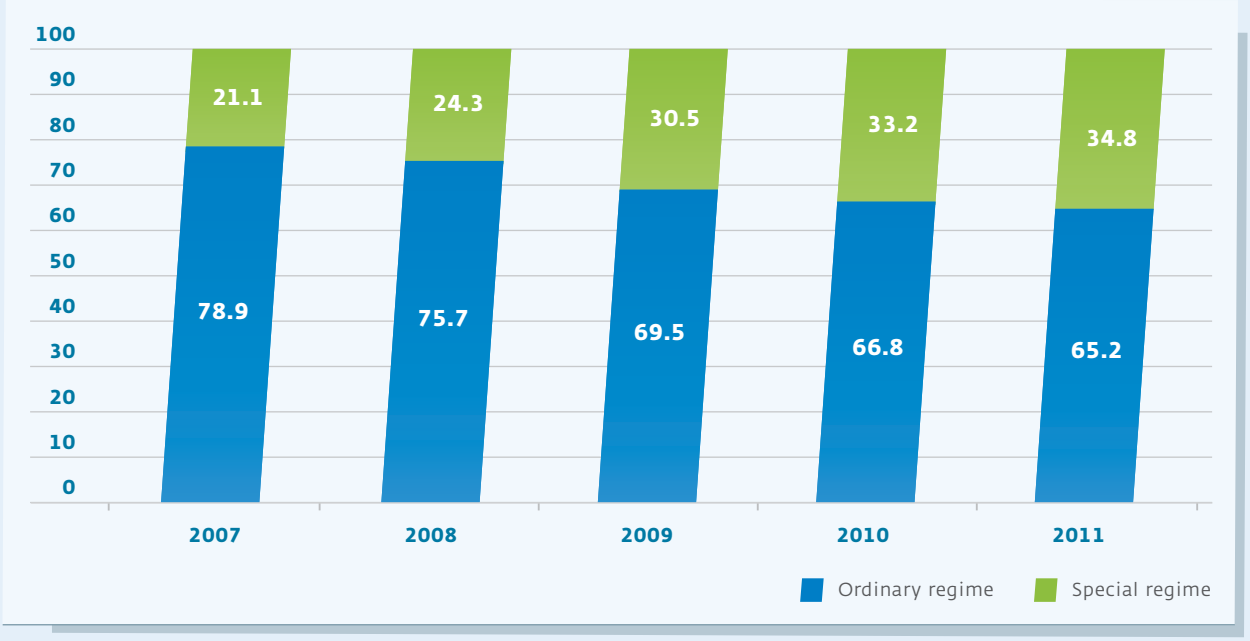
(1) As of 1 January2011 GICC (Elcogas) in included in national coal as according to RD 134/2010 this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the resolution process of restrictions for guaranteeing supply.

Annual evolution of electricity demand coverage (GWh)

	2007	2008	2009	2010	2011	%11/10
Hydroelectric	26,352	21,428	23,862	38,653	27,571	-28.7
Nuclear	55,102	58,973	52,761	61,990	57,731	-6.9
Coal (1)	71,833	46,275	33,862	22,097	43,488	96.8
Fuel / gas (1)	2,397	2,378	2,082	1,825	0	-
Combined cycle	68,139	91,286	78,279	64,604	50,734	-21.5
Ordinary regime	**223,823**	**220,341**	**190,846**	**189,169**	**179,525**	**-5.1**
- Generation consumption	-8,753	-8,338	-7,117	-6,673	-7,247	8.6
Special regime	**57,548**	**68,045**	**80,811**	**90,825**	**91,815**	**1.1**
Hydroelectric	4,125	4,638	5,454	6,824	5,283	-22.6
Wind	27,249	31,758	37,889	43,208	41,799	-3.3
Solar photovoltaic	463	2,406	5,829	6,140	7,081	15.3
Solar thermoelectric	8	15	130	692	1,823	163.6
Renewable thermal	2,376	2,651	3,044	3,172	3,792	19.5
Non-renewable thermal	23,328	26,576	28,466	30,789	32,037	4.1
Net generation	**272,619**	**280,048**	**264,540**	**273,321**	**264,092**	**-3.4**
- Pumped storage consumption	-4,432	-3,803	-3,794	-4,458	-3,215	-27.9
+ Peninsula-Balearic Islands' link (2)(3)	-	-	-	-	-0.5	-
+ International exchanges (2)	-5,750	-11,040	-8,086	-8,333	-6,090	-26.9
Demand at power station busbars	**262,436**	**265,206**	**252,660**	**260,530**	**254,786**	**-2.2**

(1) As of 1 January2011 GICC (Elcogas) in included in national coal as according to RD 134/2010 this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the resolution process of restrictions for guaranteeing supply.
(2) Positive value: import balance Negative value: export balance. (3) Testing phase.

Demand coverage structure at power station busbars (%)



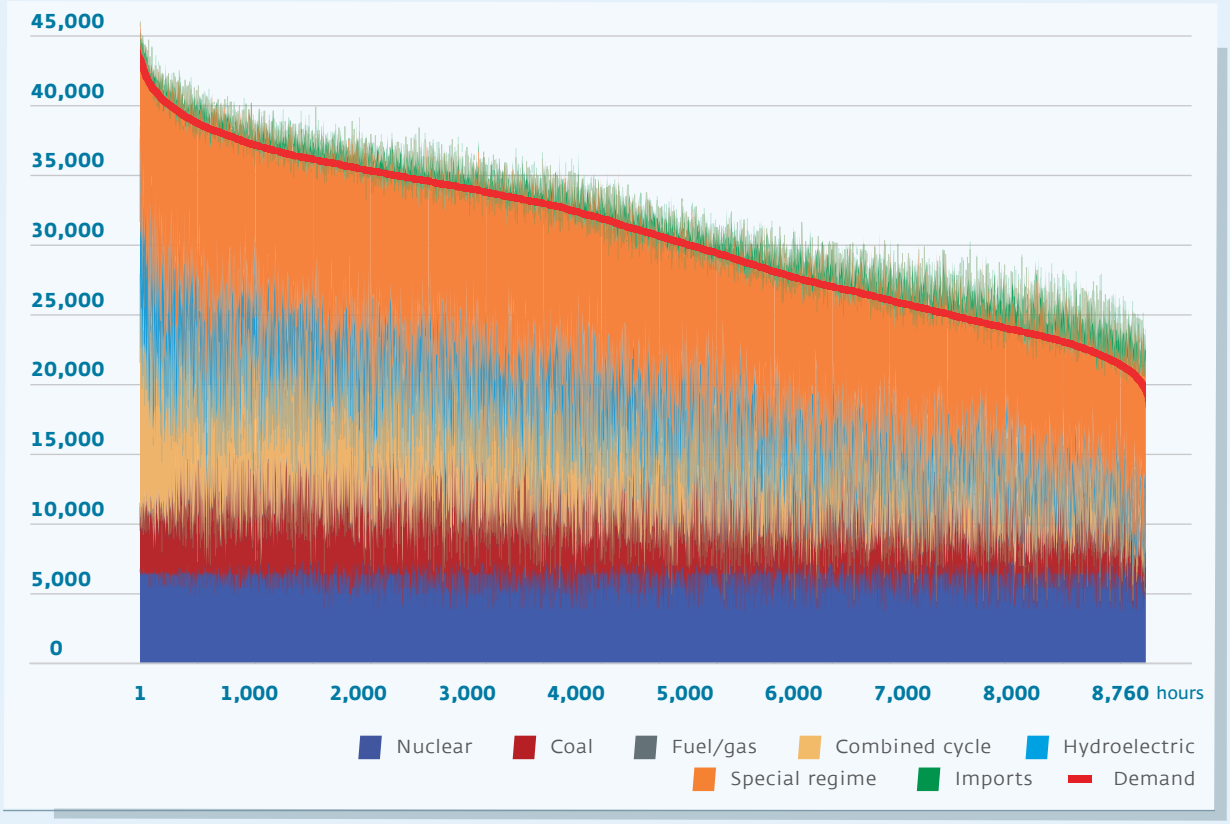
Monthly evolution of electricity demand coverage (GWh)

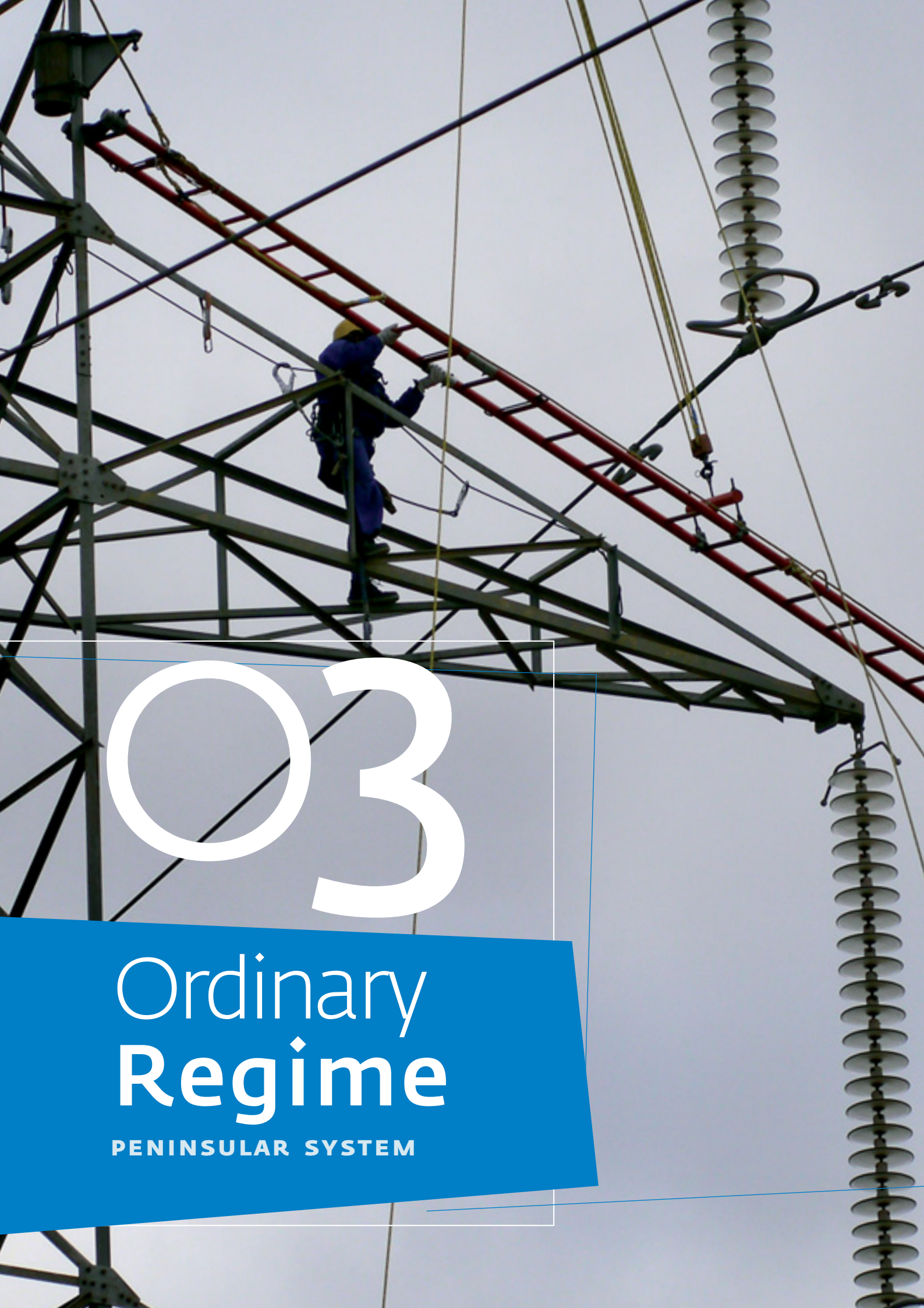
	Jan	Feb	Mar	Apr	May	Jun	
Hydroelectric	4,786	2,694	3,452	3,185	2,447	1,784	
Nuclear	4,938	4,471	4,533	4,663	3,797	4,932	
Coal (1)	2,207	2,651	3,203	2,632	3,192	2,952	
Fuel / gas	0	0	0	0	0	0	
Combined cycle	5,160	4,746	4,048	2,861	4,252	4,955	
Ordinary regime	**17,090**	**14,561**	**15,235**	**13,342**	**13,688**	**14,623**	
- Generation consumption	-570	-536	-571	-511	-525	-599	
Special regime	**8,137**	**7,967**	**9,101**	**7,732**	**7,530**	**7,244**	
Hydroelectric	664	506	656	588	489	405	
Wind	3,999	3,994	4,655	3,368	3,146	2,919	
Solar photovoltaic	331	481	509	632	717	778	
Solar thermoelectric	40	89	98	138	154	232	
Renewable thermal	304	280	304	304	312	286	
Non-renewable thermal	2,799	2,616	2,880	2,704	2,712	2,623	
Net generation	**24,656**	**21,992**	**23,765**	**20,563**	**20,694**	**21,268**	
- Pumped storage consumption	-431	-281	-348	-297	-159	-140	
+ Peninsula-Balearic Islands' link (2)(3)	-	-	-	-	-	-	
+ International exchanges (2)	-611	-359	-763	-1,075	-234	-405	(→)
Demand at power station busbars	**23,614**	**21,353**	**22,655**	**19,191**	**20,301**	**20,723**	

	Jul	Aug	Sep	Oct	Nov	Dec	Total
Hydroelectric	1,400	1,367	1,142	1,293	1,977	2,044	27,571
Nuclear	5,068	5,537	5,233	4,727	4,761	5,073	57,731
Coal (1)	4,486	4,361	4,991	4,586	4,161	4,067	43,488
Fuel / gas	0	0	0	0	0	0	0
Combined cycle	4,626	4,797	4,590	3,812	3,446	3,440	50,734
Ordinary regime	**15,580**	**16,062**	**15,957**	**14,418**	**14,345**	**14,623**	**179,525**
- Generation consumption	-653	-684	-710	-651	-618	-619	-7,247
Special regime	**7,630**	**6,497**	**6,422**	**7,191**	**7,716**	**8,648**	**91,815**
Hydroelectric	378	305	234	189	423	447	5,283
Wind	3,222	2,700	2,313	3,134	3,791	4,559	41,799
Solar photovoltaic	822	766	699	600	343	403	7,081
Solar thermoelectric	281	232	228	171	77	83	1,823
Renewable thermal	317	323	333	344	337	348	3,792
Non-renewable thermal	2,610	2,173	2,615	2,752	2,746	2,808	32,037
Net generation	**22,558**	**21,875**	**21,669**	**20,957**	**21,443**	**22,652**	**264,092**
- Pumped storage consumption	-174	-181	-176	-302	-325	-402	-3,215
+ Peninsula-Balearic Islands' link (2)(3)	-	-	-	-	0.04	0.5	-0.5
+ International exchanges (2)	-471	-197	-549	-382	-580	-466	-6,090
Demand at power station busbars	**21,913**	**21,497**	**20,944**	**20,274**	**20,538**	**21,783**	**254,786**

(1) As of 1 January2011 GICC (Elcogas) in included in national coal as according to RD 134/2010 this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the resolution process of restrictions for guaranteeing supply.
(2) Positive value: import balance Negative value: export balance. (3) Testing phase.

Monotone load curve (MW)

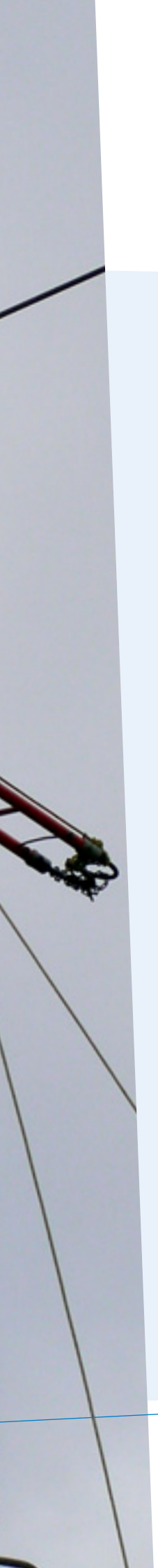




03

Ordinary **Regime**

PENINSULAR SYSTEM



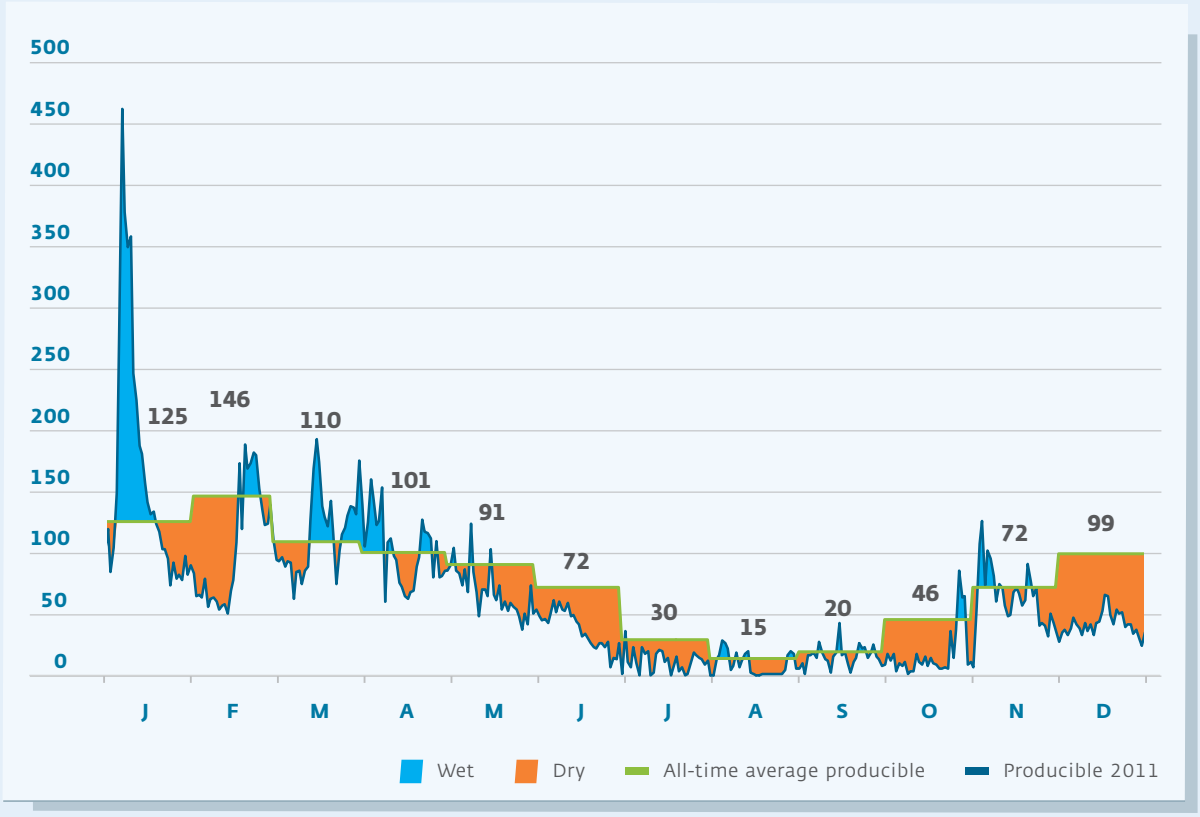
Power variations in generator equipment

Power station	Type	Date	Power (MW)
Algeciras 3	Combined cycle	March-11	10
Puerto de Barcelona 1	Combined cycle	February-11	35
Puerto de Barcelona 2	Combined cycle	February-11	10
Total commissioned			**54**
Málaga 1	Combined cycle	February-11	20
Sabón 1	Fuel/gas	December-11	120
Sabón 2	Fuel/gas	December-11	350
Total decommissioned			**490**
Balance			**-436**

Hydroelectric production per basin

Basin	Power MW	Production (GWh)			Producible (GWh)		
		2010	2011	%11/10	2010	2011	%11/10
Norte	4,667	12,614	7,529	-40.3	11,399	6,575	-42.3
Duero	3,887	10,618	8,061	-24.1	10,511	6,675	-36.5
Tajo-Júcar-Segura	4,333	6,277	5,525	-12.0	6,686	4,108	-38.6
Guadiana	226	324	274	-15.4	505	209	-58.7
Guadalquivir-Sur	1,025	1,475	1,073	-27.3	1,245	712	-42.8
Ebro-Pirineo	3,425	7,345	5,110	-30.4	5,829	4,226	-27.5
Total	**17,563**	**38,653**	**27,571**	**-28.7**	**36,174**	**22,506**	**-37.8**

Daily producible hydroelectric energy during 2011 compared with the all-time average producible (GWh)



Monthly producible hydroelectric energy

	2010				2011			
	GWh		Indice		GWh		Indice	
	Monthly	Cumulative	Monthly	Cumulative	Monthly	Cumulative	Monthly	Cumulative
January	6,247	6,247	1.61	1.61	4,965	4,965	1.28	1.28
February	5,039	11,287	1.24	1.42	2,906	7,871	0.71	0.99
March	5,849	17,136	1.72	1.51	3,555	11,426	1.05	1.01
April	3,879	21,015	1.28	1.46	3,029	14,456	1.01	1.01
May	2,954	23,969	1.05	1.39	2,129	16,584	0.76	0.97
June	2,579	26,548	1.19	1.37	1,131	17,715	0.52	0.92
July	1,105	27,653	1.18	1.36	354	18,069	0.38	0.89
August	520	28,174	1.14	1.36	267	18,335	0.59	0.89
September	554	28,727	0.92	1.35	467	18,802	0.78	0.88
October	998	29,725	0.70	1.30	530	19,332	0.37	0.85
November	2,493	32,218	1.16	1.29	1,903	21,235	0.89	0.86
December	3,956	36,174	1.28	1.29	1,271	22,506	0.41	0.81

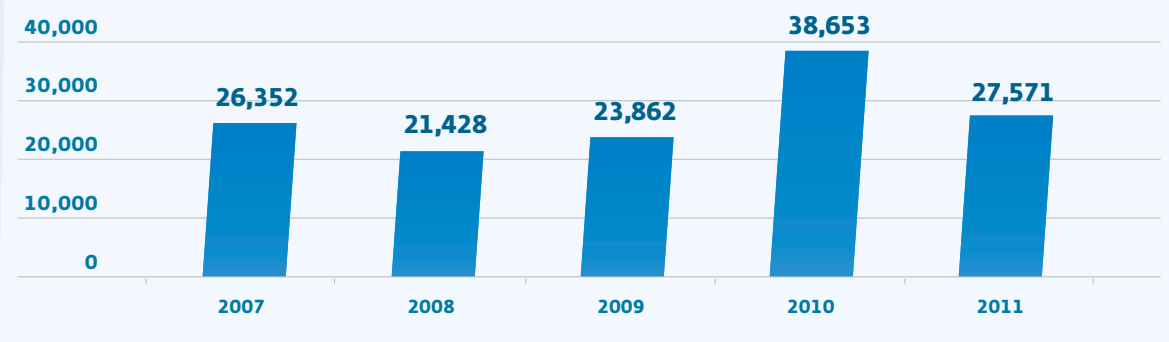
Monthly evolution of hydroelectric reserves

	2010						2011					
	Annual		Hyperannual		Overall		Annual		Hyperannual		Overall	
	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%
January	5,911	66	5,421	57	11,332	61	5,987	67	6,884	72	12,872	69
February	6,653	74	6,446	67	13,099	71	6,307	70	7,089	74	13,396	72
March	6,969	78	7,180	75	14,149	76	6,550	73	7,262	76	13,812	75
April	6,838	76	7,370	77	14,208	77	6,498	72	7,442	78	13,940	75
May	6,929	77	7,416	77	14,345	77	6,362	71	7,447	78	13,809	74
June	7,023	78	7,355	77	14,378	78	5,992	67	7,273	76	13,265	72
July	6,142	68	6,949	73	13,091	71	5,274	59	7,013	73	12,287	66
August	5,154	57	6,587	69	11,742	63	4,537	51	6,689	70	11,226	61
September	4,410	49	6,525	68	10,934	59	3,970	44	6,526	68	10,497	57
October	4,230	47	6,400	67	10,630	57	3,534	39	6,352	66	9,885	53
November	4,713	53	6,343	66	11,056	60	4,034	45	6,153	64	10,188	55
December	5,556	62	6,741	70	12,298	66	3,834	43	5,856	61	9,691	52

Extreme values of reserves

		2011			All-time values	
		GWh	Date	%	Date	%
Maximum	Annual	6,601	8 April	73.6	May 1969	92.0
	Hyperannual	7,478	9 May	78.1	April 1979	91.1
	Global	**14,003**	**27 April**	**75.5**	**April 1979**	**86.6**
Minimum	Annual	3,511	1 November	39.2	January 1976	24.9
	Hyperannual	5,856	31 December	61.2	November 1983	17.6
	Global	**9,691**	**31 December**	**52.3**	**October 1995**	**23.6**

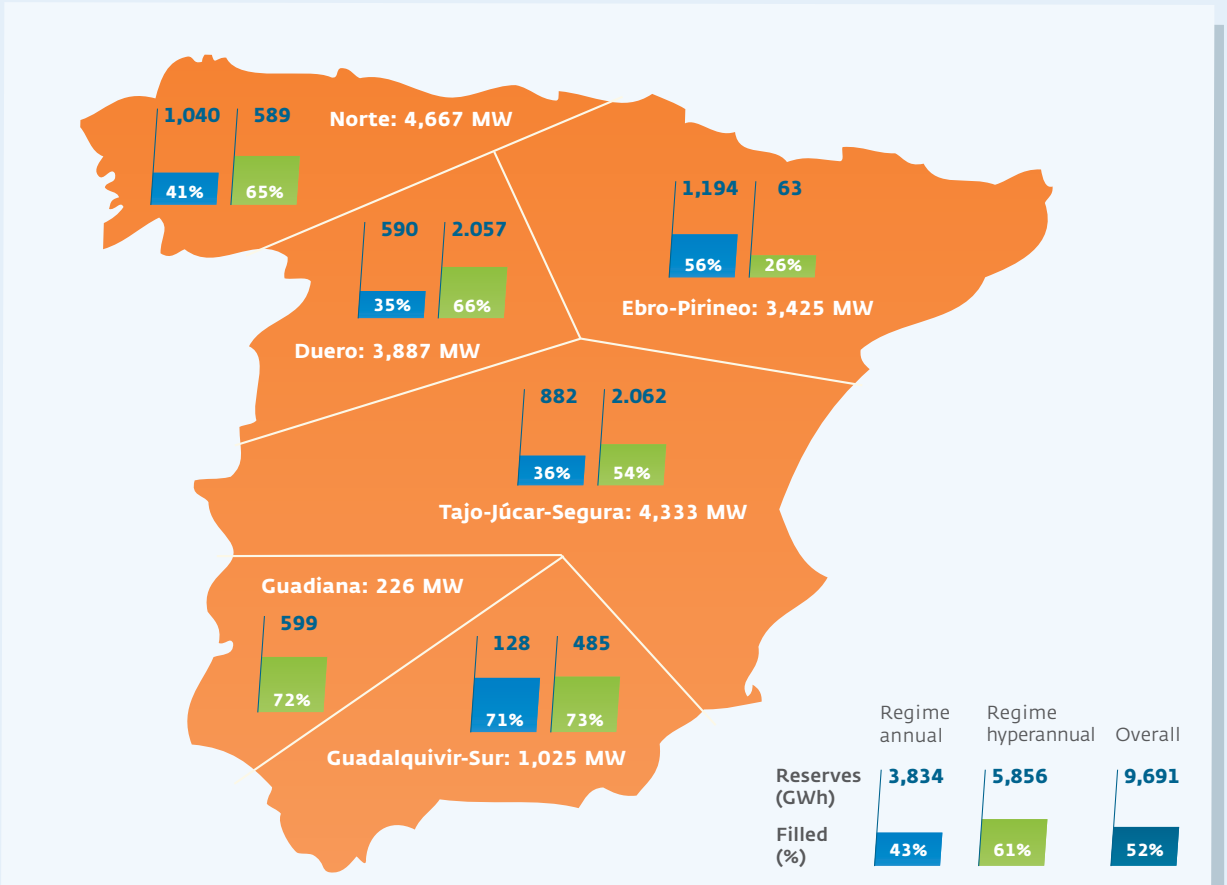
Annual evolution of hydroelectric production at generator terminals (GWh)



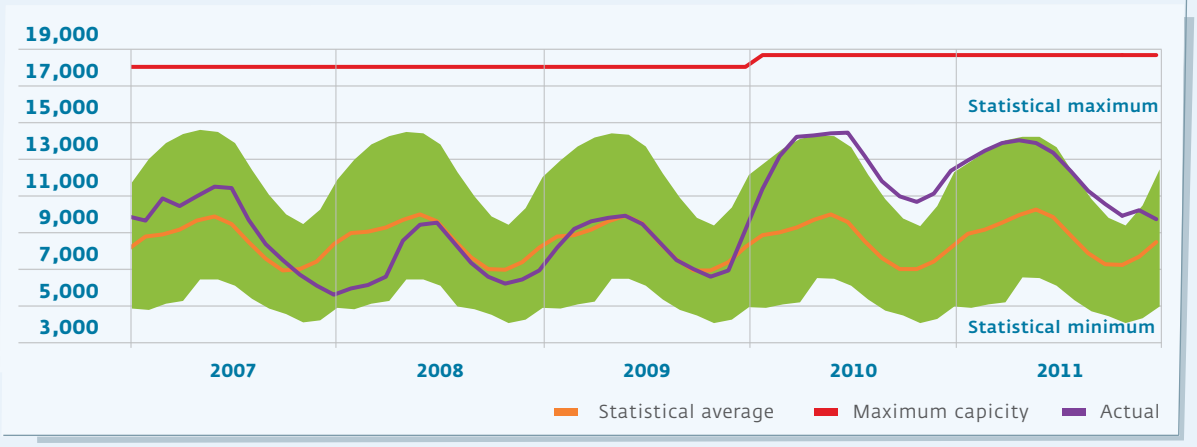
Annual evolution of producible hydroelectric energy

Year	GWh	Indice	Probablility of being exceeded
2007	18,416	0.65	92%
2008	18,945	0.67	90%
2009	22,262	0.79	76%
2010	36,174	1.29	16%
2011	**22,506**	**0.81**	**74%**

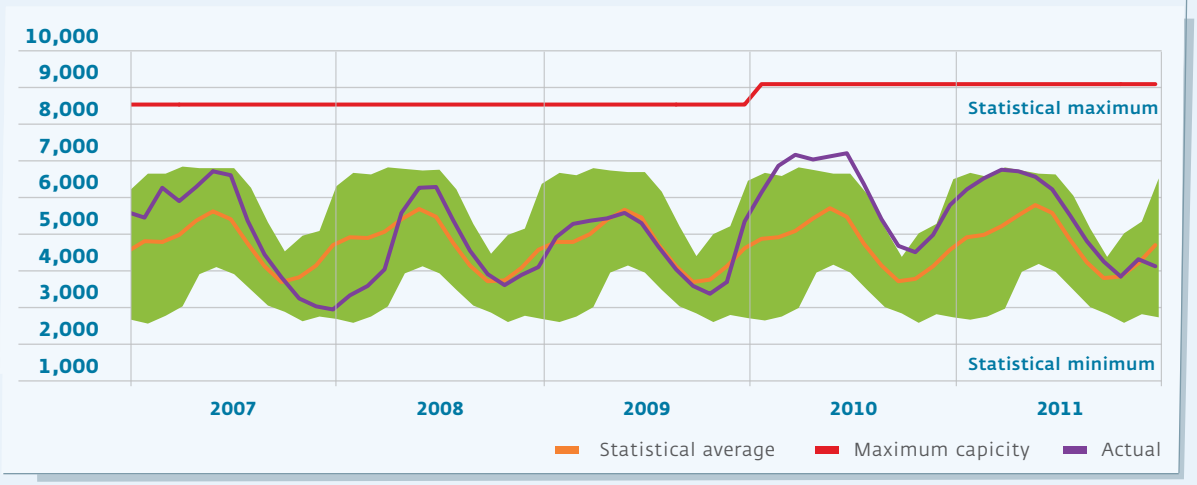
Installed power and hydroelectric reserves as at 31 December per drainage basin



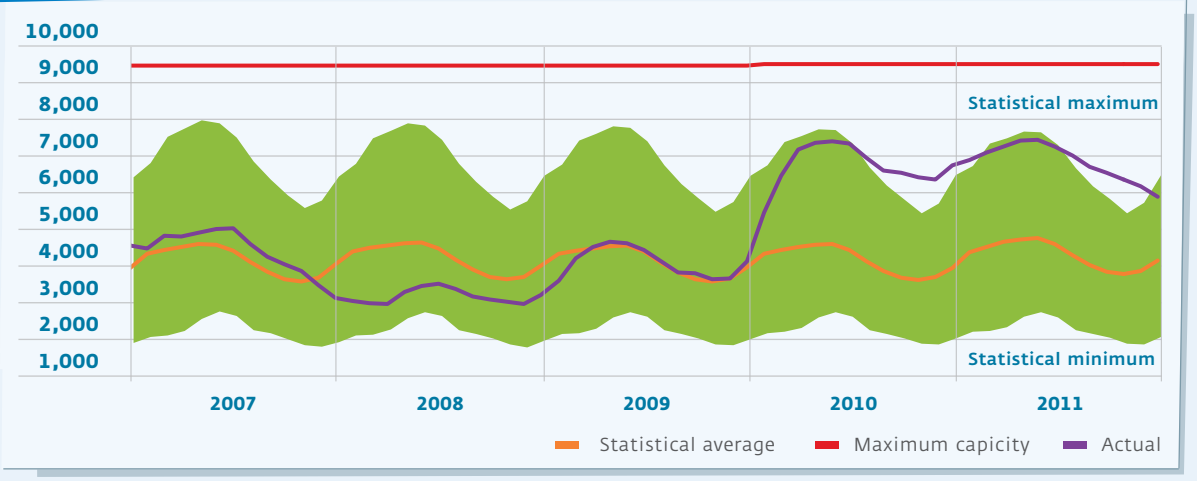
Annual evolution of hydroelectric reserves (GWh)



Annual evolution of hydroelectric reserves under special regime (GWh)



Annual evolution of hydroelectric reserves under hyperannual regime (GWh)



Production at generator terminals of the coal-fired power stations (1)

Power stations	Power MW	2010 GWh	2010 %	2011 GWh	2011 %	%11/10
Aboño	916	3,663	16.6	4,437	10.2	21.1
Anllares	365	0	0.0	1,684	3.9	-
Cercs	162	516	2.3	14	0.0	-97.4
Compostilla II	1,171	209	0.9	5,194	11.9	2,383.6
Escatrón	80	0	-	0	-	-
Escucha	159	156	0.7	419	1.0	169.6
GICC-PL ELCOGAS (2)	320	0	0.0	1,617	3.7	-
Guardo	516	63	0.3	1,847	4.2	2,834.6
La Robla	655	29	0.1	1,016	2.3	3,360.1
Lada	513	698	3.2	675	1.6	-3.3
Litoral de Almería	1,159	4,409	20.0	5,109	11.7	15.9
Los Barrios	589	2,489	11.3	2,341	5.4	-5.9
Meirama	563	856	3.9	1,151	2.6	34.4
Narcea	595	1	0.0	1,359	3.1	134,485.7
Pasajes	217	487	2.2	357	0.8	-26.7
Puentenuevo 3	324	590	2.7	1,258	2.9	113.1
Puentes García Rodríguez	1,468	4,955	22.4	7,352	16.9	48.4
Puertollano	221	255	1.2	81	0.2	-68.2
Soto de la Ribera	604	927	4.2	1,315	3.0	41.9
Teruel	1,102	1,793	8.1	6,260	14.4	249.2
Total	**11,700**	**22,097**	**100.0**	**43,488**	**100.0**	**96.8**

(1) On 26 February 2011, after a year's suspension of its coming into force, Royal Decree 134/2010, of 12 February, came into force and lays down the procedure for the resolution of security of supply restrictions and amends Royal Decree 2019/1997, of 26 December, by means of which the electricity production market is organised and regulated and which defines the procedure for the resolution of security of supply restrictions as a new system adjustment service in which ten power stations are manditarily involved (Anllares, Compostilla III, Listen, IGCC-PL ELCOGAS, Guardo, La Robla, Narcea, Puentenuevo 3, Soto de la Ribera and Teruel), in order to meet the use of domestic coal included in the Strategic Coal Reserve National Plan 2006-2012. The comparison between the production values in 2010 and 2011 of some of the above indicated power stations reflects the effect of the implementation of this procedure during 2011.

(2) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the guarantee of supply.

Utlisation and availability of coal fired power stations

Power station	Power MW	Production GWh	Hours in operation	Utilisation coefficients (%)		Non-Availability(%)		Availability
				Available(1)	In No. of hours connected to grid(2)	Periodic revision	Breakdowns	
Aboño 1	360	996	4,176	33.6	66.2	0.0	6.1	93.9
Aboño 2	556	3,441	8,638	71.3	71.6	0.0	0.9	99.1
Anllares	365	1,684	5,552	53.1	83.1	0.0	0.8	99.2
Cercs	162	14	152	1.0	54.9	0.0	3.8	96.2
Compostilla 2	141	381	3,303	33.4	81.8	0.0	7.6	92.4
Compostilla 3	330	1,620	5,675	57.5	86.5	0.0	2.6	97.4
Compostilla 4	350	1,792	5,983	60.9	85.6	0.0	4.0	96.0
Compostilla 5	350	1,401	4,853	59.7	82.5	18.1	5.3	76.6
Escatrón	80	0	0	0.0	-	0.0	0.0	100.0
Escucha	159	419	3,317	30.9	79.3	0.0	2.9	97.1
GICC-PL ELCOGAS (3)	320	1,617	6,463	92.4	78.2	18.5	19.1	62.4
Guardo 1	155	0	0	0.0	-	0.0	0.0	100.0
Guardo 2	361	1,847	6,131	60.5	83.5	0.9	2.5	96.6
La Robla 1	284	172	702	6.9	86.4	0.0	0.3	99.7
La Robla 2	371	844	2,888	48.3	78.8	0.0	46.3	53.7
Lada 3	155	0	0	0.0	-	0.0	0.0	100.0
Lada 4	358	675	2,457	23.8	76.8	6.1	3.5	90.4
Litoral de Almería 1	577	2,530	6,033	55.2	72.7	4.9	4.4	90.7
Litoral de Almería 2	582	2,579	6,260	51.7	70.8	0.0	2.2	97.8
Los Barrios	589	2,341	5,850	49.1	67.9	3.5	4.0	92.5
Meirama	563	1,151	2,555	24.6	80.0	0.0	5.1	94.9
Narcea 1	65	0	0	0.0	-	0.0	0.0	100.0
Narcea 2	166	11	112	0.9	59.8	0.0	15.0	85.0
Narcea 3	364	1,348	4,359	43.8	85.0	0.0	3.4	96.6
Pasajes	217	357	2,381	19.7	69.1	4.2	0.5	95.3
Puentenuevo 3	324	1,258	4,745	57.6	81.9	5.2	17.8	76.9
Puentes 1	369	2,074	6,689	64.4	84.0	0.0	0.3	99.7
Puentes 2	366	1,990	6,339	62.1	85.8	0.0	0.0	100.0
Puentes 3	366	1,634	5,343	53.6	83.5	3.6	1.4	95.0
Puentes 4	367	1,655	5,445	52.2	82.8	0.0	1.4	98.6
Puertollano	221	81	435	4.2	84.4	0.0	0.4	99.6
Soto de la Ribera 2	254	91	492	4.1	72.8	0.0	0.1	99.9
Soto de la Ribera 3	350	1,224	4,239	40.3	82.5	0.0	0.8	99.2
Teruel 1	368	2,043	6,890	66.2	80.6	0.0	4.2	95.8
Teruel 2	368	2,071	7,002	66.3	80.4	0.0	3.1	96.9
Teruel 3	366	2,146	7,157	68.4	81.9	0.0	2.1	97.9
Total	**11,700**	**43,488**	**4,726**	**45.6**	**78.7**	**2.0**	**5.0**	**93.0**

(1) This is the coefficient between the real production and the available production or maximum production that the power station can reach operating at nominal power during the hours it is available.
(2) This is the coefficient between the real production and the total that the power station could have reached operating at nominal power in the set of hours in which it has been connected to the grid (producing).
(3) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the guarantee of supply.

Production at generator terminals of coal-fired power stations as per type of fuel

	2010		2011		
	GWh	%	GWh	%	%11/10
National coal	**2,264**	**10.2**	**17,856**	**41.1**	**688.8**
Bituminous coal and anthracite	1,141	5.2	14,201	32.7	1,144.7
Black lignite	1,123	5.1	3,655	8.4	225.6
Imported coal	**18,671**	**84.5**	**23,345**	**53.7**	**25.0**
Total coal	**20,935**	**94.7**	**41,201**	**94.7**	**96.8**
Support fuels	**1,162**	**5.3**	**2,287**	**5.3**	**96.7**
Diesel fuel	225	1.0	290	0.7	29.3
Natural gas	82	0.4	1,079	2.5	1,217.5
Gas from steel industry	856	3.9	918	2.1	7.2
Total	**22,097**	**100.0**	**43,488**	**100.0**	**96.8**

Production at generator terminals of fuel/gas power stations

Power station	Power MW	2010		2011		
		GWh	%	GWh	%	%11/10
Aceca	314	84	4.6	0	-	-
C. Colón (1)	0	0	-	-	-	-
Escombreras (2)	0	0	-	-	-	-
Foix	520	8	0.4	0	-	-
GICC-PL ELCOGAS (3)	0	1,681	92.1	-	-	-
Sabón (4)	0	0	-	-	-	-
S. Adrián	659	52	2.9	0	-	-
Total	**1,492**	**1,825**	**-**	**0**	**-**	**-**

(1) Colón 2 - decommissioned in June 2010.
(2) Decommissioned in January 2010.
(3) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the guarantee of supply.
(4) Decommissioned in December 2011.

Utilisation and availability of fuel/gas power stations

Power station	Power MW	Production GWh	Hours in operation	Utilisation coefficients (%)		Non-Availability(%)		Availability
				Available(1)	In No. of hours connected to grid(2)	Periodic revision	Breakdowns	
Aceca 1	314	0	0	0.0	-	11.3	0.0	88.7
Foix	520	0	0	0.0	-	0.0	0.0	100.0
Sabón 1 (3)	0	0	0	-	-	0.0	100.0	0.0
Sabón 2 (3)	0	0	0	-	-	0.0	100.0	0.0
S. Adrián 1	350	0	0	0.0	-	0.0	79.2	20.8
S. Adrián 3	309	0	0	0.0	-	0.0	76.9	23.1
Total	**1,492**	**0**	**0**	**0.0**	**-**	**1.9**	**48.8**	**49.3**

(**1**) This is the coefficient between the real production and the available production or maximum production that the power station can reach operating at nominal power during the hours it is available.
(**2**) This is the coefficient between the real production and the total that the power station could have reached operating at nominal power in the set of hours in which it has been connected to the grid (producing).
(**3**) Decommissioned in December 2011.

Production at generator terminals in combined cycle power stations

Power station	Power MW	2010 GWh	2010 %	2011 GWh	2011 %	%11/10
Aceca 3	400	1,225	1.9	909	1.8	-25.8
Aceca 4	374	1,838	2.8	2,444	4.8	33.0
Algeciras 3 CC	831	126	0.2	1,754	3.5	1,293.3
Amorebieta	749	2,483	3.8	1,029	2.0	-58.6
Arcos 1	396	170	0.3	121	0.2	-29.0
Arcos 2	379	63	0.1	18	0.0	-70.6
Arcos 3	844	2,229	3.5	1,094	2.2	-50.9
Arrúbal 1	402	695	1.1	424	0.8	-39.0
Arrúbal 2	397	612	0.9	575	1.1	-6.0
Bahía de Bizkaia	800	2,939	4.5	2,283	4.5	-22.3
Besós 3	412	1,710	2.6	655	1.3	-61.7
Besós 4	407	2,183	3.4	1,715	3.4	-21.4
Besós 5	873	479	0.7	1,786	3.5	273.1
Campo Gibraltar 1	393	2,194	3.4	1,467	2.9	-33.1
Campo Gibraltar 2	388	1,552	2.4	1,445	2.8	-6.9
Cartagena 1	425	726	1.1	1,422	2.8	95.7
Cartagena 2	425	1,062	1.6	1,030	2.0	-3.0
Cartagena 3	419	952	1.5	1,193	2.4	25.3
Castejón 1	429	1,454	2.3	530	1.0	-63.6
Castejón 2	378	704	1.1	204	0.4	-71.0
Castejón 3	426	1,350	2.1	488	1.0	-63.9
Castellón 3	800	93	0.1	169	0.3	82.2
Castellón 4	854	2,619	4.1	2,419	4.8	-7.6
Castelnou	798	1,957	3.0	358	0.7	-81.7
Colón 4	398	771	1.2	755	1.5	-2.1
El Fangal 1	409	1,310	2.0	187	0.4	-85.7
El Fangal 2	408	1,028	1.6	239	0.5	-76.8
El Fangal 3	402	1,170	1.8	353	0.7	-69.8
Escatrón 3	818	3,359	5.2	1,129	2.2	-66.4
Escatrón Peaker	283	82	0.1	18	0.0	-78.3
Escombreras 6	831	1,161	1.8	1,111	2.2	-4.3
Málaga 1 CC	421	1,401	2.2	2,068	4.1	47.6
Palos 1	401	2,022	3.1	1,124	2.2	-44.4
Palos 2	396	1,944	3.0	887	1.7	-54.4
Palos 3	398	1,719	2.7	894	1.8	-48.0
Plana del Vent 1	412	213	0.3	801	1.6	276.3
Plana del Vent 2	421	188	0.3	838	1.7	345.1
Puentes García Rodríguez 5	849	694	1.1	432	0.9	-37.8
Puerto de Barcelona 1	447	678	1.0	1,140	2.2	68.1
Puerto de Barcelona 2	445	289	0.4	886	1.7	206.8
Sabón 3	389	1,497	2.3	1,872	3.7	25.1
Sagunto 1	417	2,127	3.3	1,569	3.1	-26.2
Sagunto 2	420	2,255	3.5	1,238	2.4	-45.1
Sagunto 3	419	2,119	3.3	1,496	2.9	-29.4
San Roque 1	397	1,109	1.7	1,654	3.3	49.1
San Roque 2	402	836	1.3	751	1.5	-10.1
Santurce 4	403	650	1.0	178	0.4	-72.7
Soto de la Ribera 4	432	1,418	2.2	1,379	2.7	-2.7
Soto de la Ribera 5	434	359	0.6	438	0.9	21.9
Tarragona Endesa	400	1,079	1.7	353	0.7	-67.3
Tarragona Power	424	1,712	2.7	1,414	2.8	-17.4
Total combined cycle	**25,269**	**64,604**	**100.0**	**50,734**	**100.0**	**-21.5**

Utilisation and availability of combined cycle power stations

Power station	Power MW	Production GWh	Hours in operation	Utilisation coefficients(%)		Non-Availability(%)		Availability
				Available (1)	In No. of hours connected to grid(2)	Periodic revision	Breakdowns	
Aceca 3	400	909	3,437	31.0	66.1	15.9	0.3	83.8
Aceca 4	374	2,444	7,856	77.2	83.2	1.4	1.9	96.7
Algeciras 3 CC	831	1,754	4,240	26.3	49.8	2.7	5.5	91.7
Amorebieta	749	1,029	2,321	15.8	59.2	0.4	0.0	99.6
Arcos 1	396	121	439	3.6	69.7	3.2	0.8	96.0
Arcos 2	379	18	70	0.7	69.6	18.6	0.6	80.9
Arcos 3	844	1,094	3,118	20.4	41.6	25.5	1.8	72.7
Arrúbal 1	402	424	1,321	12.2	79.7	1.4	0.2	98.5
Arrúbal 2	397	575	1,840	17.0	78.7	2.5	0.2	97.4
Bahia Bizcaya	800	2,283	4,463	46.1	63.9	24.9	4.5	70.6
Besós 3	412	655	3,231	18.3	49.2	0.0	0.5	99.5
Besós 4	407	1,715	5,872	50.2	71.8	2.5	1.6	95.9
Besós 5	873	1,786	4,619	28.5	44.3	13.4	4.6	82.0
Campo de Gibraltar 1	393	1,467	4,791	43.1	78.0	0.0	1.1	98.9
Campo de Gibraltar 2	388	1,445	4,774	73.4	78.0	14.6	27.4	57.9
Cartagena 1	425	1,422	4,785	39.3	70.0	1.6	1.1	97.3
Cartagena 2	425	1,030	3,545	28.3	68.5	1.6	0.5	98.0
Cartagena 3	419	1,193	3,951	33.0	72.0	1.6	0.1	98.3
Castejón 1	429	530	2,330	14.2	53.0	0.0	0.9	99.1
Castejón 2	378	204	799	7.1	67.6	12.4	0.2	87.4
Castejón 3	426	488	2,133	14.4	53.6	8.7	0.6	90.7
Castellón 3	800	169	514	2.8	41.1	15.1	0.0	84.9
Castellón 4	854	2,419	6,551	36.6	43.3	10.3	1.4	88.3
Castelnou	798	358	1,188	5.2	37.8	0.7	0.7	98.6
Colón 4	398	755	3,580	22.9	53.0	4.9	0.2	94.8
El Fangal 1	409	187	610	5.3	75.0	0.8	0.0	99.2
El Fangal 2	408	239	824	7.0	71.0	4.0	0.1	95.9
El Fangal 3	402	353	1,213	10.1	72.4	0.8	0.2	99.1
Escatrón 3	818	1,129	2,874	17.6	48.0	1.8	8.6	89.7
Escatrón Peaker	283	18	263	0.7	23.9	1.5	1.7	96.8
Escombreras 6	831	1,111	3,370	16.9	39.7	5.2	4.4	90.5
Málaga 1 CC	421	2,068	6,822	57.3	72.0	1.0	1.1	97.9
Palos 1	401	1,124	3,741	36.5	74.9	12.0	0.4	87.6
Palos 2	396	887	2,837	25.9	79.0	0.7	0.4	98.9
Palos 3	398	894	2,842	26.1	79.1	1.8	0.0	98.2
Plana del Vent 1	412	801	2,677	24.3	72.7	1.4	7.3	91.4
Plana del Vent 2	421	838	2,785	23.5	71.5	0.0	3.4	96.6
Puentes García Rguez. 5	849	432	1,845	6.7	27.6	12.0	1.6	86.4
Puerto de Barcelona 1	447	1,140	3,550	32.3	71.8	9.0	1.0	90.0
Puerto de Barcelona 2	445	886	2,712	25.8	73.5	10.9	0.8	88.3
Sabón 3	389	1,872	5,625	56.6	85.6	1.4	1.4	97.2

(continued on next page →)

Utilisation and availability of combined cycle power stations

Power station	Power MW	Production GWh	Hours in operation	Utilisation coefficients(%)		Non-Availability(%)		Availability
				Available(1)	In No. of hours connected to grid(2)	Periodic revision	Breakdowns	
(→ continued)								
Sagunto 1	417	1,569	4,962	43.2	75.8	0.0	0.7	99.3
Sagunto 2	420	1,238	4,028	37.2	73.2	9.2	0.2	90.5
Sagunto 3	419	1,496	4,767	46.6	75.0	9.0	3.6	87.5
San Roque 1	397	1,654	5,751	49.0	72.4	1.1	2.0	97.0
San Roque 2	402	751	3,884	22.1	48.1	1.6	1.9	96.5
Santurce 4	403	178	740	5.3	59.6	5.3	0.0	94.6
Soto de la Ribera 4	432	1,379	5,760	36.9	55.4	0.0	1.3	98.7
Soto de la Ribera 5	434	438	1,936	11.5	52.2	0.0	0.2	99.8
Tarragona Endesa	400	353	1,348	13.1	65.5	18.4	4.5	77.1
Tarragona Power	424	1,414	5,322	40.8	62.6	3.6	3.1	93.3
Total	**25,269**	**50,734**	**3,256**	**25.1**	**61.7**	**6.6**	**2.3**	**91.1**

(1) This is the coefficient between the real production and the available production or maximum production that the power station can reach operating at nominal power during the hours it is available.
(2) This is the coefficient between the real production and the total that the power station could have reached operating at nominal power in the set of hours in which it has been connected to the grid (producing).

Production at generator terminals in nuclear power stations

Power station	Power MW	2010 GWh	2010 %	2011 GWh	2011 %	%11/10
Almaraz I	1,035	8,168	13.2	7,762	13.4	-5.0
Almaraz II	983	7,292	11.8	8,095	14.0	11.0
Ascó I	1,028	8,354	13.5	6,988	12.1	-16.4
Ascó II	1,027	7,680	12.4	7,514	13.0	-2.2
Cofrentes	1,085	9,549	15.4	7,901	13.7	-17.3
Garoña	466	3,830	6.2	3,742	6.5	-2.3
Trillo I	1,066	8,243	13.3	8,383	14.5	1.7
Vandellós II	1,087	8,875	14.3	7,347	12.7	-17.2
Total	**7,777**	**61,990**	**100.0**	**57,731**	**100.0**	**-6.9**

Utilisation and availability of nuclear power stations

Power station	Power MW	Production GWh	Hours in operation	Utilisation coefficients(%) Available(1)	Utilisation coefficients(%) In No. of hours connected to grid(2)	Non-Availability(%) Periodic revision	Non-Availability(%) Breakdowns	Availability
Almaraz I	1,035	7,762	7,815	96.0	95.9	10.5	0.3	89.2
Almaraz II	983	8,095	7,992	100.0	100.0	6.8	2.1	91.0
Ascó I	1,028	6,988	6,947	98.2	97.8	20.5	0.4	79.0
Ascó II	1,027	7,514	7,559	98.2	96.8	13.4	1.5	85.1
Cofrentes	1,085	7,901	7,570	96.5	96.2	13.4	0.4	86.2
Garoña	466	3,742	8,102	99.3	99.1	7.1	0.6	92.3
Trillo I	1,066	8,383	7,943	98.7	99.0	7.7	1.4	91.0
Vandellós II	1,087	7,347	6,953	96.6	97.2	18.3	1.8	79.9
Total	**7,777**	**57,731**	**7,569**	**98.3**	**98.1**	**12.7**	**1.1**	**86.2**

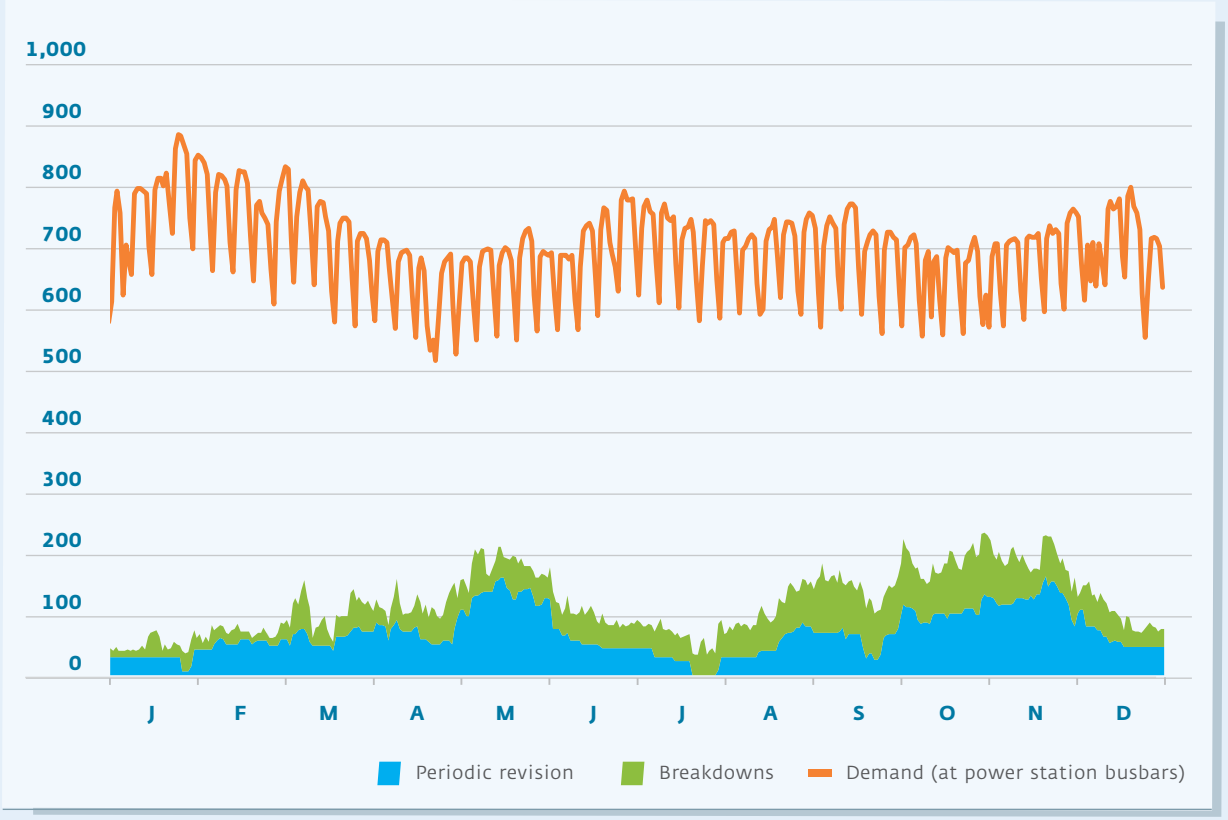
(1) This is the coefficient between the real production and the available production or maximum production that the power station can reach operating at nominal power during the hours it is available.
(2) This is the coefficient between the real production and the total that the power station could have reached operating at nominal power in the set of hours in which it has been connected to the grid (producing).

Utilisation and availability of thermal power stations (%)

	Utilisation (%)		Availability (%)	
	2010	2011	2010	2011
Nuclear	98.7	98.3	92.1	86.2
Coal (1)	24.3	45.6	91.2	93.0
Fuel/gas	10.7	0.0	85.6	49.3
Combined cycle	31.9	25.1	91.6	91.1
Thermal total	**40.2**	**41.8**	**91.3**	**89.1**

(1) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the guarantee of supply.

Comparison of daily demand at power station busbars with the daily non-availability of the thermal power stations (GWh)

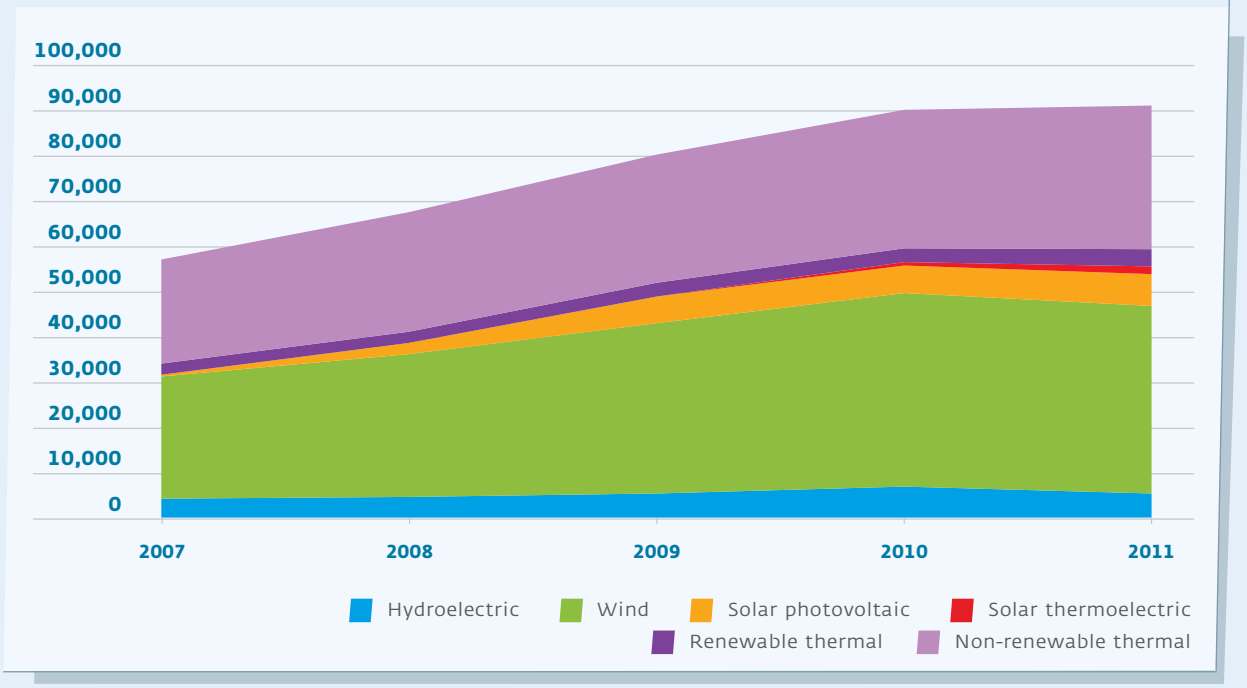


04

Special **Regime**

PENINSULAR SYSTEM

Evolution of the energy acquired from special regime (GWh)

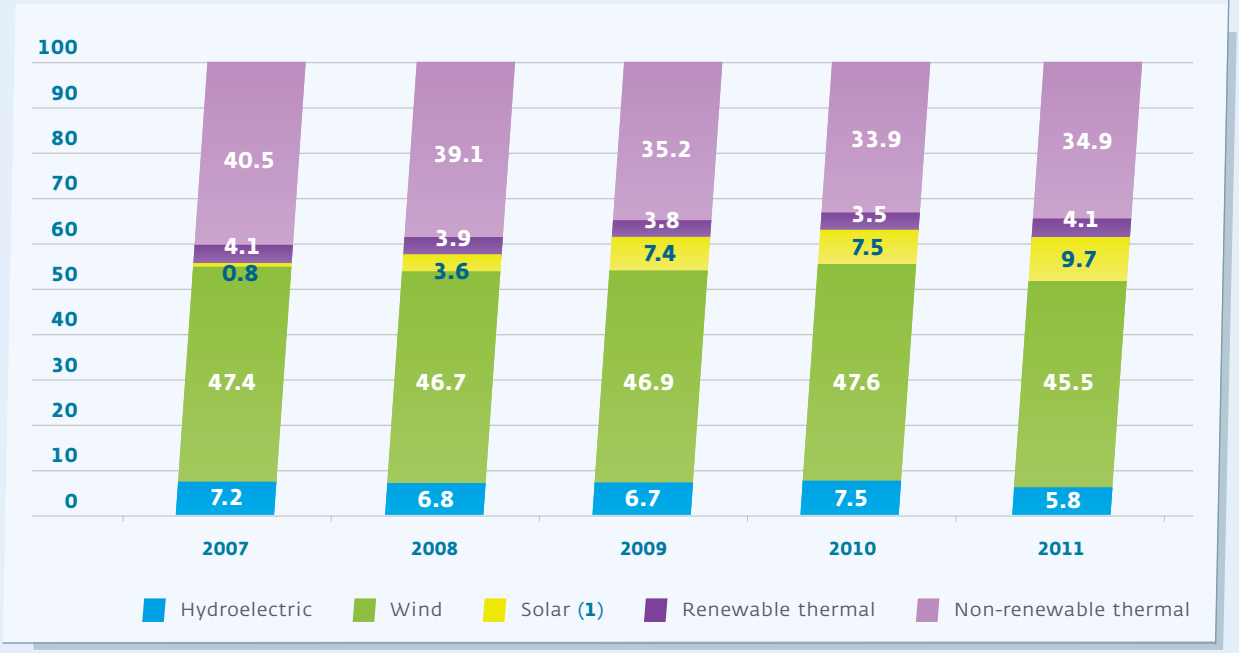


Structure and evolution of the energy acquired from special regime by technology (GWh)

	2007	2008	2009	2010	2011	%11/10
Renewables	**34,220**	**41,469**	**52,345**	**60,036**	**59,777**	**-0.4**
Hydroelectric	**4,125**	**4,638**	**5,454**	**6,824**	**5,283**	**-22.6**
Wind	**27,249**	**31,758**	**37,889**	**43,208**	**41,799**	**-3.3**
Other renewables	**2,846**	**5,073**	**9,003**	**10,003**	**12,695**	**26.9**
Biogas	730	713	670	709	767	8.1
Biomass	1,646	1,938	2,375	2,463	3,025	22.8
Solar photovoltaic	463	2,406	5,829	6,140	7,081	15.3
Solar thermoelectric	8	15	130	692	1,823	163.6
Non renewables	**23,328**	**26,576**	**28,466**	**30,789**	**32,037**	**4.1**
Residual heat	50	31	139	97	107	10.0
Fuel, diesel and liquified petroleum gases	2,426	2,688	2,817	2,584	2,428	-6.0
Natural gas	18,113	21,109	22,790	24,974	26,566	6.4
Mining subproducts (1)	1,380	1,322	1,262	1,691	1,602	-5.3
Solid urban waste	1,358	1,426	1,458	1,442	1,334	-7.5
Total	**57,548**	**68,045**	**80,811**	**90,825**	**91,815**	**1.1**

(1) Includes non-commercial products from mining exploitation, coal, residual gas and refinery gas.
Provisional data.

Structure of the energy acquired from special regime (%)



(1) Includes solar photovoltaic and thermo electric.

Structure and evolution of special regime installed power by technology (MW)

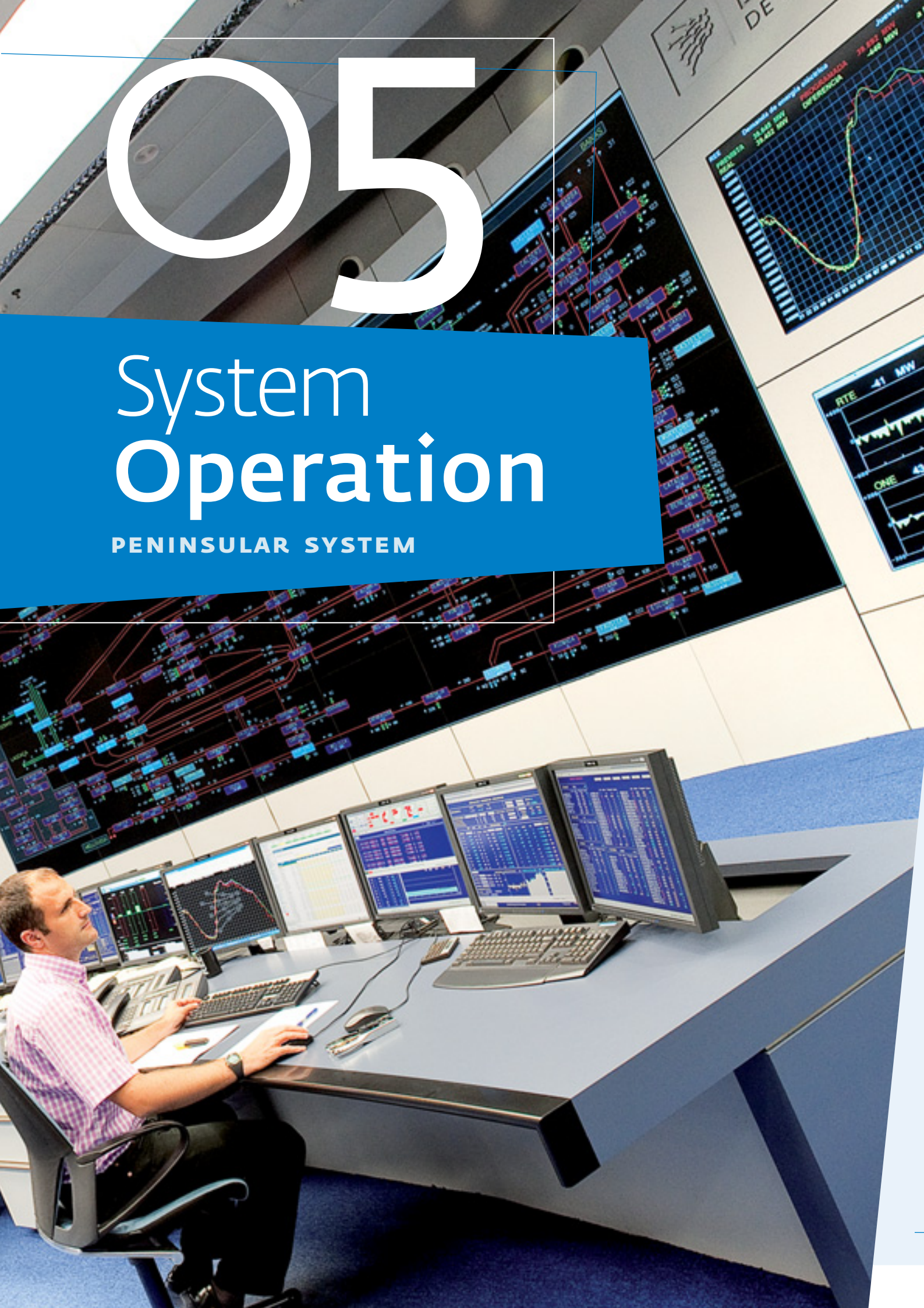
	2007	2008	2009	2010	2011	%11/10
Renewables	**16,573**	**21,814**	**24,933**	**26,688**	**29,085**	**9.0**
Hydroelectric	**1,871**	**1,979**	**2,022**	**2,035**	**2,041**	**0.3**
Wind	**13,529**	**15,977**	**18,712**	**19,710**	**21,091**	**7.0**
Other renewables	**1,173**	**3,858**	**4,199**	**4,942**	**5,954**	**20.5**
Biogas	155	167	183	198	208	5.1
Biomass	395	422	535	555	650	17.2
Solar photovoltaic	612	3,207	3,249	3,657	4,047	10.7
Solar thermoelectric	11	61	232	532	1,049	97.1
Non renewables	**6,543**	**6,803**	**7,024**	**7,187**	**7,282**	**1.3**
Residual heat	67	67	68	68	68	0.0
Fuel, diesel and liquified petroleum gases	966	966	938	916	878	-4.1
Natural gas	4,924	5,185	5,449	5,634	5,797	2.9
Mining subproducts (1)	350	350	335	335	332	-0.9
Solid urban waste	234	234	234	234	208	-11.3
Total	**23,115**	**28,618**	**31,957**	**33,875**	**36,367**	**7.4**

(1) Includes non-commercial products from mining exploitation, coal, residual gas and refinery gas.
Provisional data.

05

System **Operation**

PENINSULAR SYSTEM

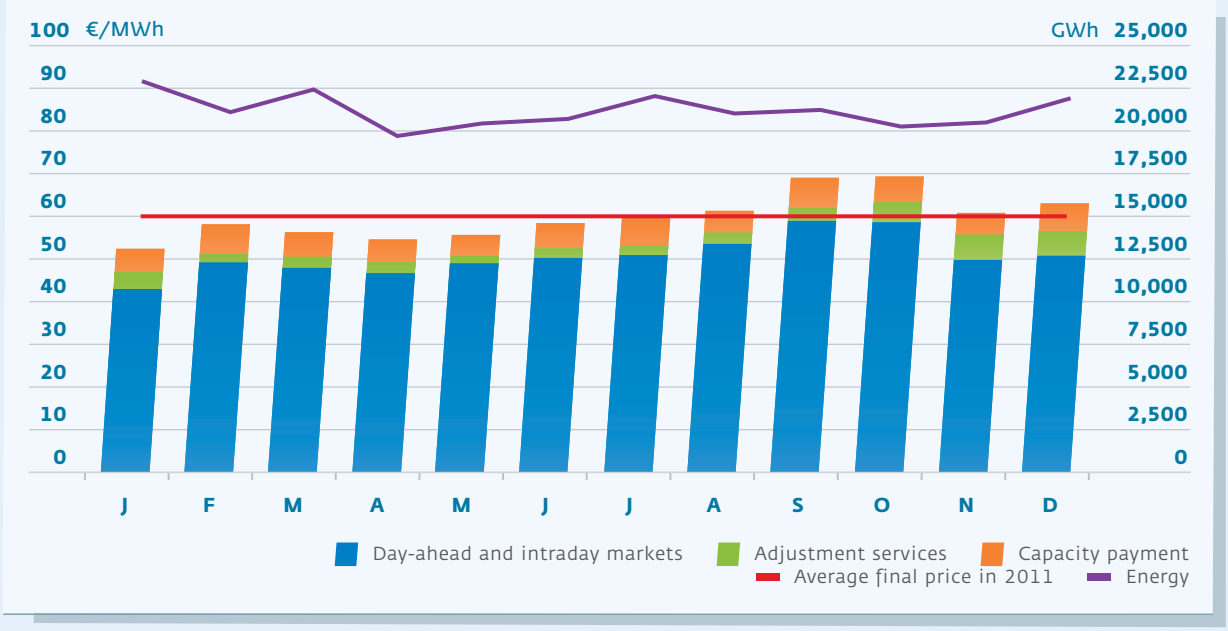


National demand (last resort supply + free contracting). Components of the average final price (€/MWh)

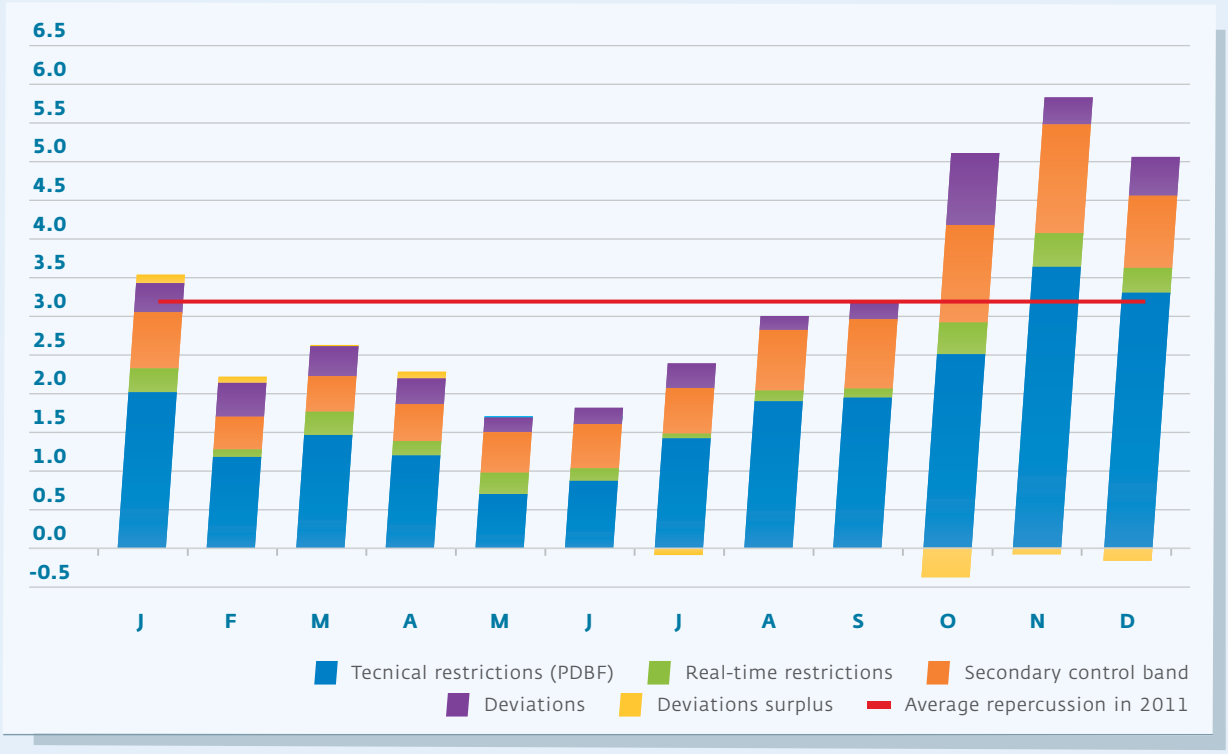
	Jan	Feb	Mar	Abr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	%11/10
Day-ahead market	43.20	49.01	47.63	46.21	49.58	50.63	51.47	54.18	59.55	58.75	50.10	51.46	50.91	32.4
Intraday market	-0.05	-0.03	-0.05	-0.01	-0.04	-0.05	-0.05	-0.08	-0.05	-0.03	-0.11	-0.15	-0.06	159.6
System adjustment services	3.56	2.24	2.71	2.29	1.71	1.82	2.29	2.98	3.28	4.81	5.74	4.95	3.20	-14.8
Tecnical restrictions (PDBF)	2.02	1.19	1.48	1.18	0.68	0.85	1.42	1.87	1.94	2.51	3.66	3.32	1.85	-19.3
Real-time restrictions	0.30	0.10	0.29	0.17	0.28	0.18	0.06	0.15	0.11	0.41	0.46	0.33	0.24	-8.8
Secondary control band	0.74	0.45	0.44	0.49	0.55	0.59	0.61	0.77	0.91	1.32	1.36	0.90	0.76	9.0
Deviations	0.33	0.43	0.47	0.38	0.19	0.20	0.29	0.22	0.30	0.92	0.34	0.54	0.38	0.8
Deviations surplus	0.17	0.07	0.03	0.07	0.01	0.00	-0.09	-0.03	0.02	-0.35	-0.08	-0.14	-0.02	-118.9
Capacity payment	7.03	6.99	5.76	5.50	5.44	6.42	7.09	4.98	5.68	5.37	5.60	7.02	6.09	68.0
Final price 2011	53.74	58.21	56.05	53.99	56.69	58.82	60.80	62.06	68.46	68.90	61.33	63.28	60.15	31.3
Final price 2010	41.72	38.05	30.51	35.10	43.79	46.88	50.87	50.40	53.98	51.00	50.53	56.75	45.82	

Note: The prices are calculated using the latest settlements available from the System Operator.

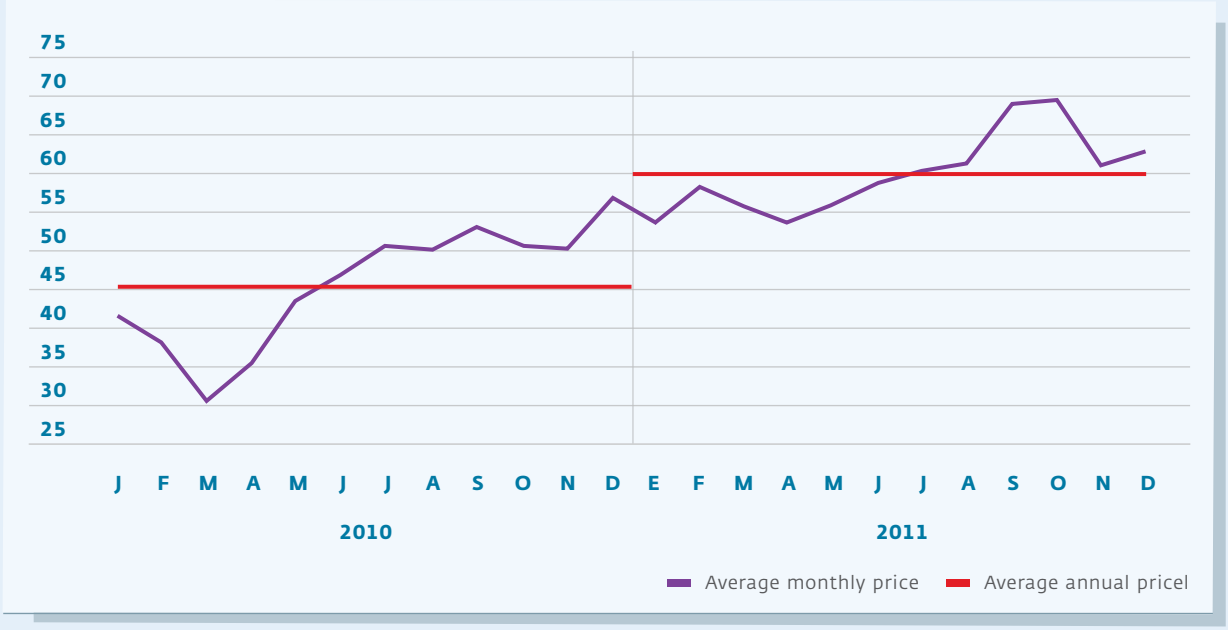
National demand (last resort supply + free contracting). Final prices and energy



Repercussion of the adjustment services in the average final price (€/MWh)



National demand (last resort supply + free contracting). Evolution of the average price (€/MWh)

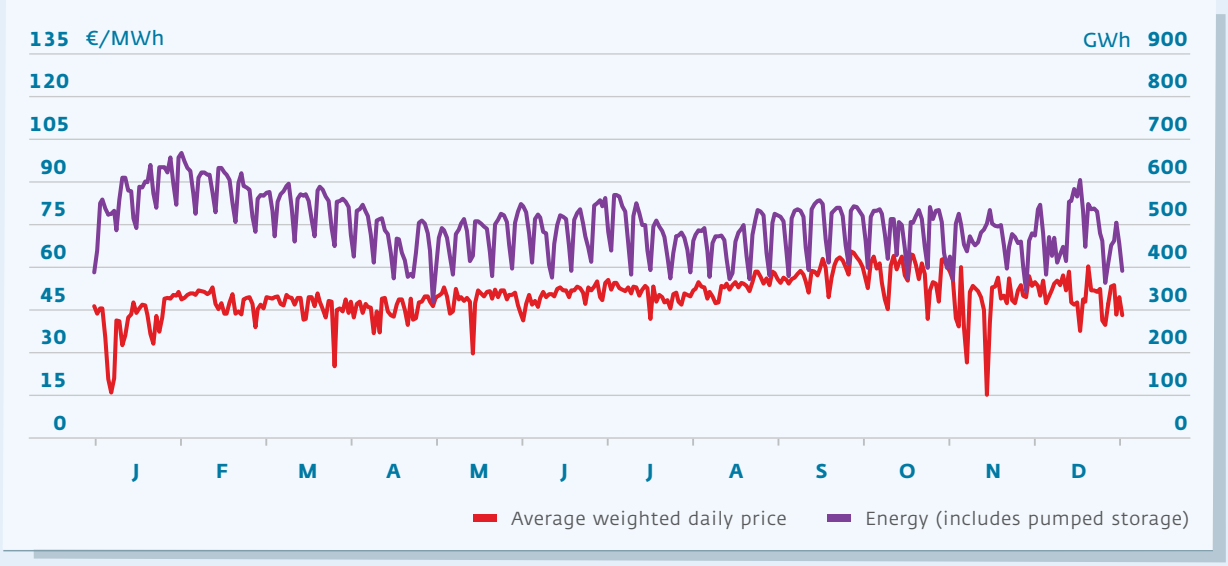


Energy and average weighted prices in the day-ahead market

	Energy (*) (GWh)	Price (€/MWh)		
		Hourly minimum	Monthly avg.	Hourly max.
January	17,515	0.00	42.72	91.01
February	16,496	20.00	48.86	64.50
March	16,957	4.90	47.50	60.90
April	14,053	2.00	46.17	55.25
May	14,469	0.50	49.48	58.17
June	14,701	11.27	50.56	59.50
July	14,889	26.07	51.63	61.68
August	14,360	22.07	54.24	68.21
September	15,066	28.07	59.88	75.36
October	14,936	4.90	58.77	82.50
November	13,907	0.00	49.33	91.01
December	14,940	1.00	51.17	89.90
Annual	**182,290**	**0.00**	**50.73**	**91.01**

(*) Includes pumped storage.

Day-ahead market. Average weighted daily price and energy



Energy and average weighted prices in the intraday market

	Negotiated volume (GWh)	(1)(2) Energy (GWh)	Average price (€/MWh)	
			Monthly avg.	Hourly max.
January	3,233	614	41.86	91.01
February	2,748	630	47.70	101.41
March	3,881	961	46.16	88.25
April	3,179	657	46.41	65.69
May	4,151	1,211	49.16	65.00
June	4,095	1,253	49.60	72.02
July	4,423	1,250	49.68	68.88
August	4,145	1,446	52.33	70.33
September	3,825	1,257	57.37	76.35
October	3,796	1,177	57.81	86.24
November	4,207	1,281	49.11	85.55
December	4,048	1,143	48.29	75.69
Annual	**45,731**	**12,880**	**49.79**	**101.41**

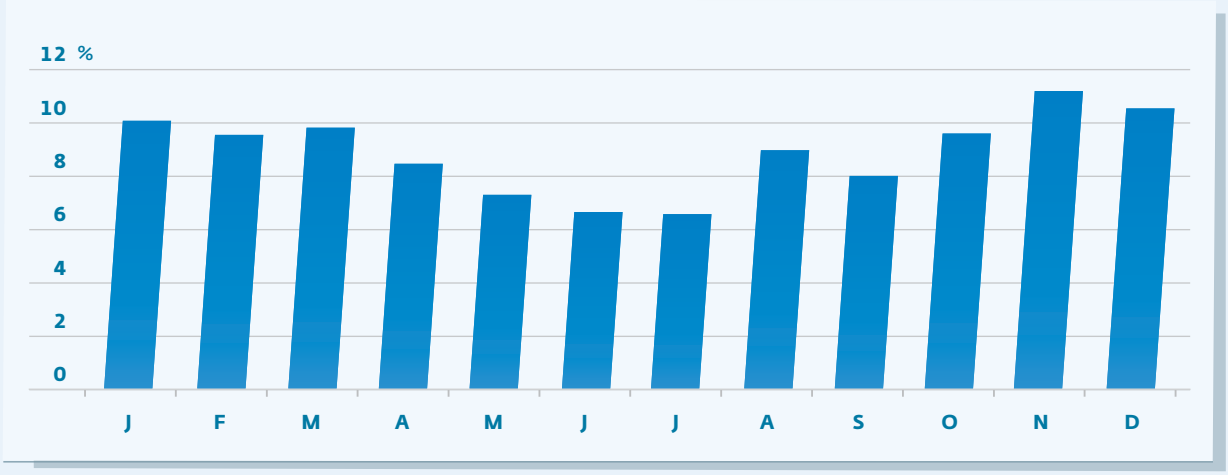
(1) Includes pumped storage.
(2) Negotiated net result.

Energy managed in the system adjustment services (GWh)

	2010		2011		% 11/10	
	Upward	Downward	Upward	Downward	Upward	Downward
Security of supply restrictions (1)	-	-	12,773	-	-	-
Technical restrictions (PDBF) (2)	12,509	447	9,998	228	-20.1	-48.9
Secondary control	1,165	1,724	1,213	1,514	4.1	-12.2
Tertiary control	2,726	2,983	2,694	2,591	-1.2	-13.1
Deviation management	2,198	2,675	1,775	2,046	-19.3	-23.5
Reat-time restrictions	887	901	657	509	-25.9	-43.5
Total energy managed	**28,214**		**35,999**		**27.6**	

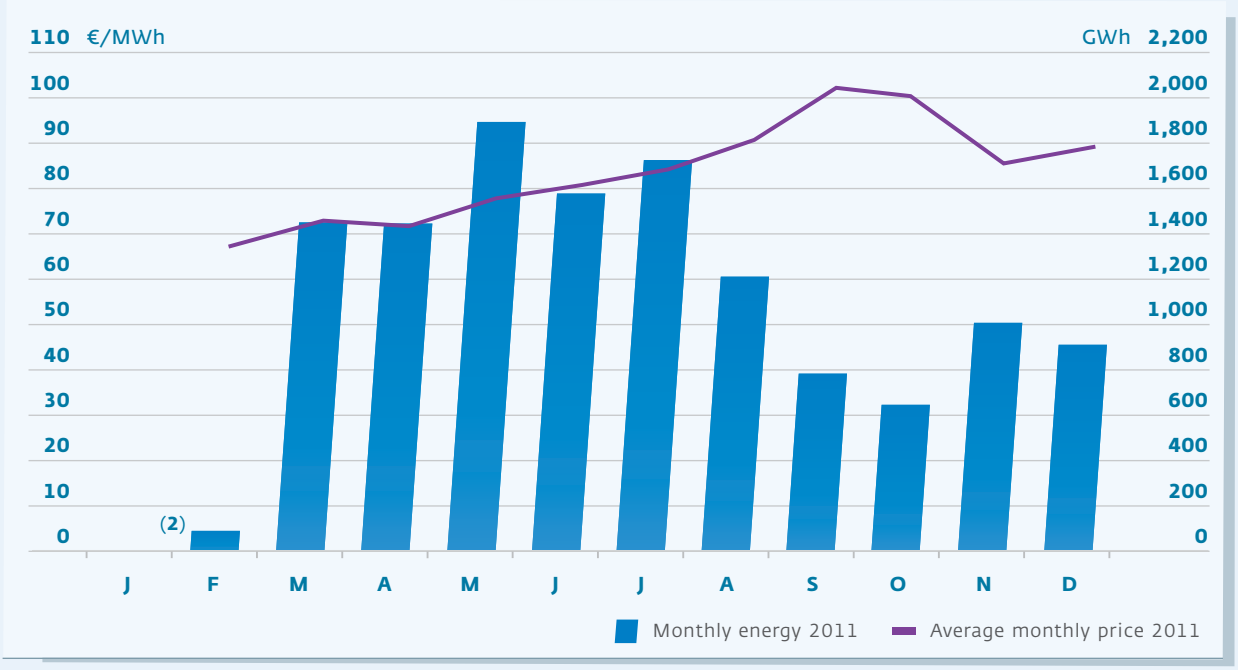
(1) Energy increased in phase 1 of the resolution of security of supply restrictions (Royal Decree 134/210 modified by RD 1221/2010) (P.O.3.10).
(2) Energy increased or reduced in phase 1 of the resolution of technical restrictions of the PDBF (P.O.3.2).

Energy managed in the peninsular system adjustment services with regard to demand (last resort supply + free contracting) (%)



Note: Does not include restrictions due to security of supply.

Resolution of security of supply restrictions (GWh) (1)

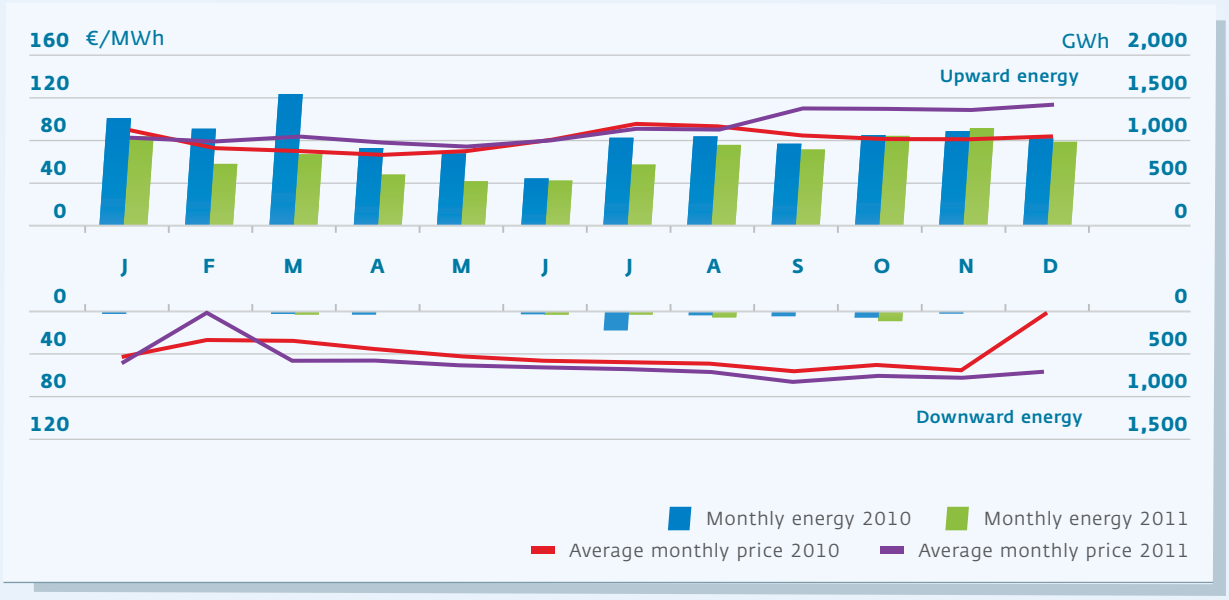


(1) Energy increased in phase 1 of the resolution of security of supply restrictions (Royal Decree 134/210 modified by RD 1221/2010) (P.O.3.10).
(2) Process initiated on 26/02/2011.

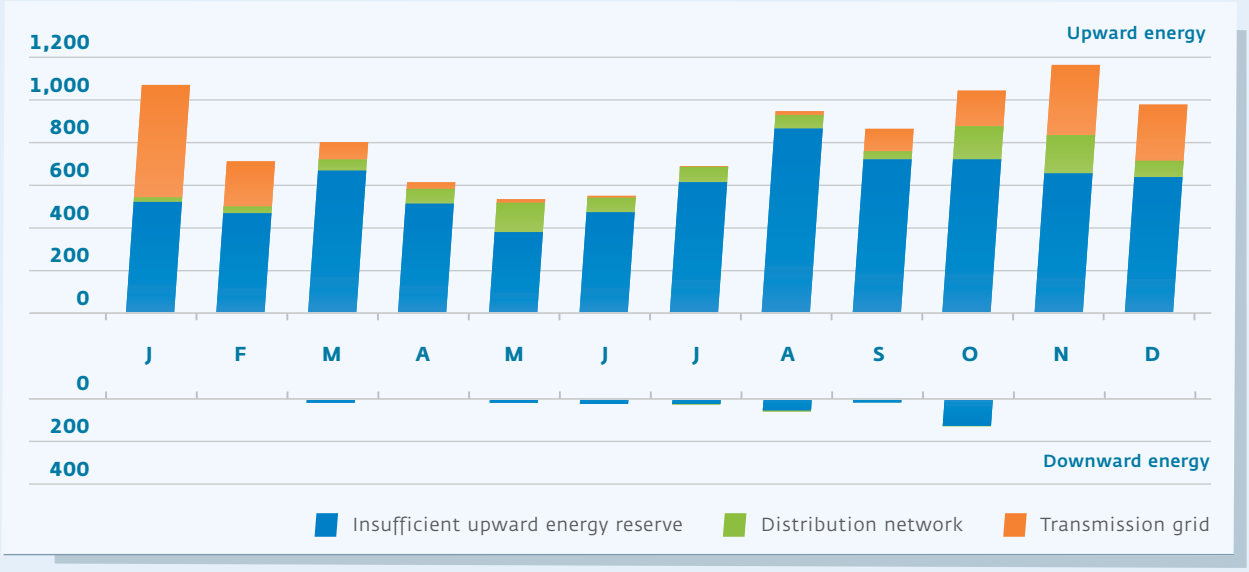
Resolution of technical restrictions (PBDF) (Phase I)

	Upward energy			Downward energy		
	Energy (GWh)	Price (€/MWh) Weighted average	Max.	Energy (GWh)	Price (€/MWh) Weighted average	Max.
January	1,066	83.76	143.5	0.2	50.36	55.0
February	716	82.10	196.0	0	-	-
March	804	84.88	137.8	5	47.55	56.3
April	610	80.83	207.9	0.2	47.13	48.3
May	526	73.05	126.4	3	51.08	53.1
June	561	80.16	128.9	14	52.66	59.5
July	702	92.58	164.1	18	53.56	61.7
August	940	91.13	124.6	53	55.34	60.5
September	871	106.28	161.3	4	63.64	75.4
October	1,050	106.75	148.5	130	61.40	76.8
November	1,168	106.28	162.3	0.2	60.15	76.5
December	986	114.43	255.7	1	55.34	55.7
Annual	**9,998**	**94.13**	**255.7**	**228**	**58.38**	**76.8**

Resolution of technical restrictions (PDBF). Average weighted prices and energies



Resolution of technical restrictions (PDBF). Breakdown by restriction type (GWh)

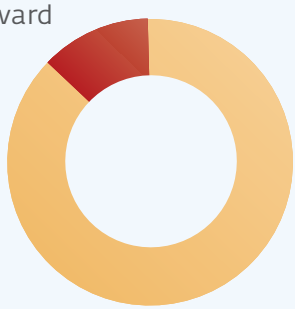


Resolution of technical restrictions (PDBF). Breakdown by technology. Annual total (%)

PHASE I Upward

87% Combined-cycle

13% Coal

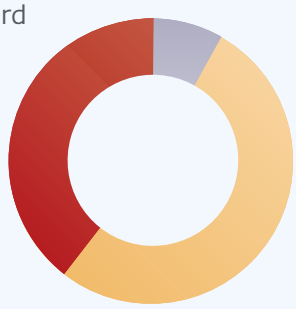


PHASE 2 Upward

58% Combined-cycle

34% Coal

8% Pumped turbine



PHASE I Downward

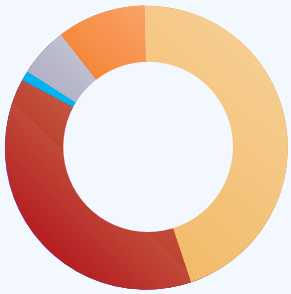
45% Combined-cycle

40% Coal

1% Hydroelectric

5% Pumped turbine

9% Special regime



PHASE 2 Downward

18% Combined-cycle

12% Coal

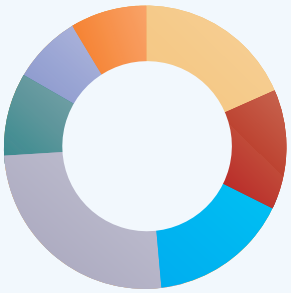
19% Hydroelectric

25% Pumped turbine

10% Pumped storage consumption

8% International exchanges

8% Special regime



Adjustment services market. Energy managed (1) (GWh)

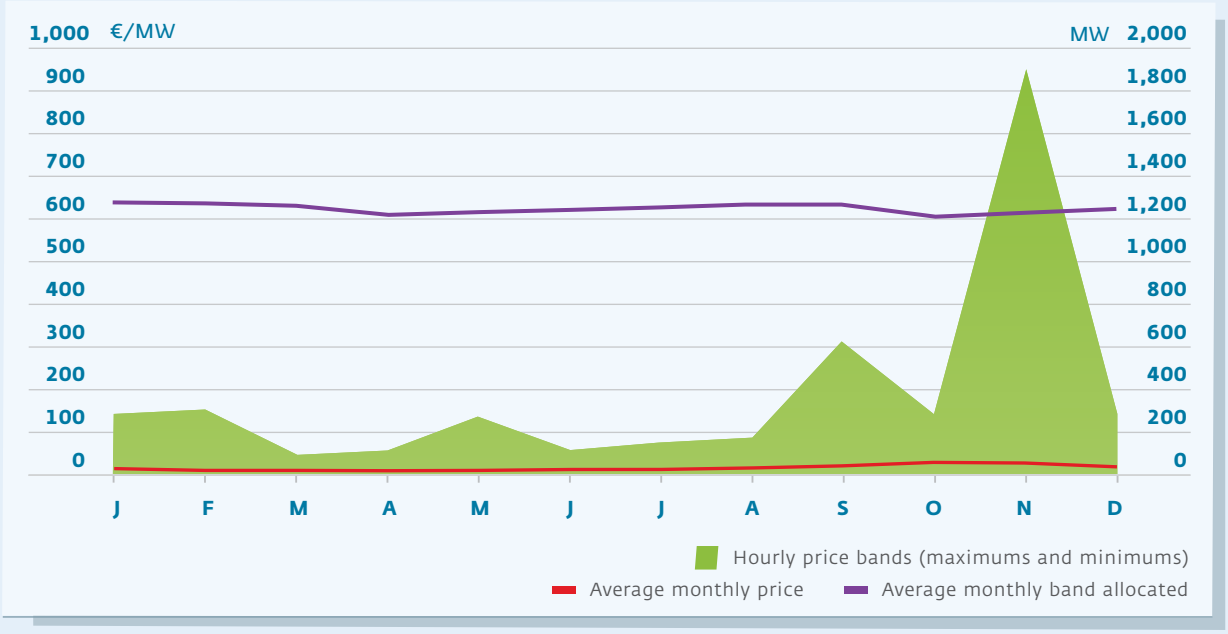
(1) Does not include restrictions due to security of supply nor PDBF techincal restrictions.

Secondary control

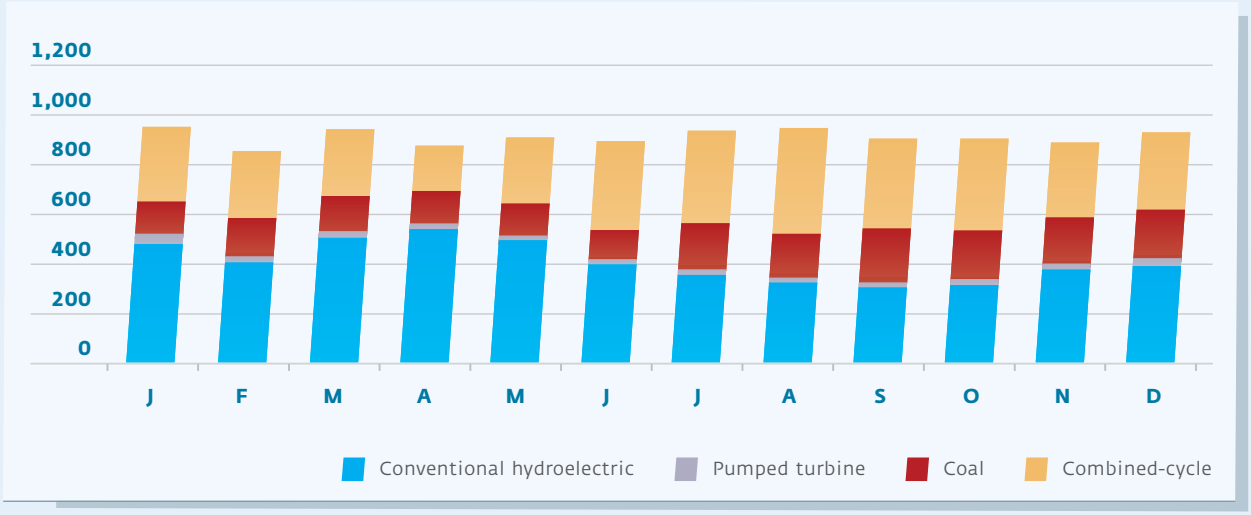
	Average band					Energy					
						Upward			Downward		
	Power (MW)			Price (€/MW)			Price (€/MWh)			Price (€/MWh)	
	Upward	Downward	Total	Weighted average	Max.	Energy (GWh)	Avg.(1)	Máx.	Energy (GWh)	Avg.(2)	Max.
January	736	540	1,276	16.10	140.00	86	42.86	95.00	153	26.64	81.00
February	728	543	1,271	9.55	145.56	76	49.69	180.05	151	34.87	57.88
March	723	536	1,259	9.02	46.93	132	48.07	107.78	130	27.25	150.00
April	698	511	1,209	9.70	56.00	115	47.43	76.08	100	26.07	53.03
May	703	515	1,218	10.87	128.54	90	51.46	72.74	147	32.93	180.00
June	715	523	1,238	12.32	60.00	91	52.68	73.85	129	34.82	62.00
July	711	532	1,243	13.29	79.13	79	51.70	78.63	136	34.36	100.00
August	725	527	1,252	16.03	90.20	100	55.98	85.00	116	38.50	77.71
September	727	525	1,253	19.25	307.90	93	56.69	85.00	126	41.92	80.00
October	697	515	1,212	26.97	130.60	105	57.71	98.15	109	39.35	150.00
November	716	524	1,240	28.41	947.70	123	53.74	180.32	105	33.28	80.00
December	715	526	1,241	18.76	114.90	124	50.87	140.00	114	30.66	72.34
Annual	**716**	**526**	**1,243**	**15.87**	**947.70**	**1,213**	**51.58**	**180.32**	**1,514**	**33.32**	**180.00**

(1) Average weighted sell price.
(2) Average weighted buy back price.

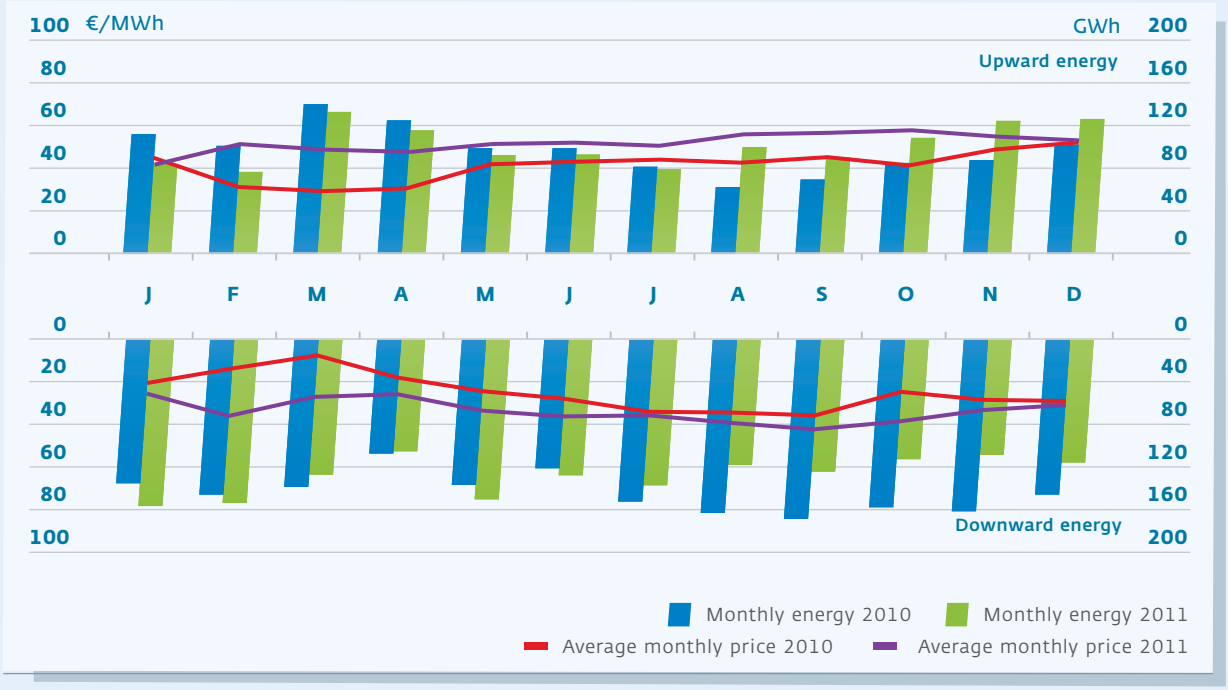
Secondary control band. Average weighted price and average band



Monthly total of allocated secondary control band. Breakdown by technology (GW)



Secondary control. Average weighted prices and energies.

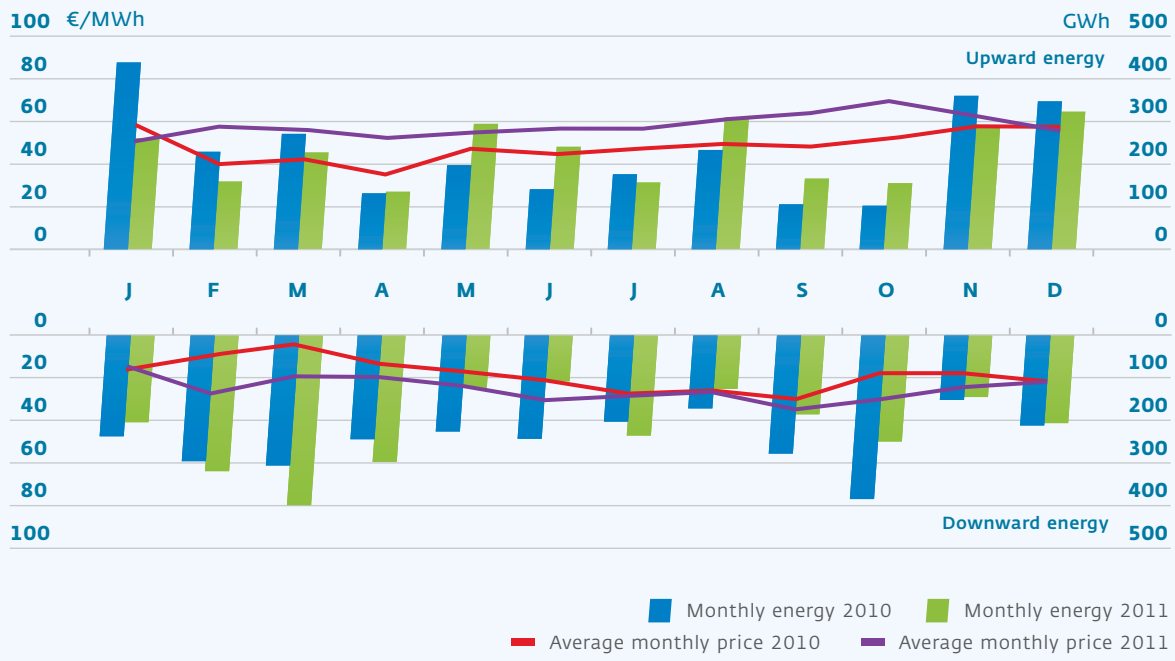


Tertiary control

	Upward energy			Downward energy		
	Energy(1) (GWh)	Price (€/MWh) Avg.(2)	Max.	Energy(1) (GWh)	Price (€/MWh) Avg.(3)	Max.
January	263	50.45	86.00	206	14.69	46.07
February	158	57.38	91.89	321	27.42	58.00
March	227	56.40	91.00	400	19.05	52.01
April	134	52.13	72.08	295	19.61	48.00
May	294	54.33	71.00	128	23.83	52.69
June	239	55.94	78.25	98	30.00	47.00
July	157	56.57	74.63	236	28.09	49.93
August	301	61.49	84.79	117	26.71	49.99
September	165	63.72	81.88	186	35.06	60.00
October	154	70.00	99.94	253	30.50	66.60
November	280	63.37	180.30	145	24.73	73.60
December	321	56.80	82.00	207	22.22	48.77
Annual	**2,694**	**57.97**	**180.30**	**2,591**	**24.46**	**73.60**

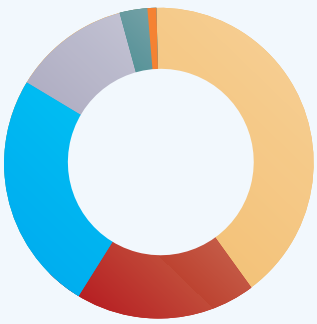
(1) Includes emergency tertiary control energy.
(2) Average weighted sell price.
(3) Average weighted buy back price.

Tertiary control. Average weighted prices and energies.



Tertiary control. Breakdown by technology. Annual total (%)

Upward energy



40% Combined-cycle

19% Coal

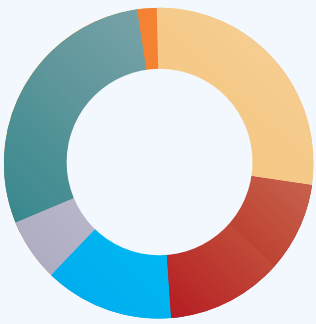
25% Hydroelectric

12% Pumped turbine

3% Pumped storage consumption

1% Special regime

Downward energy



27% Combined-cycleo

22% Coal

13% Hydroelectric

7% Pumped turbine

29% Pumped storage consumption

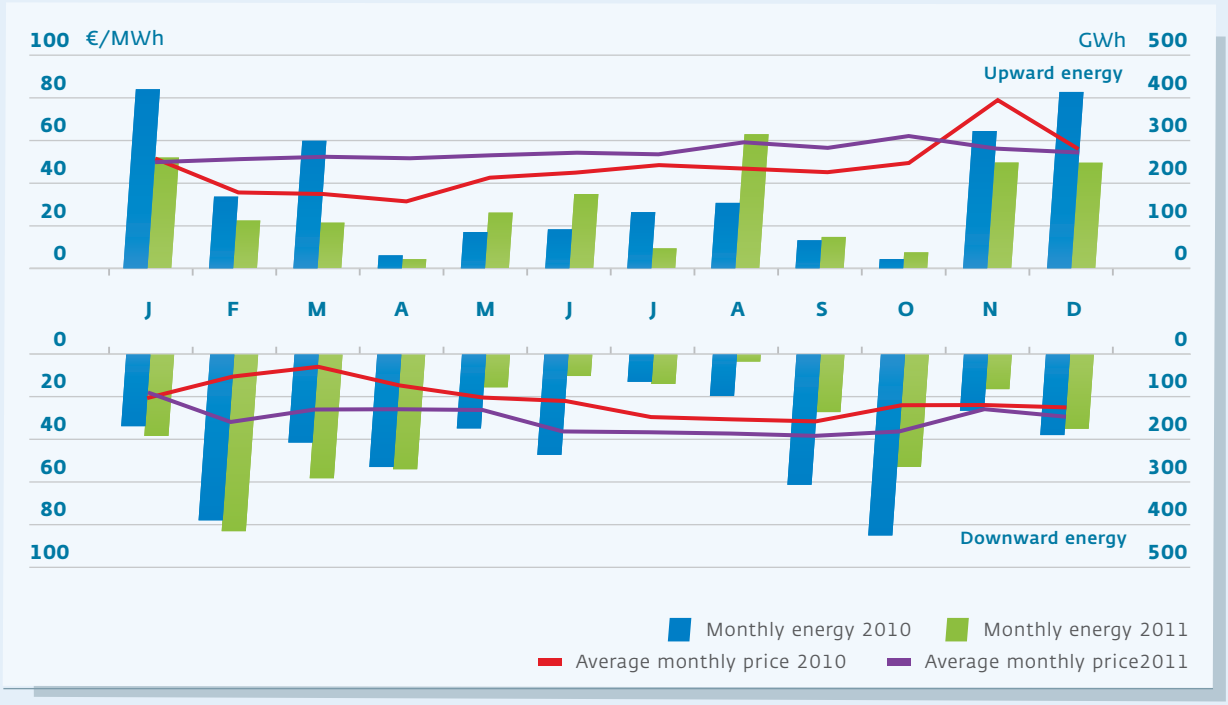
2% Special regime

Deviation management

	Upward energy			Downward energy		
	Energy (GWh)	Price (€/MWh) Avg.(1)	Max.	Energy (GWh)	Price (€/MWh) Avg.(2)	Max.
January	261	48.91	72.65	192	17.86	45.42
February	112	51.38	62.00	415	32.46	49.50
March	106	52.33	67.00	290	26.27	55.23
April	22	51.36	60.81	270	26.91	49.00
May	130	53.21	70.00	79	27.31	51.00
June	175	54.19	70.44	51	36.85	50.00
July	47	53.46	70.05	71	36.97	53.42
August	315	58.95	75.43	18	37.39	45.00
September	74	56.04	80.00	137	38.20	59.31
October	39	62.05	75.00	264	35.40	63.60
November	247	56.02	150.00	83	26.05	55.20
December	247	53.82	68.00	176	29.43	46.82
Annual	**1,775**	**54.30**	**150.00**	**2,046**	**29.83**	**63.60**

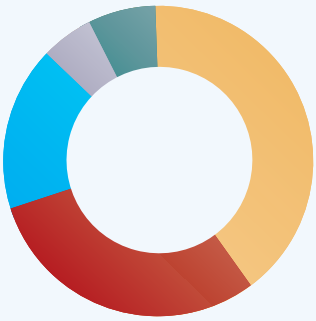
(**1**) Average weighted sell price.
(**2**) Average weighted buy back price.

Deviation management. Average weighted prices and energies.



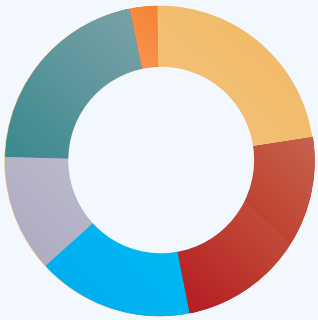
Deviation management. Breakdown by technology. Annual total (%)

Upward energy



- 40% Combined-cycle
- 30% Coal
- 17% Hydroelectric
- 6% Pumped turbine
- 7% Pumped storage consumption

Downward energy



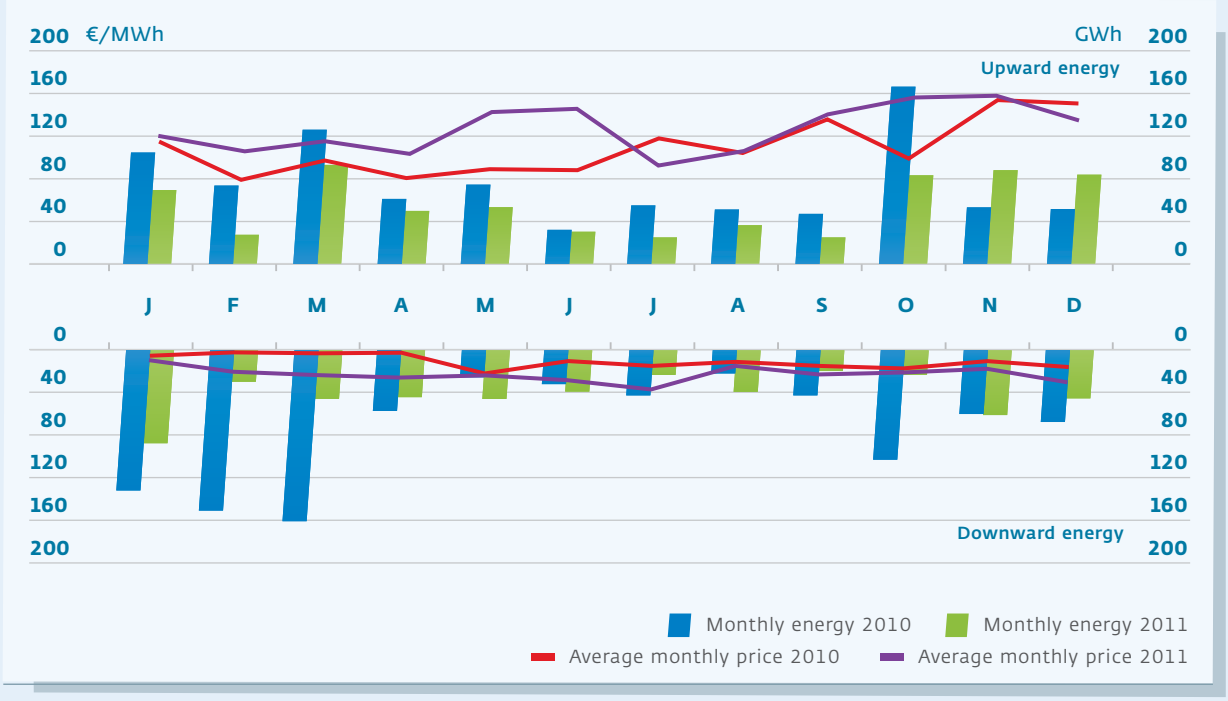
- 23% Combined-cycle
- 24% Coal
- 17% Hydroelectric
- 12% Pumped turbine
- 21% Pumped storage consumption
- 3% Special regime

Real-time restrictions

	Upward energy			Downward energy		
	Energy (GWh)	Price (€/MWh) Avg.(1)	Max.	Energy (GWh)	Price (€/MWh) Avg.(2)	Max.
January	69	120.16	317.33	88	11.51	49.53
February	27	105.18	264.77	29	20.21	48.88
March	92	112.63	319.22	46	24.35	42.51
April	49	102.84	261.39	45	27.14	44.57
May	53	141.66	598.20	46	27.38	47.55
June	30	144.25	300.00	39	27.72	50.58
July	24	92.35	209.00	24	37.42	53.91
August	36	104.86	380.14	39	19.17	53.99
September	25	139.27	259.68	20	28.43	64.06
October	83	154.82	311.81	26	24.28	66.00
November	88	156.92	935.74	62	18.69	55.25
December	82	134.59	426.31	46	31.61	80.90
Annual	**657**	**129.95**	**935.74**	**509**	**23.02**	**80.90**

(1) Average weighted sell price.
(2) Average weighted buy back price.

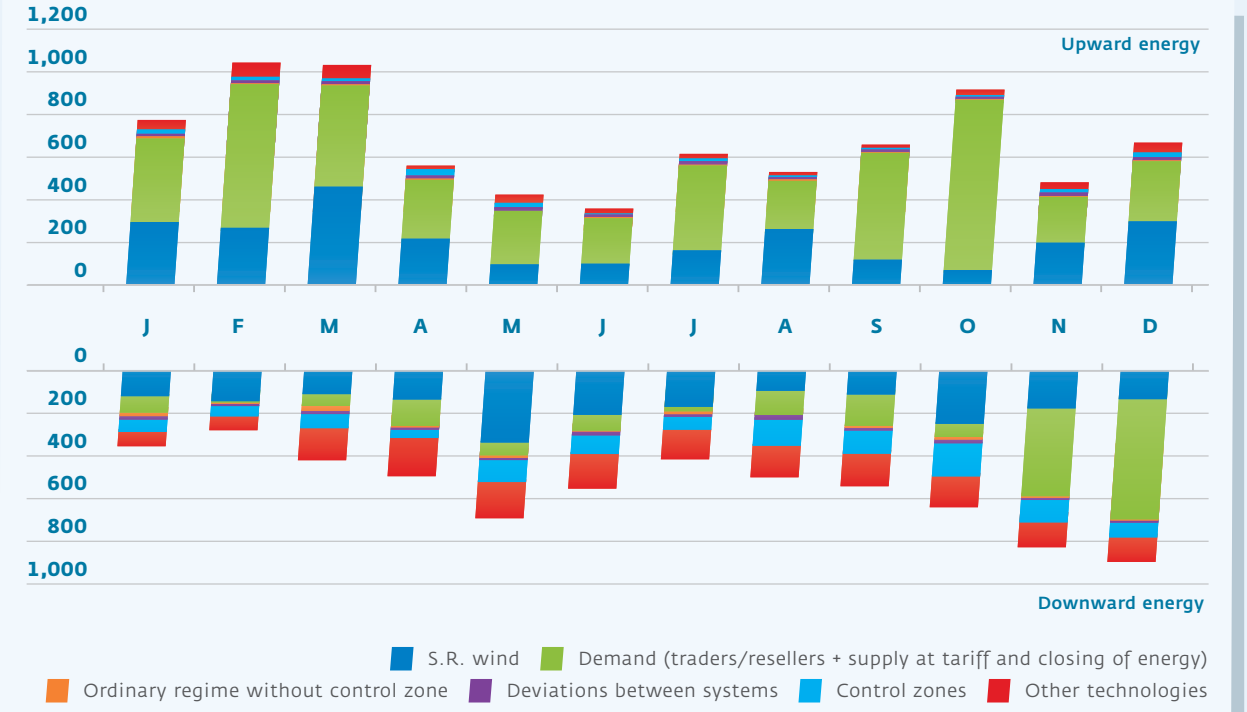
Real-time restrictions. Average weighted prices and energies.



Measured net deviations. Average monthly weighted prices and net energy of the balance markets

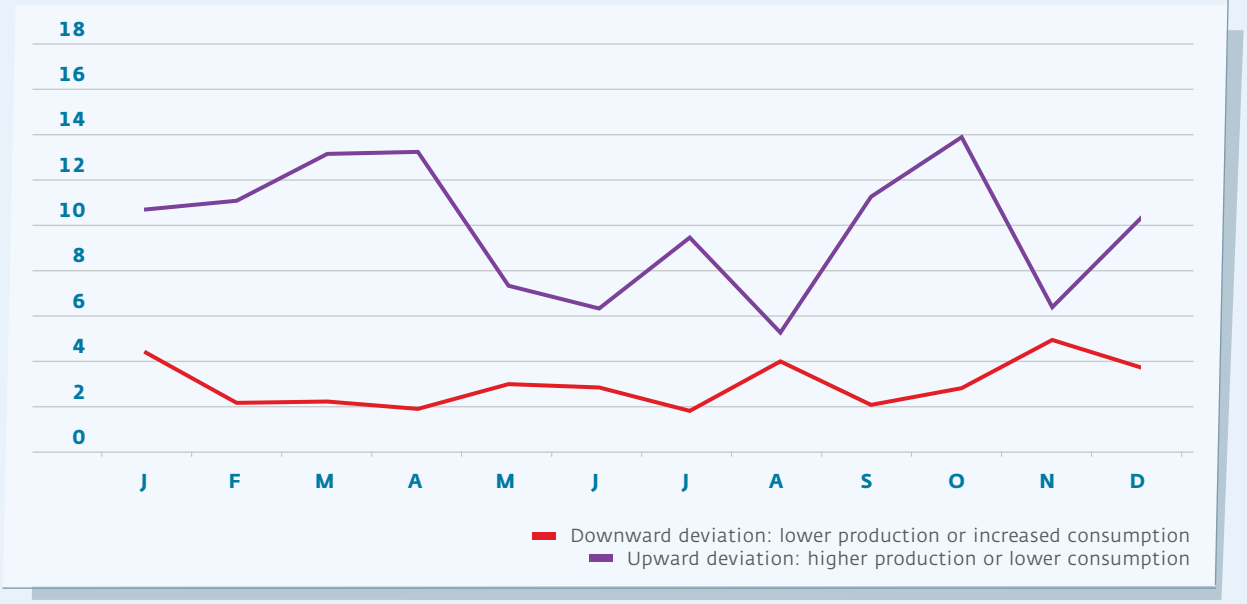
	Upward energy		Downward energy	
	Energy (GWh)	Price (€/MWh)	Energy (GWh)	Price (€/MWh)
January	774	30.32	355	45.67
February	1,037	36.76	281	50.24
March	1,026	33.33	419	48.98
April	559	31.98	494	47.41
May	425	41.43	694	51.96
June	360	43.55	551	52.89
July	613	41.21	419	52.68
August	531	48.17	499	57.60
September	656	47.03	542	60.60
October	911	43.33	641	60.33
November	484	41.88	827	53.41
December	664	39.49	896	53.84
Annual	**8,042**	**39.87**	**6,619**	**52.97**

Measured net deviations (GWh)

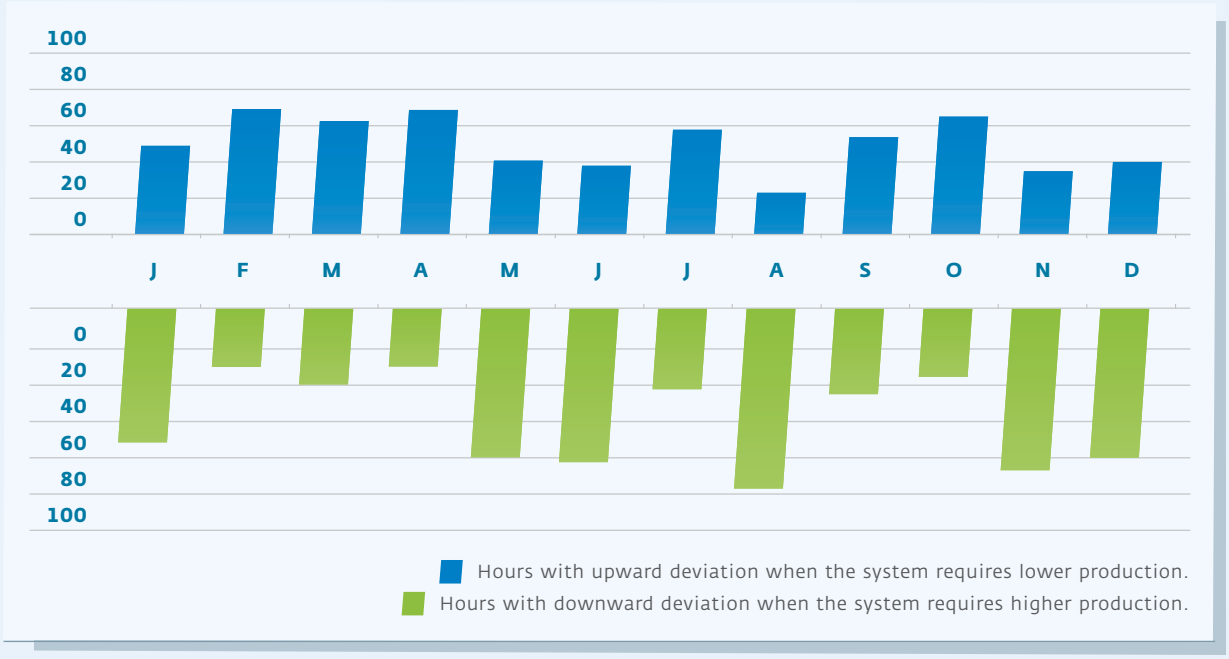


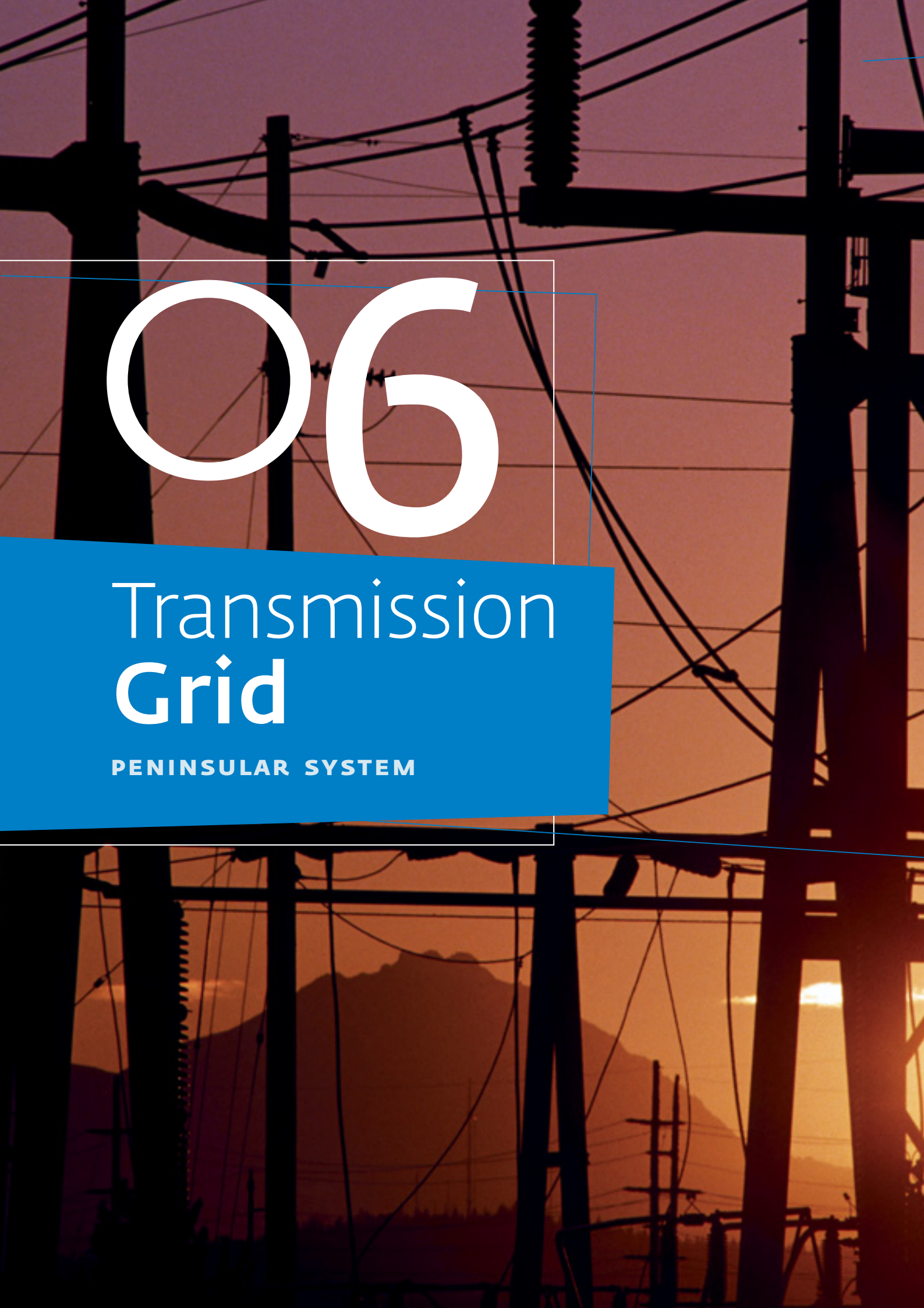
S.R.: Special regime.
Other technologies: Importation (without rights). Exportation (without rights). SR Hydroelectric, SR Solar, SR

Average cost of deviations (€/MWh)



Deviation hours against the system (%)

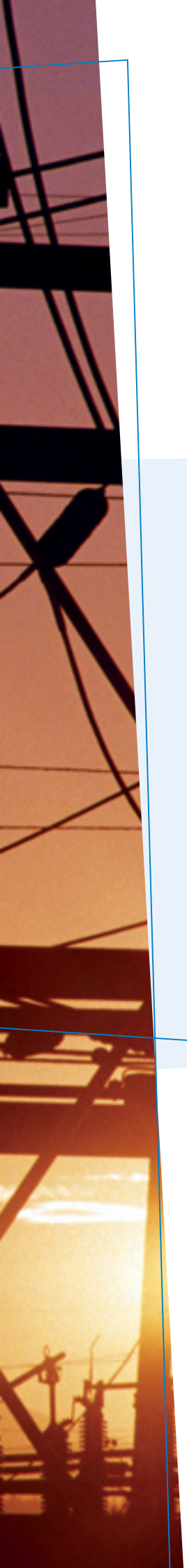




06

Transmission **Grid**

PENINSULAR SYSTEM



Evolution of the transmission system and transformer capacity

		2007	2008	2009	2010	2011
km of 400 kV circuit	Red Eléctrica	17,134	17,686	17,977	18,765	19,622
	Other companies	38	38	38	0	0
	Total	**17,172**	**17,724**	**18,015**	**18,765**	**19,622**
km of ≤ 220 kV circuit	Red Eléctrica	16,532	16,633	16,773	17,078	17,699
	Other companies	275	307	322	107	107
	Total	**16,807**	**16,940**	**17,095**	**17,185**	**17,806**
Transformer capacity (MVA)	Red Eléctrica	58,372	62,772	65,797	68,597	71,047(1)
	Other companies	800	800	800	0	0
	Total	**59,172**	**63,572**	**66,597**	**68,597**	**71,047**

(1) The 2011 data includes three transformers inventoried during this fiscal year and increases in capacity of 650 MVA.

400 kV transmission lines commissioned in 2011

Line	Company	No. of circuits	km	MVA*km
E/S Belinchón L/ Morata-Olmedilla	Red Eléctrica	2	6.9	16,848
E/S Carril L/ Asomada-Litoral	Red Eléctrica	2	2.8	5,172
E/S Carril L/ El Palmar-Litoral	Red Eléctrica	2	2.9	5,248
E/S Palo L/ Pesoz-Grado	Red Eléctrica	2	0.3	727
E/S Silleda L/ Cartelle-Puentes Gª. Rodríguez	Red Eléctrica	2	0.9	1,547
E/S Tabernas L/ Huéneja-Litoral	Red Eléctrica	1	1.3	2,395
E/S Udalla L/ Abanto-Aguayo	Red Eléctrica	1	1.9	3,517
L/ Aparecida-Tordesillas	Red Eléctrica	2	353.3	862,396
L/ Fuendetodos-Mezquita	Red Eléctrica	2	159.7	389,789
L/ Pesoz-Salas	Red Eléctrica	2	102.1	249,334
L/ Pesoz-Sanzo	Red Eléctrica	2	2.3	4,164
L/ Soto-Penagos	Red Eléctrica	1	182.8	308,085
L/ Vic-Bescanó (3 fase)	Red Eléctrica	1	39.9	97,474
Total			**857.2**	**1,946,696**

E/S substation; **L/** line

220 kV transmission lines commissioned in 2011

Line	Company	No. of circuits	km	MVA*km
E/S Amoeiro L/ Chantada-Castrelo	Red Eléctrica	2	0.2	35
E/S Arenas San Juan L/ La Paloma-Madridejos	Red Eléctrica	2	1.4	993
E/S Beniferri L/ Feria de Muestras-Torrente (S)	Red Eléctrica	2	3.1	1,561
E/S Bescanó L/ Vic-Juiá	Red Eléctrica	2	2.2	977
E/S Buenavista L/ Moraleja-Retamar (S)	Red Eléctrica	2	0.1	61
E/S Cartama L/ Alhaurín-Tajo	Red Eléctrica	1	1.6	735
E/S Cartama L/ Ramos-Casares	Red Eléctrica	2	2.6	1,155
E/S Cartama L/ Alhaurín-Montes	Red Eléctrica	2	19.4	19,336
E/S Haro L/ Miranda-La Guardia	Red Eléctrica	2	18.1	9,779
E/S Illora L/ Atarfe-Tajo	Red Eléctrica	2	2.8	1,239
E/S Illora L/Caparacena-Tajo	Red Eléctrica	2	2.3	1,031
E/S La Solana L/ Picón-Puertollano 1	Red Eléctrica	1	0.1	111
E/S La Solana L/ Picón-Puertollano 1 (S)	Red Eléctrica	1	0.1	40
E/S La Solana L/ Picón-Puertollano 2	Red Eléctrica	2	0.1	98
E/S La Solana L/ Picón-Puertollano 2 (S)	Red Eléctrica	1	0.1	28
E/S Montebello L/ El Cantalar-Jijona	Red Eléctrica	2	65.7	52,542
E/S Montebello L/ El Cantalar-Jijona (S)	Red Eléctrica	2	4.2	2,223
E/S Nueva Casares L/ Algeciras-Los Ramos	Red Eléctrica	2	12.4	9,904
E/S Palencia L/ Corcos-Villalbilla	Red Eléctrica	2	7.8	6,950
E/S Palencia L/ Mudarra-Vallejera	Red Eléctrica	2	12.9	6,303
E/S Santiz L/ Villalcampo-Villamayor	Red Eléctrica	2	1.3	429
L/ Alvarado-Vaguadas	Red Eléctrica	1	18.1	4,719
L/ Alvarado-Vaguadas (S)	Red Eléctrica	1	0.1	45
L/ Arkale-Irún	Red Eléctrica	1	1.0	557
L/ Baró de Viver-Trinitat (S)	Red Eléctrica	1	0.9	423
L/ Benicull-Bernat (Alcira)	Red Eléctrica	2	14.3	11,433
L/ Benicull-Bernat (Alcira) (S)	Red Eléctrica	2	0.4	206
L/ Beniferri-Fuente de San Luis (S)	Red Eléctrica	1	13.0	6,752
L/ Fuencarral-El Pilar (S)	Red Eléctrica	2	17.7	6,630
L/ Jalón-Los Vientos	Red Eléctrica	2	60.8	36,464
L/ La Solana-Costanilla (S)	Red Eléctrica	1	0.1	12
L/ Mérida-Vaguadas	Red Eléctrica	1	57.3	14,886
L/ Mérida-Vaguadas (S)	Red Eléctrica	1	0.1	45
L/ Morvedre-Santa Ponsa (Morvedre a km 122)(SM) ± 250 kV	Red Eléctrica	2	236.0 (1)	94,400
L/ Morvedre-Santa Ponsa (Morvedre a km 122)(S) ± 250 kV	Red Eléctrica	2	8.0 (1)	3,200
L/ San Cayetano-Portodemouros	Red Eléctrica	1	26.8	9,839
L/ San Cayetano-Portodemouros (S)	Red Eléctrica	1	7.5	2,715
Fausita: connection between (S)	Red Eléctrica	1	0.3	182
Fuencarral: connection AT3 to GIS 220	Red Eléctrica	1	0.3	176
Torrente: connection between (S)	Red Eléctrica	1	0.3	172
Total			**621.2**	**308,385**

E/S substation; **L/** line; **(S)** underground ; **(SM)** submarine ; **(1)** Of the 488 km of circuit that make up this link, half is accounted for on the Spanish peninsula and the other half on the Balearic Islands.

Increase in line capacity in 2011

Line	Voltage (kV)	km	Increase in capacity (MVA)	MWA*km
Line Pierola-Vic	400	35.6	438	15,580
Line Bellicens-Begues (Subirat)	220	82.3	95	7,818
Line Centenario-Santiponce	220	5.0	105	525
Line Cordovilla-Sanguesa	220	38.6	105	4,053
Line Costasol-Alhaurín	220	36.5	105	3,833
Line Jordana-Alhaurín	220	65.5	105	13,755
Line Laguardia-Miranda	220	36.4	70	2,551
Line Viladecans-St. Just	220	13.4	105	1,407
Total 220 kV		**313.3**	**1,128**	**49,521**

Substation switchyards commissioned in 2011

Substation	Company	Voltage kV
Carril	Red Eléctrica	400
Mezquita	Red Eléctrica	400
Palo	Red Eléctrica	400
Silleda	Red Eléctrica	400
Tabernas	Red Eléctrica	400
Amoeiro	Red Eléctrica	220
Arenas de San Pedro	Red Eléctrica	220
Baró de Viver	Red Eléctrica	220
Bescanó	Red Eléctrica	220
Buenavista	Red Eléctrica	220
Calamocha	Red Eléctrica	220
Ébora	Red Eléctrica	220
Illora	Red Eléctrica	220
La Solana	Red Eléctrica	220
Los Leones	Red Eléctrica	220
Mezquita	Red Eléctrica	220
Novelda	Red Eléctrica	220
Nudo Viario	Red Eléctrica	220
Parque Central	Red Eléctrica	220
Santiz	Red Eléctrica	220
Tabernas	Red Eléctrica	220

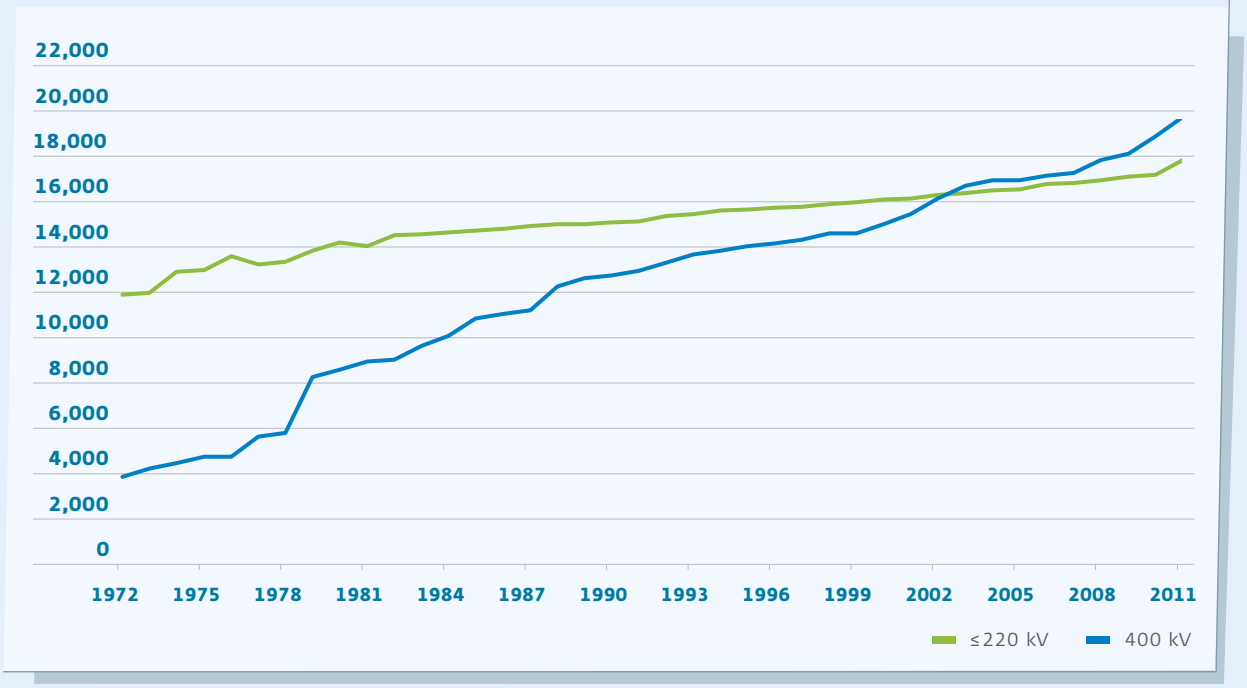
Transformers inventoried in 2011

Substation	Company	Voltage kV	Transformer capacity kV	Transformer capacity MVA
Brazatortas	Red Eléctrica	400	400/220	600
Fausita	Red Eléctrica	400	400/220	600
El Palmar	Red Eléctrica	400	400/220	600
Total				**1,800**

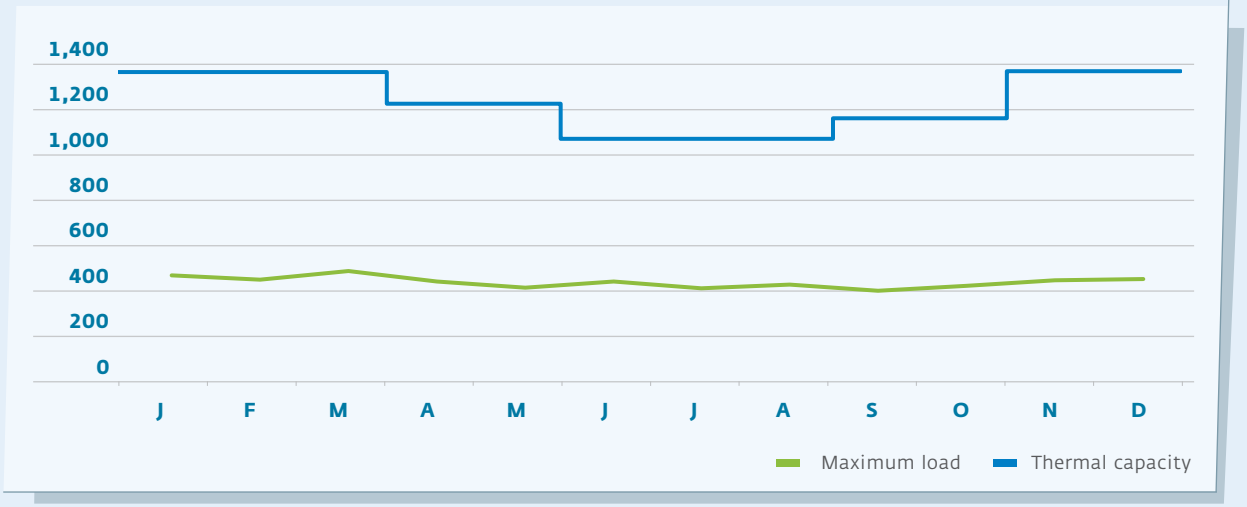
Evolution of the 400 and ≤ 220 kV transmission grid (km)

Year	400 kV	≤ 220 kV	Year	400 kV	≤ 220 kV
1972	3,817	11,839	1992	13,222	15,356
1973	4,175	11,923	1993	13,611	15,442
1974	4,437	12,830	1994	13,737	15,586
1975	4,715	12,925	1995	13,970	15,629
1976	4,715	13,501	1996	14,084	15,734
1977	5,595	13,138	1997	14,244	15,776
1978	5,732	13,258	1998	14,538	15,876
1979	8,207	13,767	1999	14,538	15,975
1980	8,518	14,139	2000	14,918	16,078
1981	8,906	13,973	2001	15,364	16,121
1982	8,975	14,466	2002	16,067	16,296
1983	9,563	14,491	2003	16,592	16,344
1984	9,998	14,598	2004	16,841	16,464
1985	10,781	14,652	2005	16,846	16,530
1986	10,978	14,746	2006	17,042	16,765
1987	11,147	14,849	2007	17,172	16,807
1988	12,194	14,938	2008	17,724	16,940
1989	12,533	14,964	2009	18,015	17,095
1990	12,686	15,035	2010	18,765	17,185
1991	12,883	15,109	2011	19,622	17,806

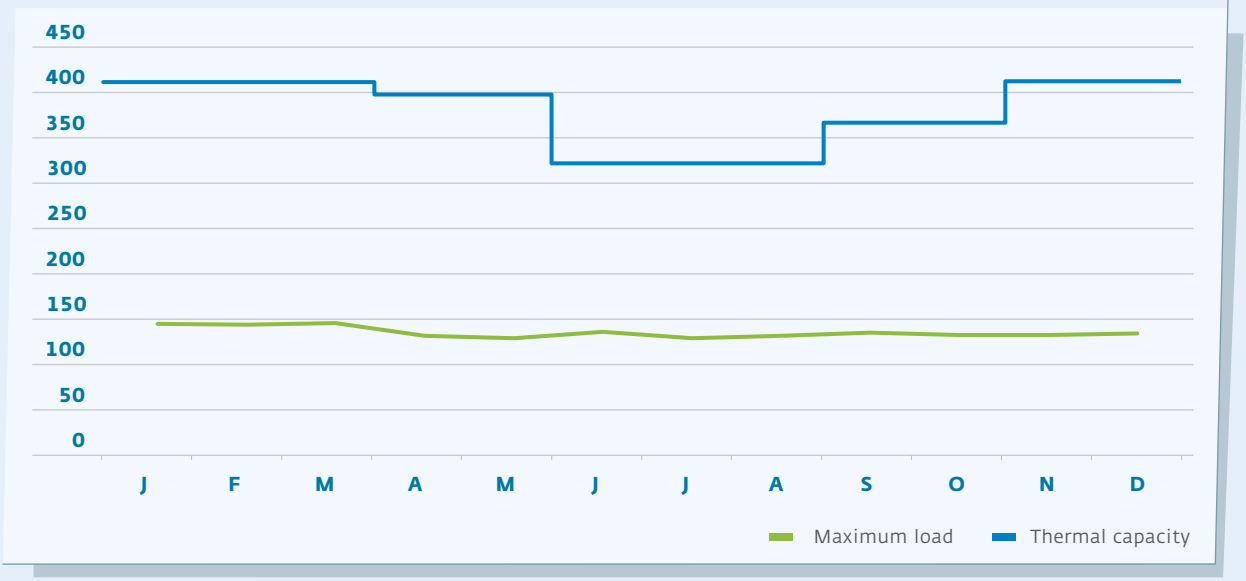
Evolution of the 400 and ≤ 220 kV transmission grid (km)



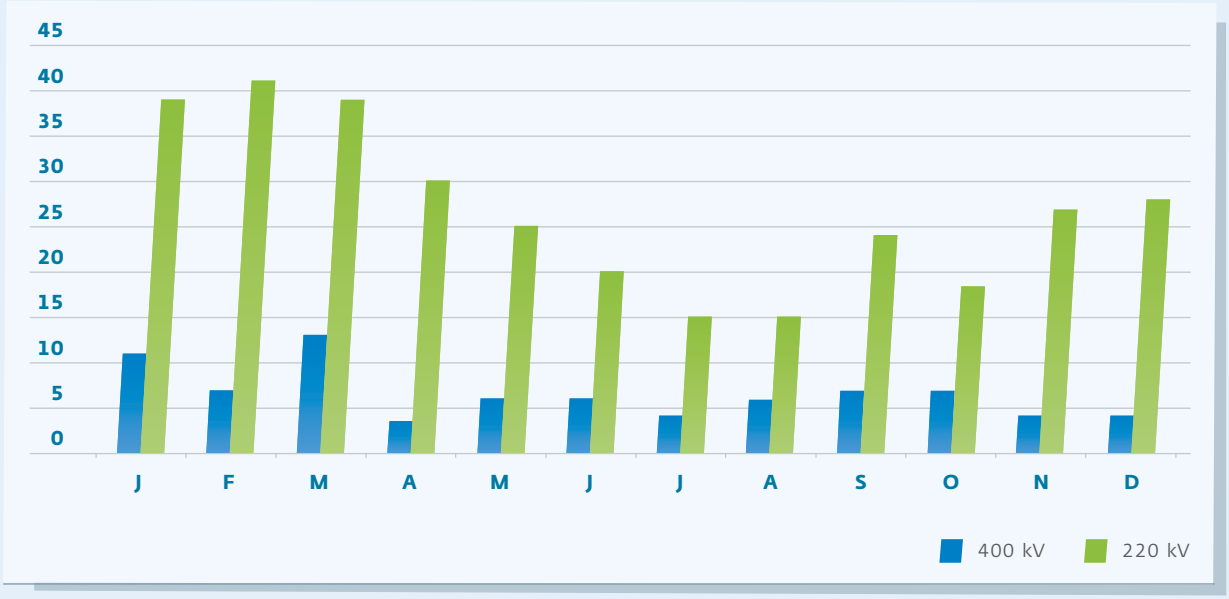
Maximum load on working day on the average of the 400 kV lines (MW)



Maximum load on working day on the average of the 220 kV lines (MW)



Transmission grid lines with load above 70%

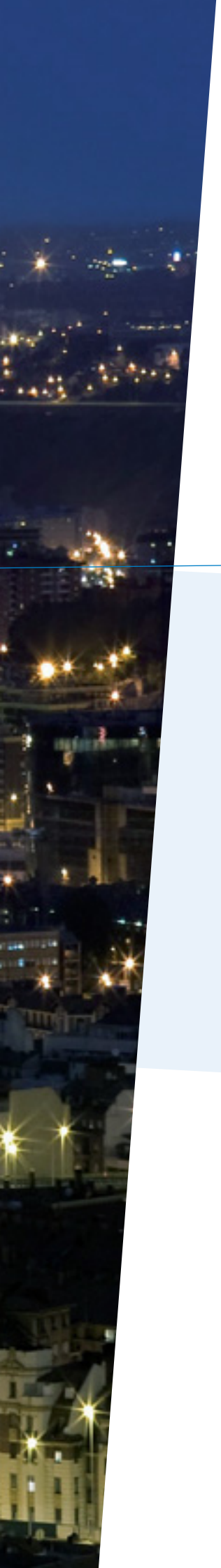


No. of lines that at any moment exceed the 70% of the thermal capacity of winter transmission.

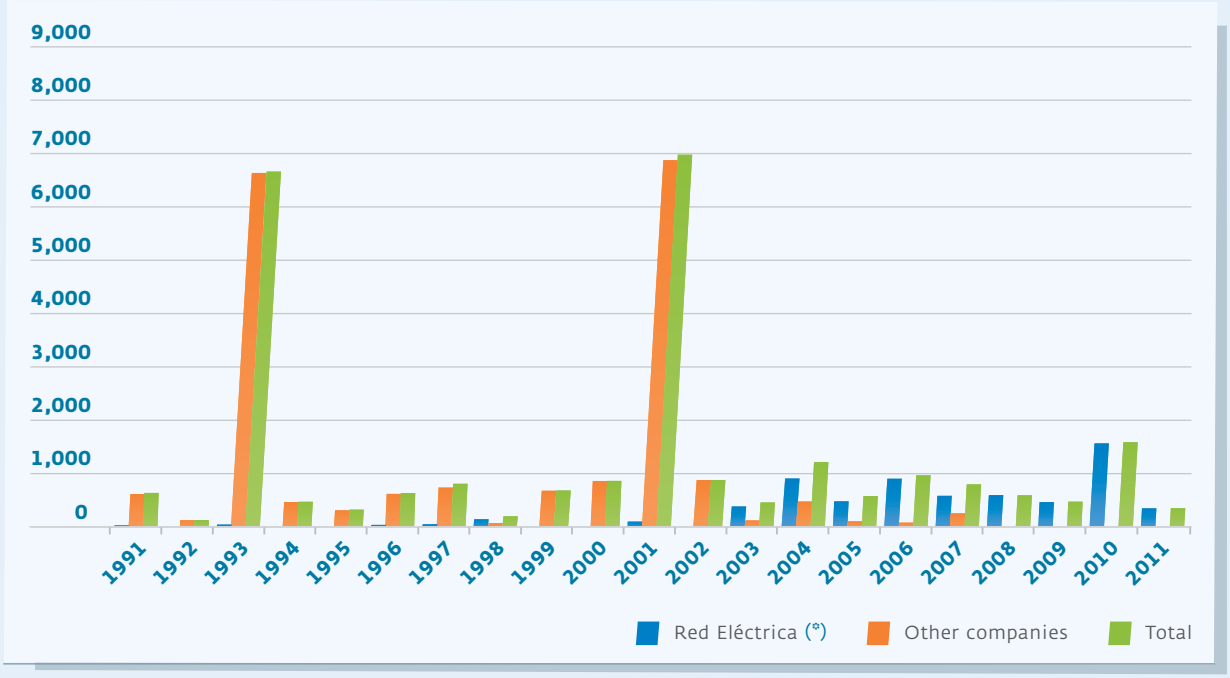
07

Service **Quality**

PENINSULAR SYSTEM

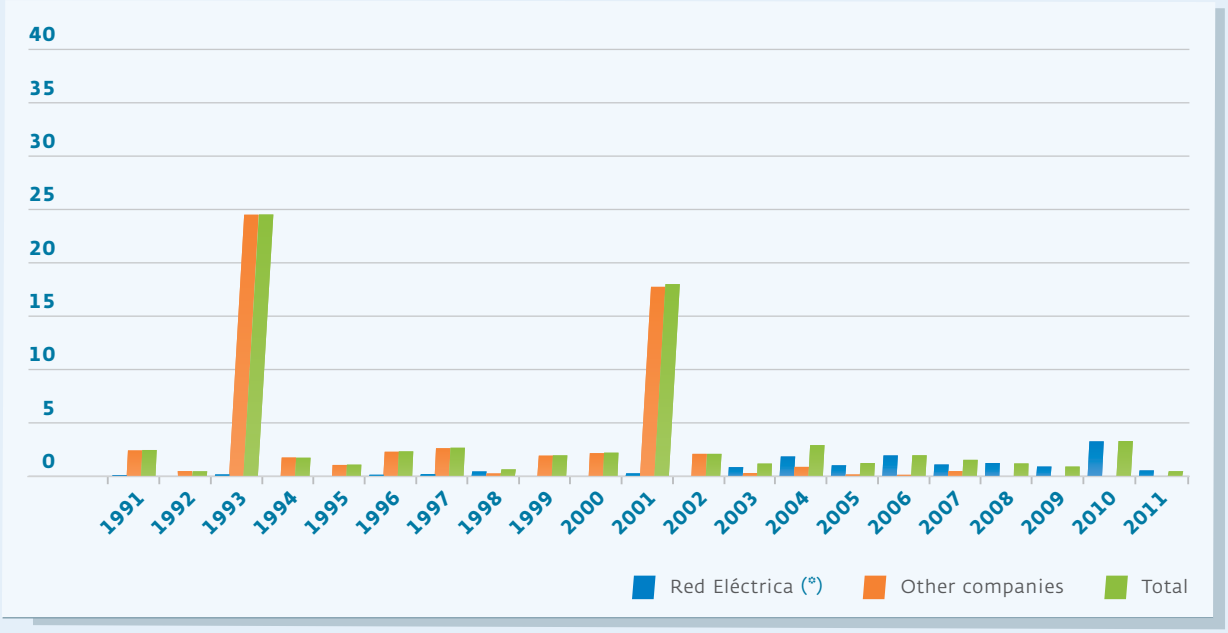


Energy not supplied (ENS) due to incidences in the transmission grid (MWh)



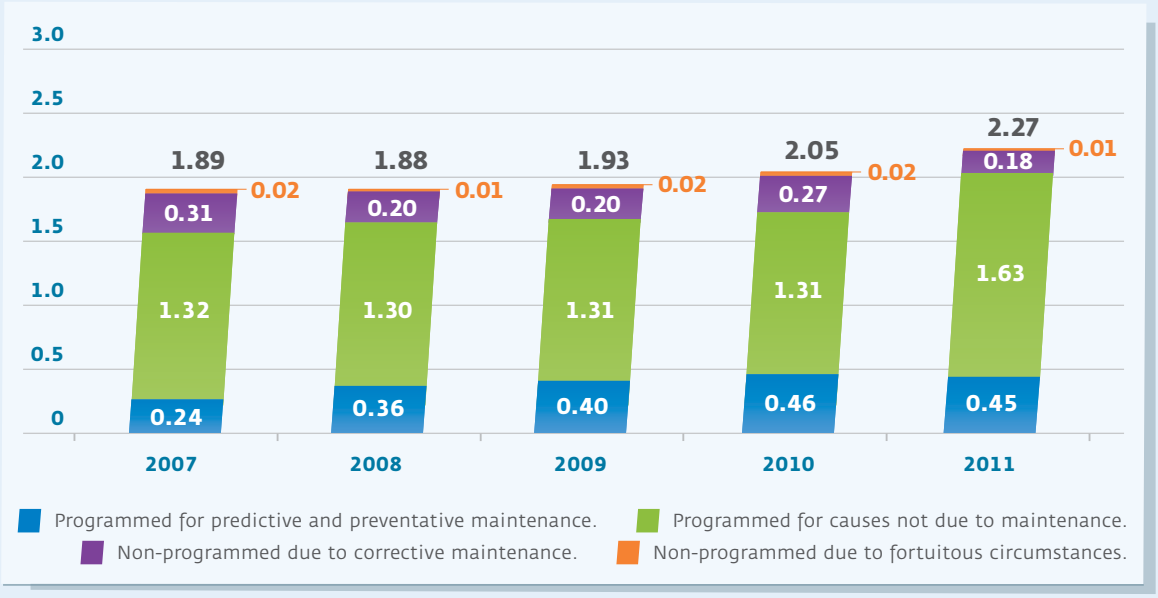
(*) As of 2003, the data of Red Eléctrica includes transmission assets acquired from other companies.

Average interruption time (AIT) due to incidences in the transmission grid (minutes)



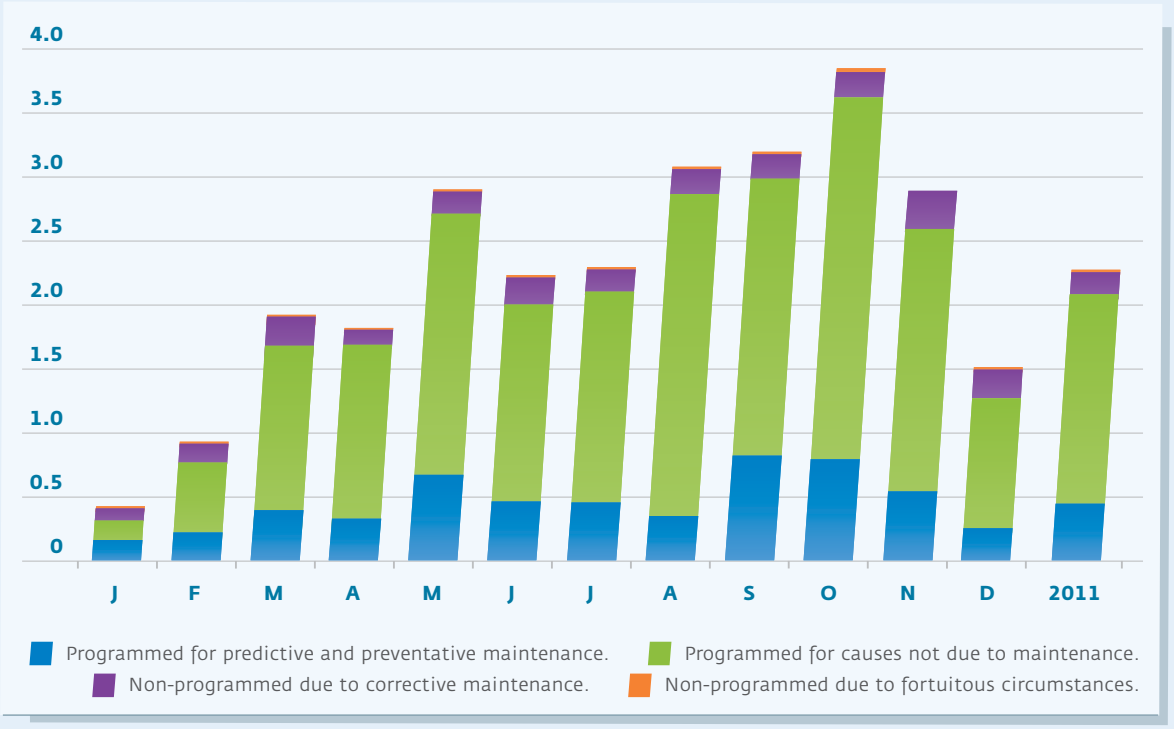
(*) As of 2003, the data of Red Eléctrica includes transmission assets acquired from other companies.
AIT = ENS/Average Power of the system.

Annual evolution of the non-availability rate of the transmission grid (%)



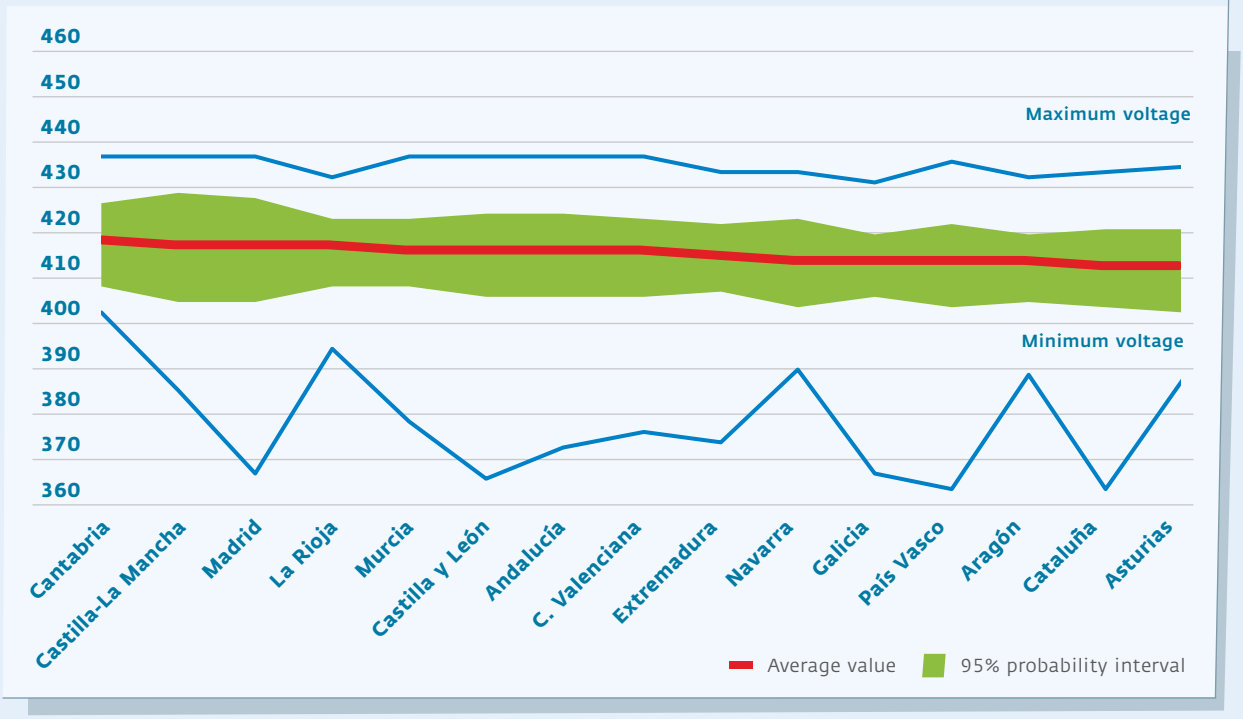
Note: Classification according to RD 1955/2000.

Monthly evolution of the non-availability rate of the transmission grid (%)

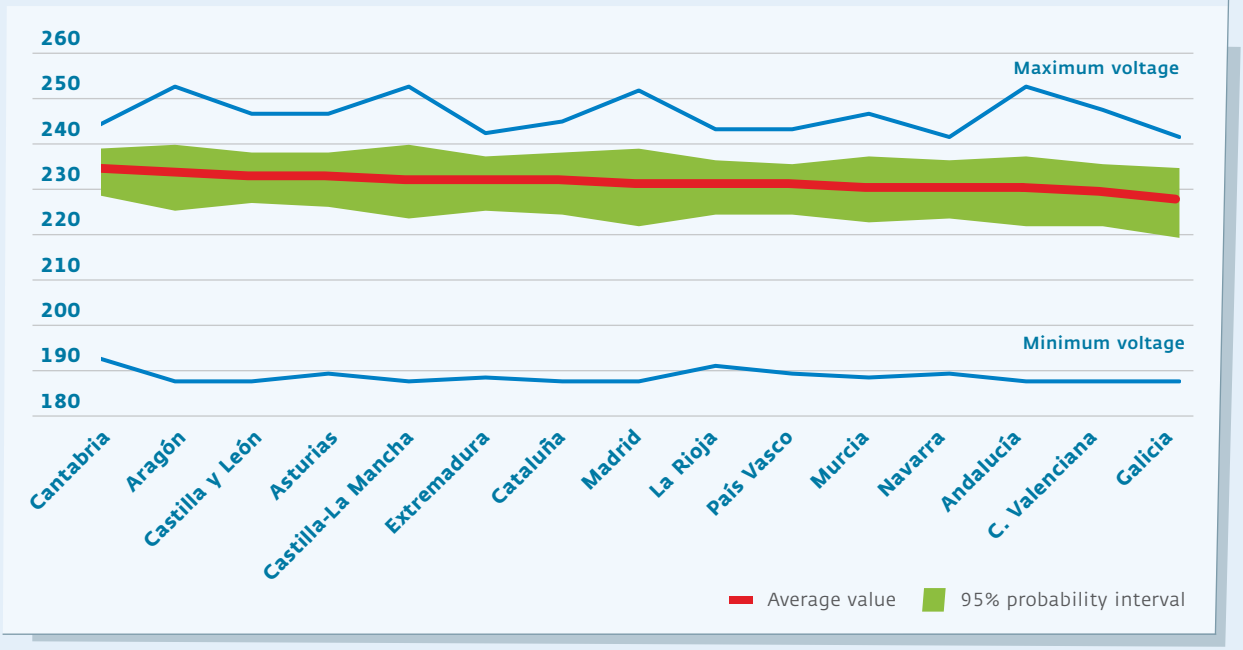


Note: Classification according to RD 1955/2000.

Voltage limit values with 95% probability for the 400kV grid. (kV)



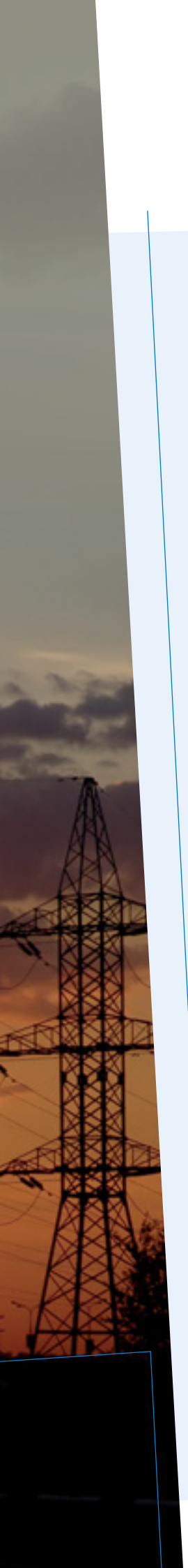
Voltage limit values with 95% probability for the 220kV grid. (kV)



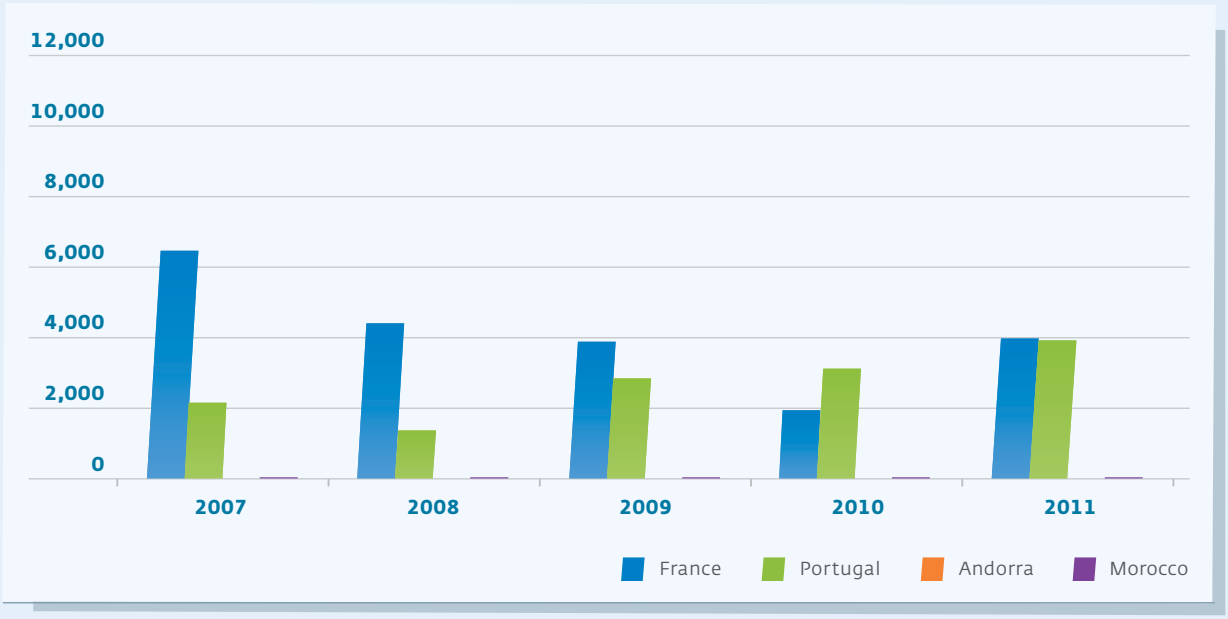
08

International **Exchanges**

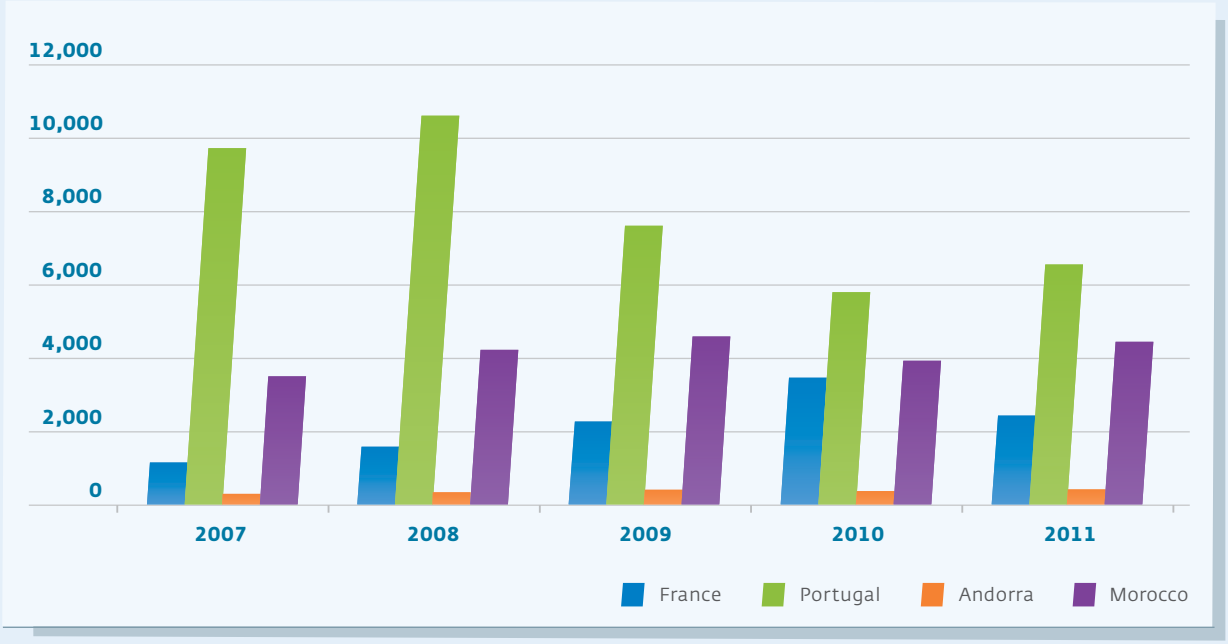
PENINSULAR SYSTEM



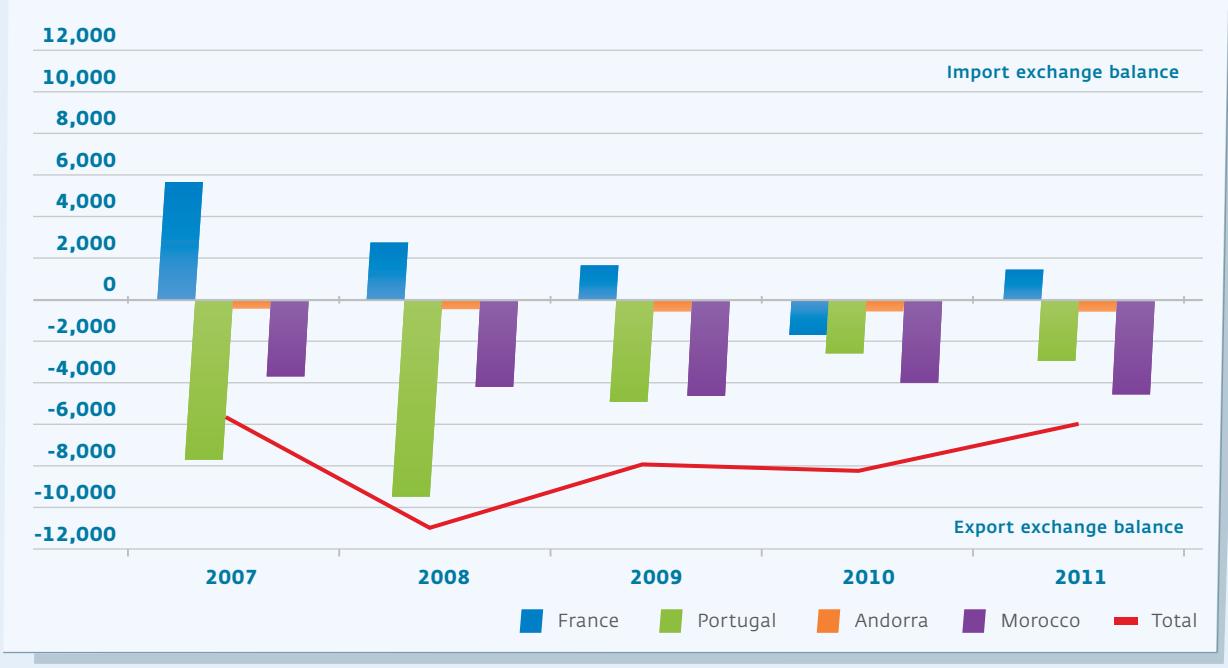
Evolution of imports in international physical energy exchanges (GWh)



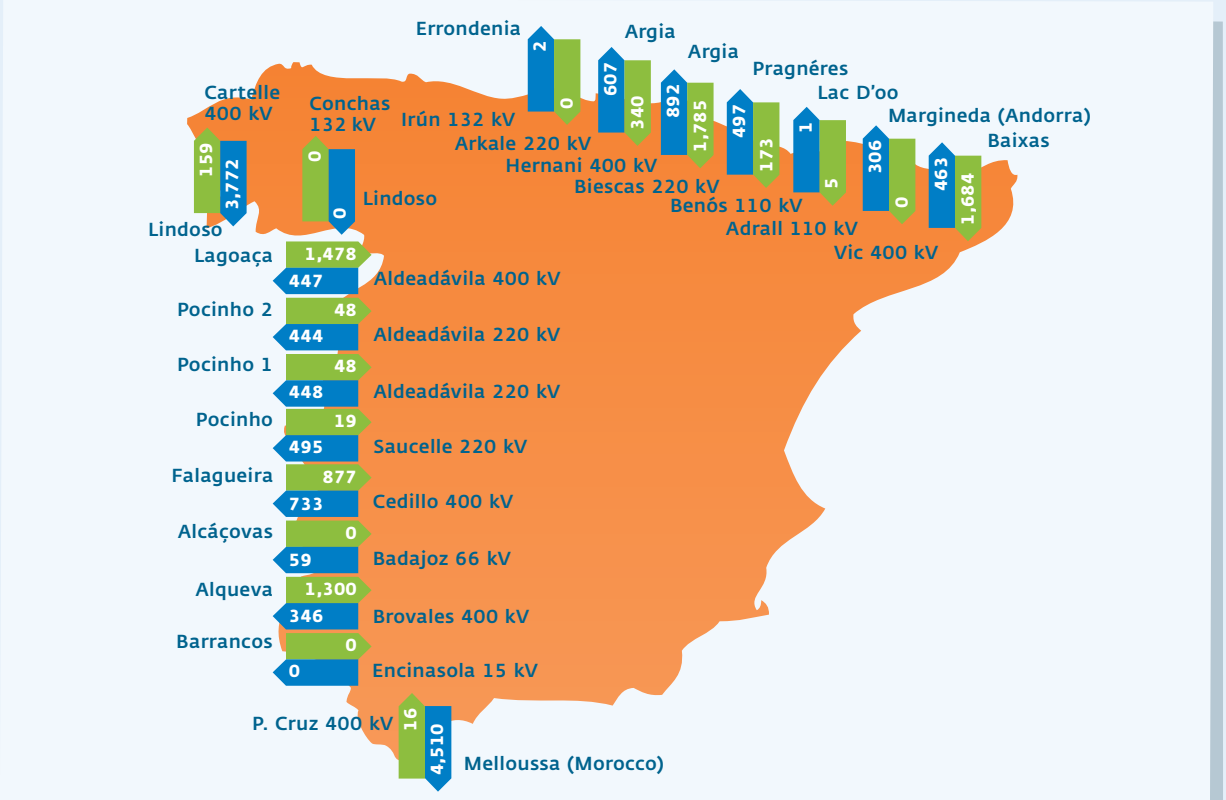
Evolution of exports in international physical energy exchanges (GWh)



Evolution of the net international physical energy exchanges (GWh)



Map of international physical energy exchanges (GWh)



International physical energy exchanges (GWh)

	Incoming		Outgoing		Balance(1)		Volume	
	2010	2011	2010	2011	2010	2011	2010	2011
France	1,983	3,987	3,514	2,463	-1,531	1,524	5,497	6,450
Portugal	3,189	3,930	5,823	6,744	-2,634	-2,814	9,012	10,674
Andorra	0	0	264	306	-264	-306	264	306
Morocco	34	16	3,937	4,510	-3,903	-4,495	3,971	4,526
Total	**5,206**	**7,932**	**13,539**	**14,023**	**-8,333**	**-6,090**	**18,745**	**21,955**

(1) Positive value: import exchange balance. Negative values: export exchange balance.

Scheduled international energy exchanges (GWh)

	Importation		Exportation		Balance(1)	
	2010	2011	2010	2011	2010	2011
France (2)	1,865	4,493	3,388	2,982	-1,523	1,511
Portugal (3)	1,718	1,635	4,351	4,445	-2,633	-2,810
Andorra	0	0	264	305	-264	-305
Morocco	15	5	3,920	4,498	-3,905	-4,493
Total	**3,598**	**6,133**	**11,923**	**12,230**	**-8,325**	**-6,097**

(1) Positive value: import exchange balance. Negative values: export exchange balance.

(2) Includes exchanges with other European countries.

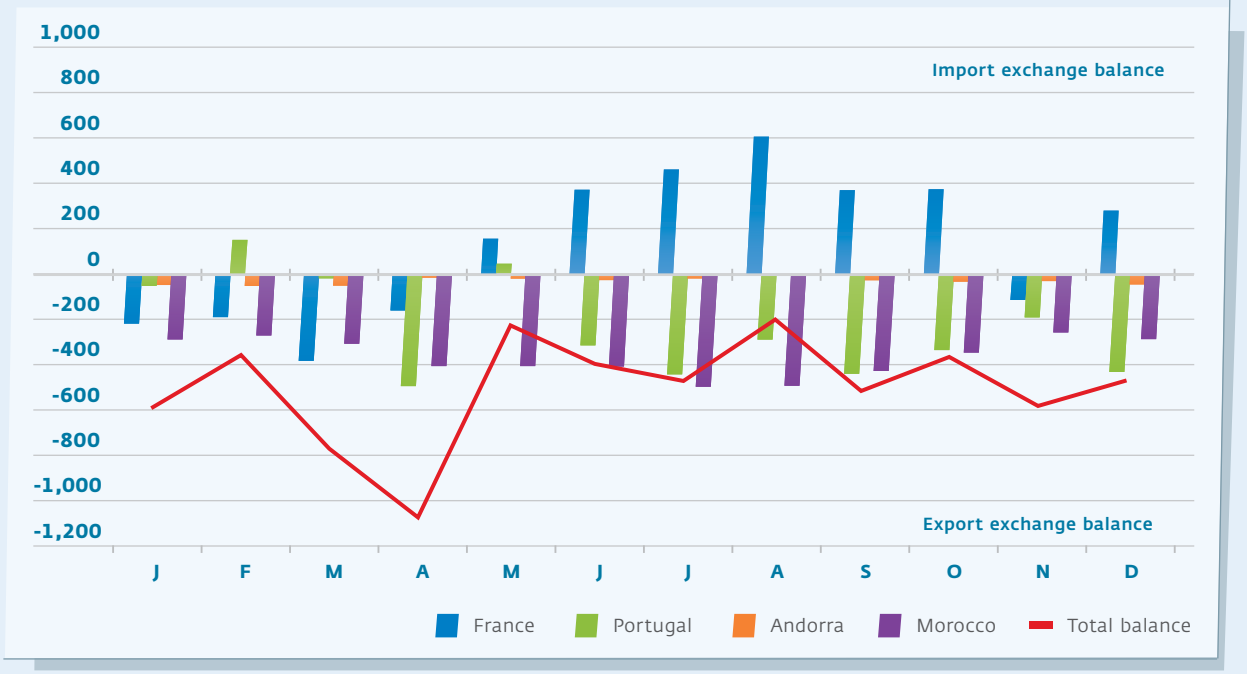
(3) As of 1 July 2007, with the launch of the integrated market MIBEL (day-ahead and intraday), the management of the Portugal-Spain interconnection is carried out via a market splitting mechanism where the Market Operator performs a joint matching of the Iberian market and calculates the prices for each one of the areas in the market in the event of congestion. The exchange capacity is not allocated to any particular market agent but, as a result of this process, establishes a net energy exchange schedules through this interconnection.

Summary of international energy exchanges (GWh)

	Importation	Exportation	Balance
Transactions (market + physical bilateral contracts)	**6,126**	**12,229**	**-6,103**
France (1)	4,486	2,981	1,505
Portugal	1,635	4,445	-2,810
Andorra	0	305	-305
Morocco	5	4,498	-4,493
Counter-Trading France – Spain	**7**	**1**	**6**
Counter-Trading Portugal – Spain	**0**	**0**	**0**
Support exchanges	**0**	**0**	**0**
Total scheduled exchanges	**6,133**	**12,230**	**-6,097**
Frequency control deviations compensated for			**7**
Physical balance of international exchanges			**-6,090**

(1) Includes exchanges with other European countries.

Monthly net scheduled international energy exchanges (GWh)



Scheduled international transactions by type of market agent and interconnection (GWh)

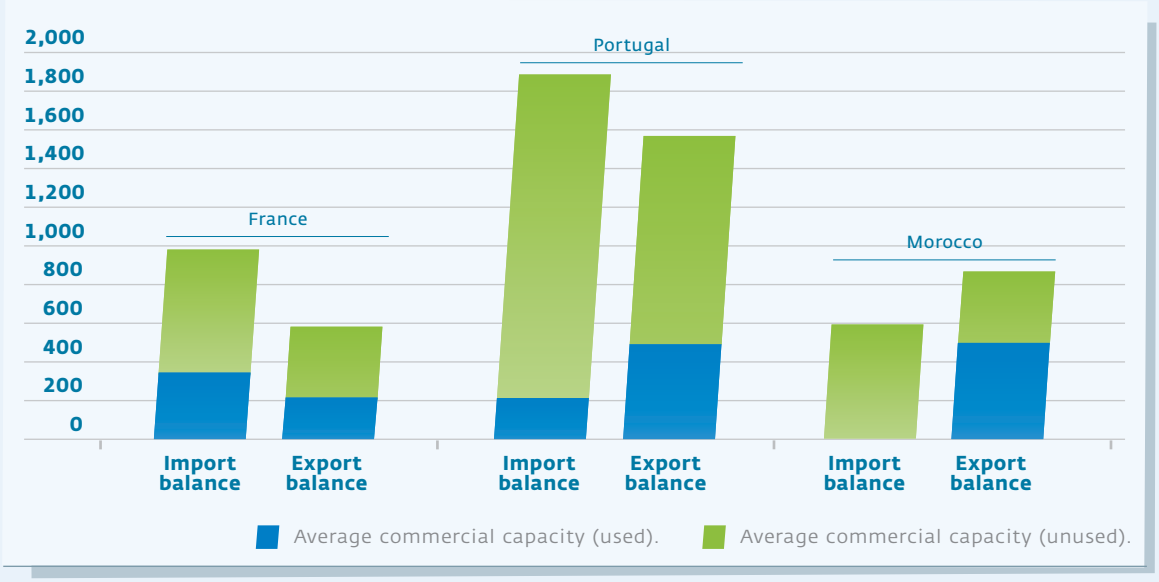
	Traders/ Resellers		Exchange schedules Spain-Port (2)		Support exchanges		Countertrading actions		Total		
	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Imp.	Exp.	Balance
France (1)	4,486	2,981	0	0	0	0	7	1	4,493	2,982	1,511
Portugal (2)	0	0	1,635	4,445	0	0	0	0	1,635	4,445	-2,810
Andorra	0	305	0	0	0	0	0	0	0	305	-305
Morocco	5	4,498	0	0	0	0	0	0	5	4,498	-4,493
Total	**4,491**	**7,784**	**1,635**	**4,445**	**0**	**0**	**7**	**1**	**6,133**	**12,230**	**-6,097**

(1) Includes exchanges with other European countries.
(2) As of 1 July 2007, with the launch of the integrated market MIBEL (day-ahead and intraday), the management of the Portugal-Spain interconnection is carried out via a market splitting mechanism where the Market Operator performs a joint matching of the Iberian market and calculates the prices for each one of the areas in the market in the event of congestion. The exchange capacity is not allocated to any particular market agent but, as a result of this process, establishes a net energy exchange schedules through this interconnection.

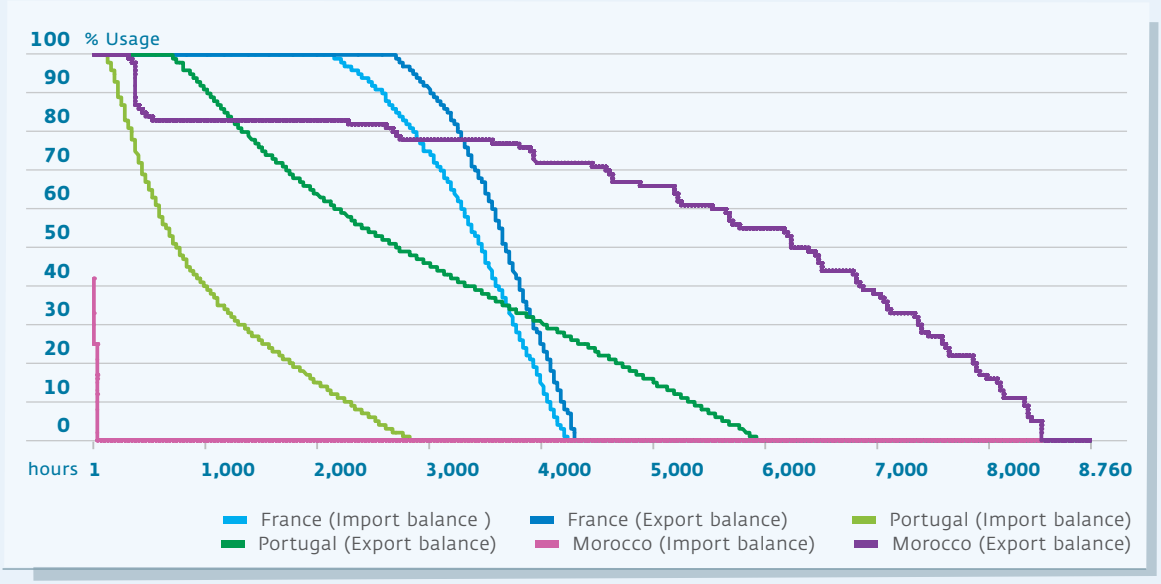
Commercial exchange capacity of the interconnections (MW)

(°) Extreme hourly values considering non-availibilities of the grid and generation elements.

Average usage of commercial exchange capacity of the interconnections (MW)

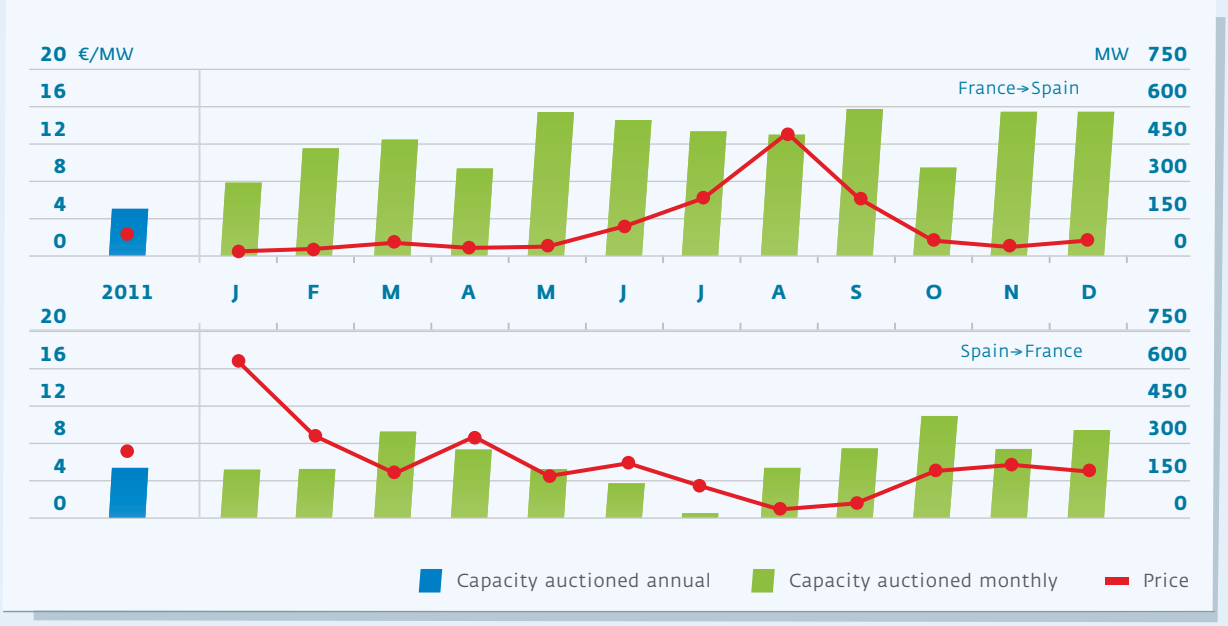


Utilization rate of the commercial exchange capacity of the interconnections



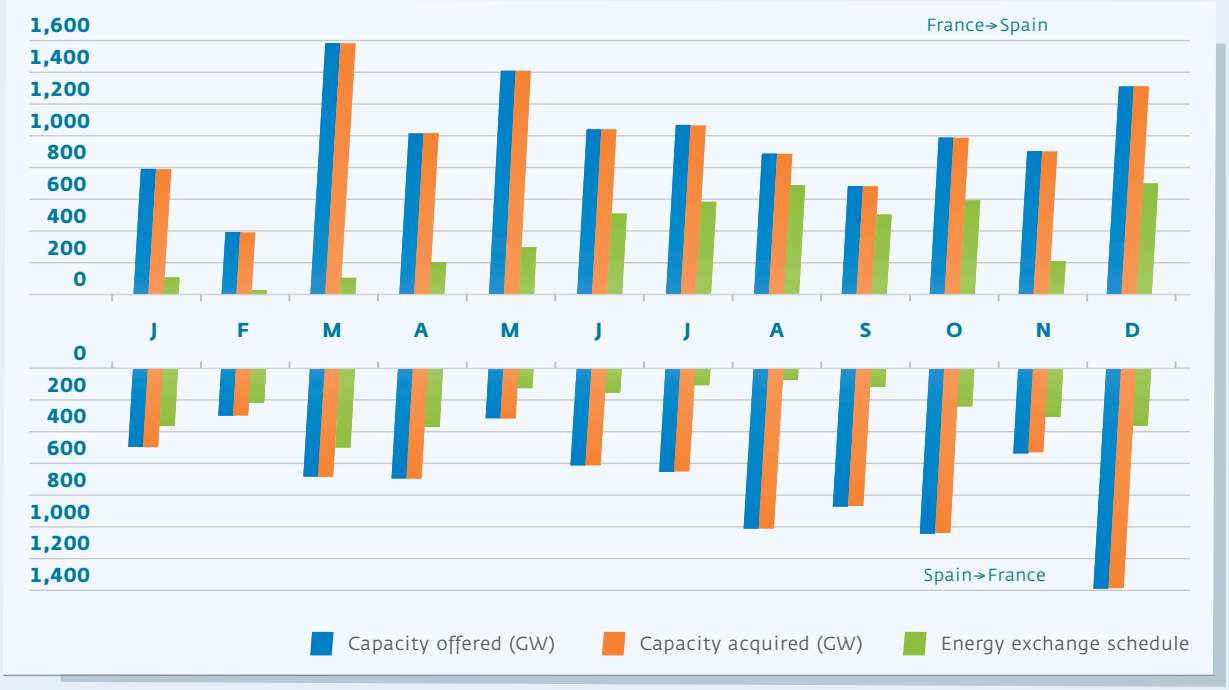
Commercial exchange capacity usage sorted in decreasing order (monotone curves).

Evolution of the capacity auctions for the interconnection with France



The result of the annual / monthly capacity auction (carried out in December last year / late previous month) applies for each hour of the year / month except for the periods reflected in the published specifications for said auction.

Capacity negotiated in explicit auctions for the interconnection with France (IFE) (1)



(1) Includes annual, monthly and daily capacities.

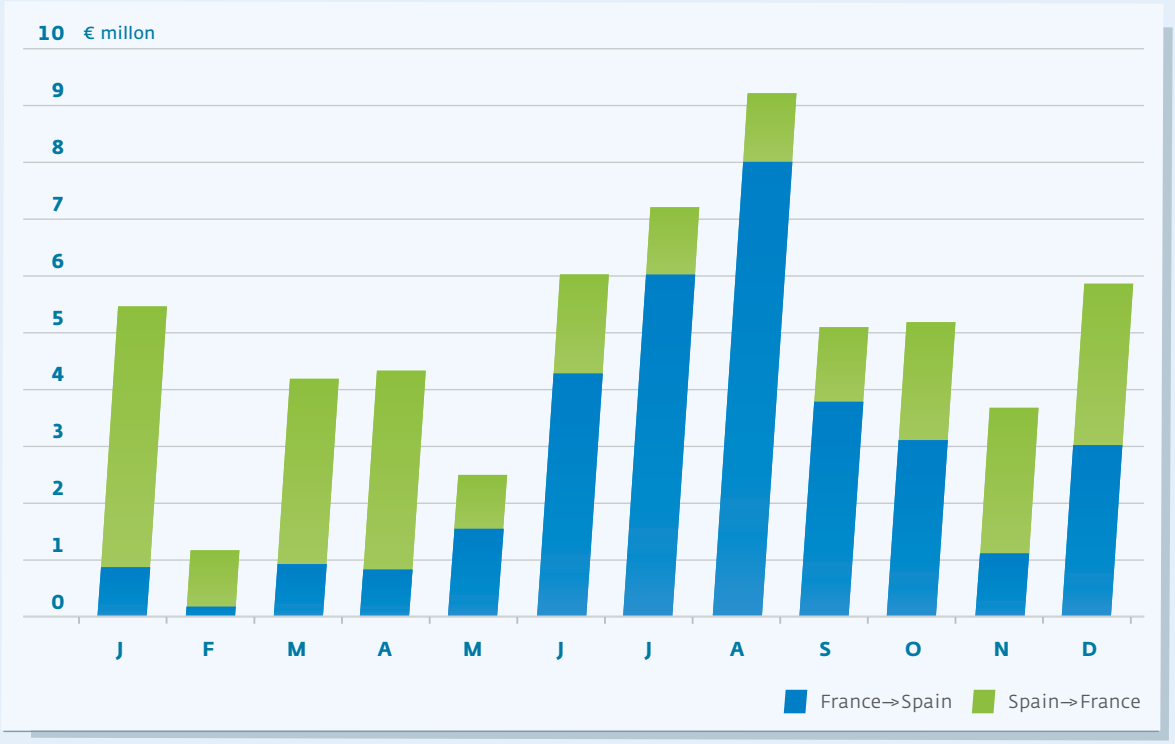
Capacity negotiated in explicit intraday auctions for the interconnection with France (IFE) (GW)

Congestion rent derived from the capacity auctions for the interconnection with France (IFE) (1)

Subastas	France→Spain direction € thousand	%	Spain→France direction € thousand	%	Total € thousand	%
Annual	3,069	5.1	9,377	15.5	12,445	20.5
Monthly	11,764	19.4	10,035	16.5	21,799	35.9
Daily	17,805	29.4	6,885	11.4	24,691	40.7
Intraday	810	1.3	919	1.5	1,729	2.8
Total	**33,448**	**55.1**	**27,216**	**44.9**	**60,664**	**100.0**

(1) Does not include the costs of countertrading actions nor other costs.

Monthly evolution of congestion rent derived from the capacity auctions for the interconnection with France (IFE) (1)

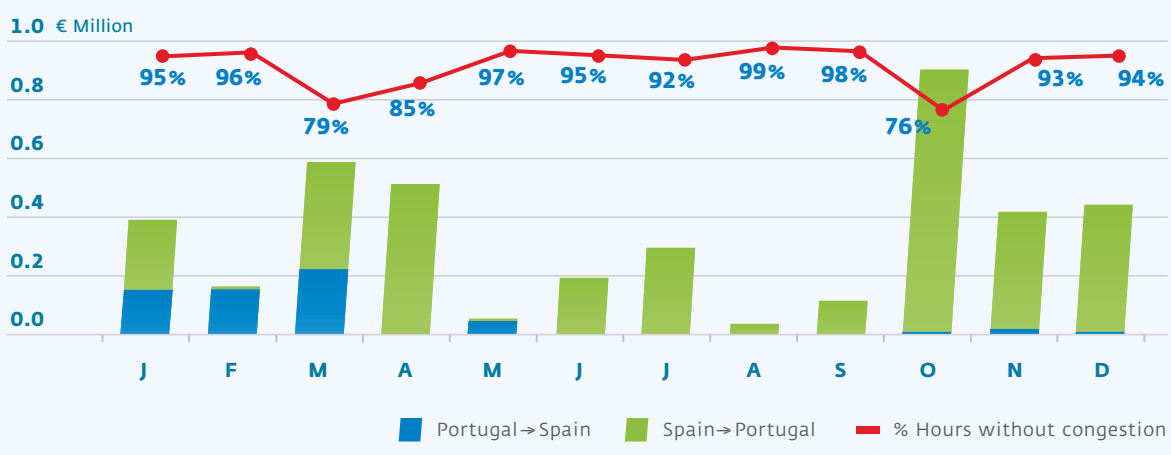


(1) Does not include the costs of countertrading actions nor other costs.

Countertrading schedules applied for the interconnection with France

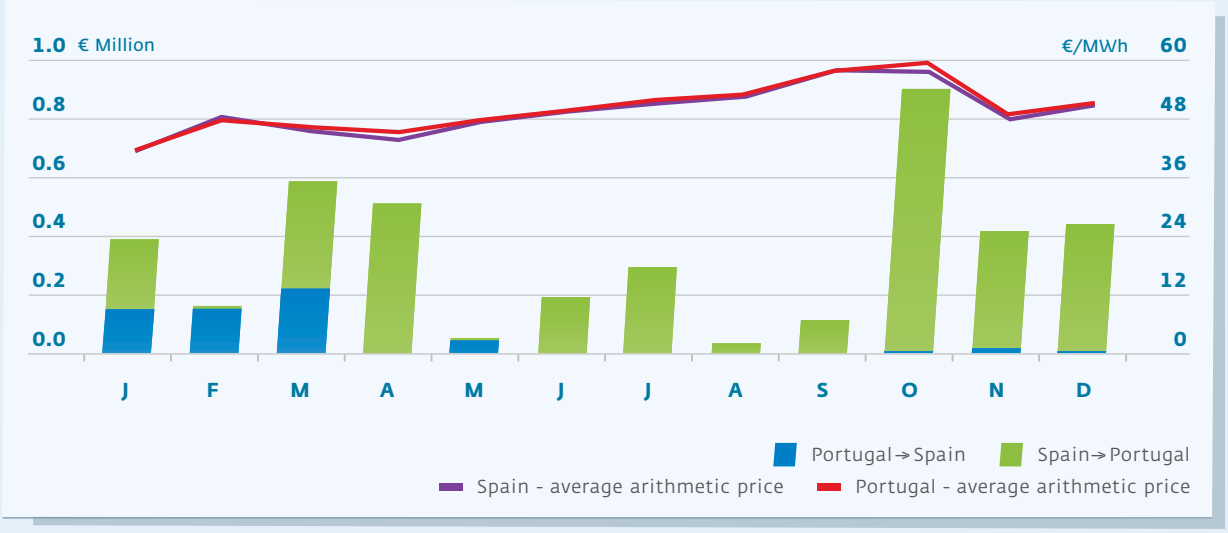
Month	Day	Direction	MWh	Observations
January	3	Spain→France	5	Maintain balance unchanged after recovering of schedules anomalously re-dispatched.
	6	Spain→France	225	
February	22	France→Spain	6,250	Extension of planned disconnection of the 400 kV Baixas-Vic line from 24 Jan to 20 Feb.
April	30	Spain→France	450	Delay in putting back in service of the disconnected 400 kV Vic-Pierola line.
May	15	France→Spain	3	Spain=>France Congestion due to a schedule reduction program in the second phase of the Technical Restrictions process (prorate rule application with prices equal to 0 €/MWh)
July	19	France→Spain	48	Reduction in export capacity due to security of the Spanish system owing to the non-availability of the 220 kV Biescas-Pragneres line.
November	3	France→Spain	220	Reduction in export capacity due to delay in the planned disconnection of the 400 kV Vic-Baixas line.
Total Spain→France			**680**	
Total France→Spain			**6,521**	

Congestion rent and coupling rate derived from market splitting in the day-ahead market for the interconnection with Portugal (1)



(1) Does not include the costs of countertrading.

Congestion rent and prices of market splitting in the day-ahead market for the interconnection with Portugal (1)

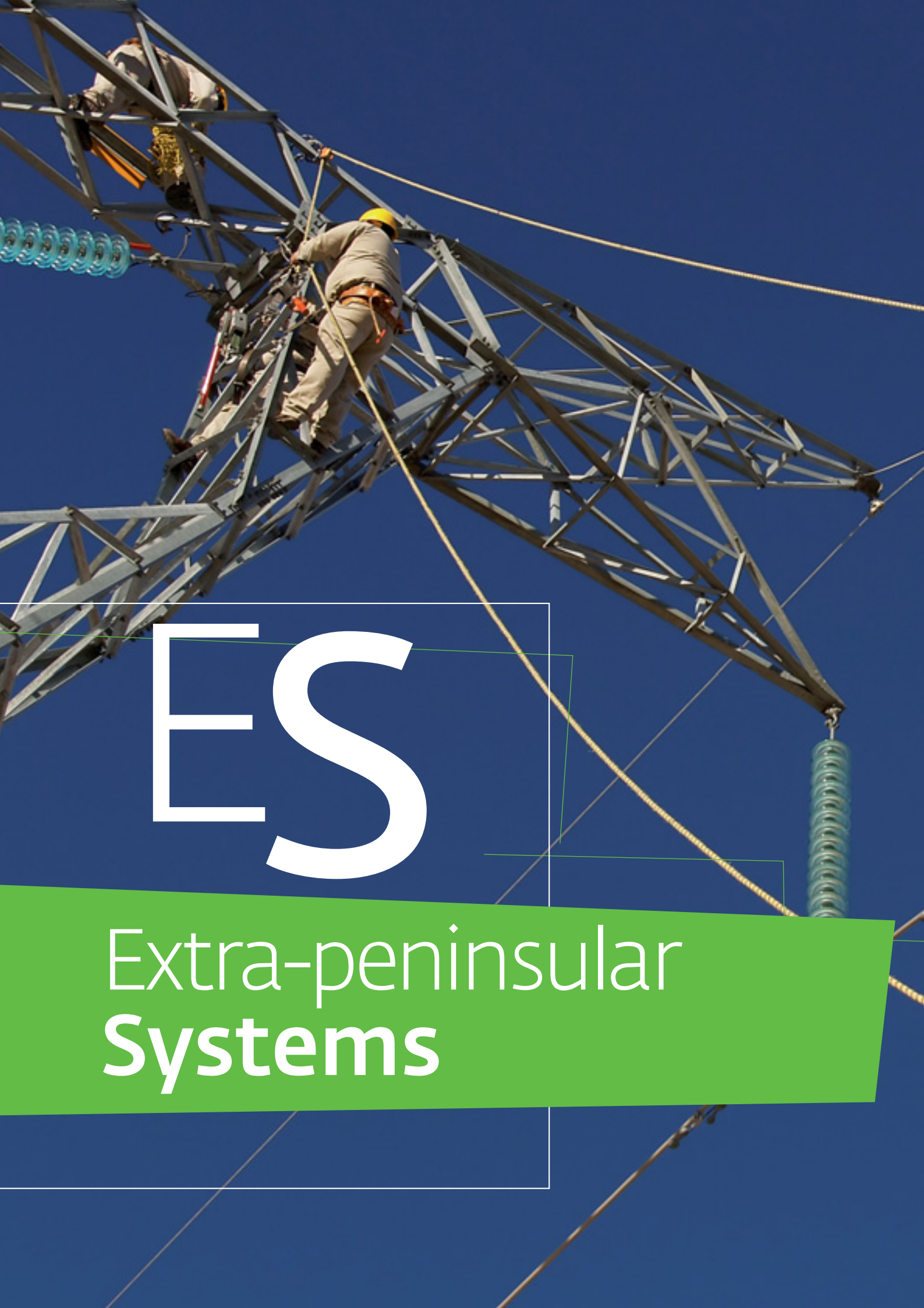


(1) Does not include the costs of countertrading.

Congestion rent and prices of market splitting in the day-ahead market for the interconnection with Portugal

Month	Spain average arithmetic price (€/MWh)	Portugal average arithmetic price (€/MWh)	Difference in average price (€/MWh)	Congestion rents Portugal-Spain(1) (€ million)	Congestion rents Spain-Portugal(1) (€ million)
January	41.19	41.26	-0.08	0.14	0.25
February	48.03	47.91	0.12	0.14	0.01
March	46.70	47.32	-0.62	0.23	0.35
April	45.45	46.85	-1.40	0.00	0.52
May	48.90	49.02	-0.12	0.04	0.01
June	50.00	50.64	-0.64	0.00	0.19
July	50.82	51.15	-0.34	0.00	0.29
August	53.53	53.60	-0.07	0.00	0.04
September	58.47	58.56	-0.09	0.00	0.11
October	57.45	59.22	-1.77	0.01	0.89
November	48.38	49.10	-0.72	0.02	0.40
December	50.07	50.66	-0.59	0.01	0.43
Total				**0.59**	**3.49**

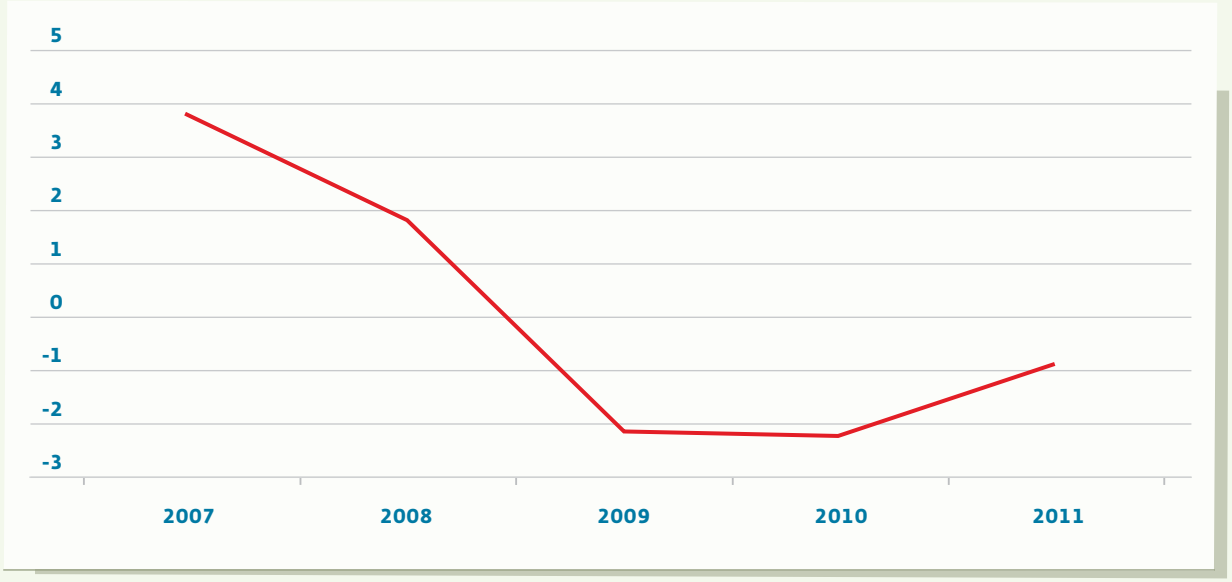
(1) Does not include the costs associated to countertrading.



ES

Extra-peninsular **Systems**

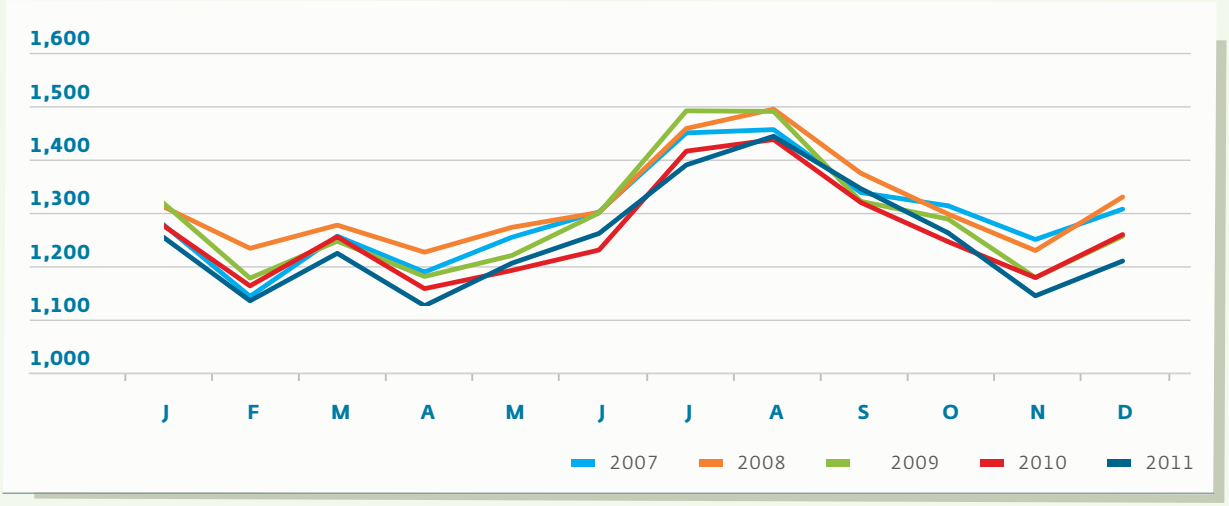
Annual growth of the electricity demand at power station busbars (%)



Monthly distribution of the electricity demand at power station busbars

	2007		2008		2009		2010		2011	
	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%
January	1,283	8.2	1,317	8.3	1,324	8.5	1,281	8.4	1,258	8.4
February	1,140	7.3	1,234	7.8	1,176	7.6	1,160	7.7	1,132	7.5
March	1,259	8.1	1,280	8.1	1,249	8.0	1,258	8.3	1,226	8.2
April	1,188	7.6	1,227	7.7	1,179	7.6	1,156	7.6	1,122	7.5
May	1,257	8.1	1,276	8.0	1,220	7.9	1,192	7.9	1,205	8.0
June	1,306	8.4	1,305	8.2	1,305	8.4	1,231	8.1	1,264	8.4
July	1,462	9.4	1,471	9.3	1,505	9.7	1,426	9.4	1,399	9.3
August	1,468	9.4	1,508	9.5	1,504	9.7	1,449	9.6	1,455	9.7
September	1,344	8.6	1,382	8.7	1,327	8.6	1,325	8.7	1,352	9.0
October	1,318	8.5	1,302	8.2	1,292	8.3	1,248	8.2	1,265	8.4
November	1,252	8.0	1,230	7.8	1,177	7.6	1,177	7.8	1,142	7.6
December	1,312	8.4	1,336	8.4	1,259	8.1	1,262	8.3	1,210	8.1
Total	**15,590**	**100.0**	**15,870**	**100.0**	**15,518**	**100.0**	**15,166**	**100.0**	**15,030**	**100.0**

Evolution of the monthly electricity demand at power station busbars (GWh)



Annual evolution of electricity demand coverage (GWh)

	2007	2008	2009	2010	2011	%11/10
Hydroelectric	0	0	0	0	0	-
Coal	3,195	3,372	3,450	3,381	3,031	-10.4
Fuel / gas (1)	8,240	8,217	7,934	7,721	7,470	-3.3
Combined-cycle	4,168	4,243	3,961	3,991	4,406	10.4
Auxiliary generation (2)	148	96	39	7	9	30.6
Ordinary regime	**15,751**	**15,928**	**15,384**	**15,100**	**14,915**	**-1.2**
- Consumption in generation	-882	-919	-882	-899	-882	-1.9
Special regime	**721**	**862**	**1,016**	**965**	**996**	**3.2**
Hydroelectric	1	2	0	0	1	-
Wind	362	402	364	337	361	7.1
Solar photovoltaic	21	92	243	283	333	17.7
Thermal renewable	213	217	273	161	33	-79.4
Thermal non-renewable	123	149	135	184	268	45.3
Net generation	**15,590**	**15,870**	**15,518**	**15,166**	**15,030**	**-0.9**
Peninsula-Balearics link (3)	-	-	-	-	0.5	-
Demand	**15,590**	**15,870**	**15,518**	**15,166**	**15,030**	**-0.9**

(1) Includes generation obtained from internal-combustion engines, gas turbine and steam turbine.
(2) Emergency generators installed temporarily in specific zones to cover a deficit in generation.
(3) Test phase. Positive value: import balance; Negative value: export balance.

Annual balance of electrical energy

	Balearic Islands		Canary Islands		Ceuta		Melilla		Total	
	GWh	%11/10	GWh	%11/10	GWh	%11/10	GWh	%11/10	GWh	%11/10
Hydroelectric	-	-	0	-	-	-	-	-	0	-
Coal	3,031	-10.4	-	-	-	-	-	-	3,031	-10.4
Fuel / gas	1,322	-3.1	5,704	-3.3	222	-6.6	222	1.5	7,470	-3.3
Internal-combustion engines (1)(2)	964	-9.0	2,286	-0.8	222	-5.6	221	1.5	3,694	-3.2
Gas turbine	357	17.3	544	53.9	0.3	-89.3	1	0.8	903	36.4
Steam turbine	-	-	2,873	-11.4	-	-	-	-	2,873	-11.4
Combined-cycle	1,390	16.2	3,016	7.9	-	-	-	-	4,406	10.4
Auxiliary generation (3)	9	30.6	0	-	-	-	-	-	9	30.6
Ordinary regime	**5,751**	**-3.3**	**8,720**	**0.3**	**222**	**-6.6**	**222**	**1.5**	**14,915**	**-1.2**
- Consumption in generation	-376	-0.5	-472	-3.1	-20	-5.6	-14	5.1	-882	-1.9
Special regime	**368**	**36.4**	**621**	**-9.6**	**0**	**-**	**7**	**-12.2**	**996**	**3.2**
Hydroelectric	-	-	1	-	-	-	-	-	1	-
Wind	6	8.2	355	7.1	-	-	-	-	361	7.1
Solar photovoltaic	101	15.1	232	18.9	-	-	0.1	7.3	333	17.7
Thermal renewable	0	-	33	-79.4	-	-	-	-	33	-79.4
Thermal non-renewable	261	47.9	0	-	-	-	7	-12.4	268	45.3
Net generation	**5,743**	**-1.7**	**8,869**	**-0.3**	**203**	**-6.7**	**215**	**0.7**	**15,030**	**-0.9**
Peninsula-Balearics link (4)	0.5	-	-	-	-	-	-	-	0.5	-
Demand	**5,743**	**-1.7**	**8,869**	**-0.3**	**203**	**-6.7**	**215**	**0.7**	**15,030**	**-0.9**

(1) Includes generator units whose primary fuel is fuel-oil, gas-oil or natural gas.
(2) As of 9 June 2011, Cotesa is included since according to the resolution of the Directorate General of Energy Policy and Mines this facility is removed from special regime and is registered in the ordinary regime of the Administrative Registry of Electricity Generation Facilities.
(3) Emergency generators installed temporarily in specific zones to cover a deficit in generation.
(4) Test phase. Positive value: import balance; Negative value: export balance.

Installed power as at 31.12.2011

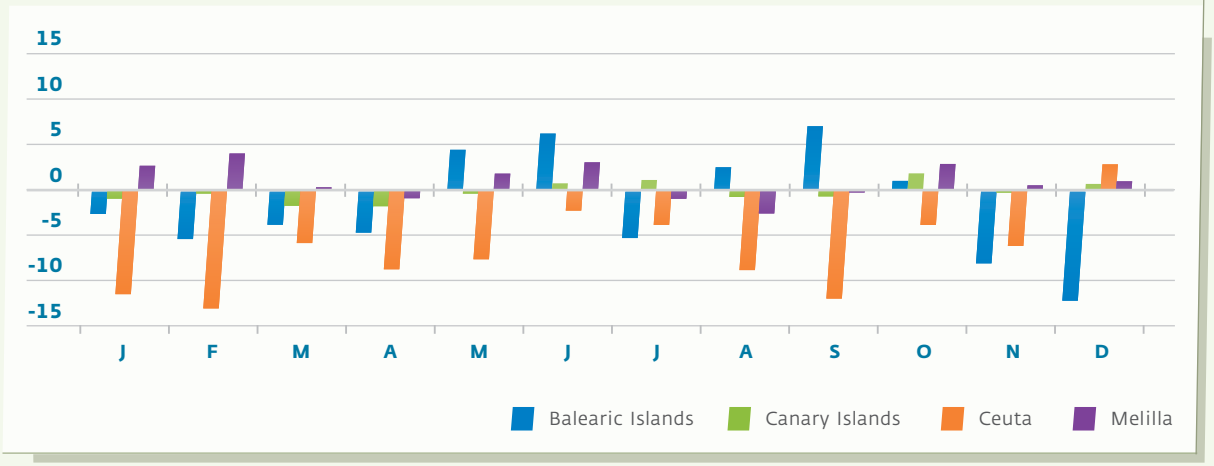
	Balearic Islands		Canary Islands		Ceuta		Melilla		Total	
	MW	%11/10	MW	%11/10	MW	%11/10	MW	%11/10	MW	%11/10
Hydroelectric	-	-	1	0.0	-	-	-	-	1	0.0
Coal	510	0.0	-	-	-	-	-	-	510	0.0
Fuel / gas	802	-2.0	1,899	2.0	99	0.0	85	0.0	2,884	0.7
Internal-combustion iengines (1)(2)	199	-7.7	546	0.0	83	0.0	70	0.0	898	-1.8
Gas turbine	603	0.0	639	6.1	16	0.0	15	0.0	1,273	3.0
Steam turbine	-	-	713	0.0	-	-	-	-	713	0.0
Combined-cycle	934	0.0	920	-1.0	-	-	-	-	1,854	-0.5
Auxiliary generation(3)	0	-	0	-	-	-	-	-	0	-
Total Ordinary regime	**2,246**	**-0.7**	**2,820**	**1.0**	**99**	**0.0**	**85**	**0.0**	**5,249**	**0.2**
Hydroelectric	-	-	0.5	0.0	-	-	-	-	0.5	0.0
Wind	4	0.0	145	1.8	-	-	-	-	149	1.7
Solar photovoltaic	63	6.9	139	9.7	-	-	0.1	0.0	202	8.8
Thermal renewable	0	-	1	-96.8	-	-	-	-	1	-96.8
Thermal non-renewable	83	1.2	33	0.0	-	-	2	0.0	119	0.9
Total Special regime	**150**	**3.5**	**319**	**-6.9**	**-**	**-**	**2**	**0.0**	**471**	**-3.8**
Total	**2,395**	**-0.5**	**3,138**	**0.1**	**99**	**0.0**	**87**	**0.0**	**5,720**	**-0.1**

(1) Includes generator units whose primary fuel is fuel-oil, gas-oil or natural gas.
(2) As of 9 June 2011, Cotesa is included since according to the resolution of the Directorate General of Energy Policy and Mines this facility is removed from special regime and is registered in the ordinary regime of the Administrative Registry of Electricity Generation Facilities.
(3) Emergency generators installed temporarily in specific zones to cover a deficit in generation.

Annual evolution of electrical energy demand

	Balearic Islands		Canary Islands		Ceuta		Melilla	
	GWh	ΔAnual(%)	GWh	ΔAnual(%)	GWh	ΔAnual(%)	GWh	ΔAnual(%)
2007	5,979	2.6	9,215	4.5	203	0.5	193	13.6
2008	6,122	2.4	9,333	1.3	210	3.5	205	6.1
2009	5,993	-2.1	9,107	-2.4	212	0.9	206	0.5
2010	5,840	-2.5	8,895	-2.3	218	2.8	213	3.6
2011	5,743	-1.7	8,869	-0.3	203	-6.7	215	0.7

Monthly growth of electrical energy demand at power station busbars (%)



Peak demand of average hourly power and daily energy

	Power (MW)		Energy (GWh)	
Balearics	1,026	25 January (20-21h)	24 January	18,568
	1,159	22 August (21-22h)	23 August	22,773
Canaries	1,450	31 December (19-20h)	7 October	26,745
	1,430	23 June (13-14h)	22 June	27,601
Ceuta	36	2 February (21-22h)	4 October	622
	36	30 June (12-13h)	28 July	655
Melilla	37	1 February (20-21h)	26 January	662
	39	8 August (12-13h)	22 August	756

Winter (October-May) Summer (June-September)

Variations in generator equipment within ordinary regime

	Commissioned			Decommissioned		
	Type	Date	MW	Type	Date	MW
Balearic Islands						
Ibiza BW2				Internal-combustion engines	May-11	8
Ibiza BW3				Internal-combustion engines	May-11	8
Formentera AUX	Emergency generators	Jun-11	8	Emergency generators	Sept-11	8
Total			**8**			**24**
Canary Islands						
Cotesa (1)	Gas turbine	Jun-11	37			
Granadilla 10-Gas 5 CCC				Combined-cycle	Oct-11	5
Granadilla 11-Gas 6 CCC				Combined-cycle	Oct-11	5
Total			**37**			**10**

(1) As of 9 June 2011, according to the resolution of the Directorate General of Energy Policy and Mines this facility is removed from special regime and is registered in the ordinary regime of the Administrative Registry of Electricity Generation Facilities.

New transmission lines

Lines	Company	Voltage kV	No. of circuits	km
Balearic Islands				
L/Morvedre-Santa Ponsa (Santa Ponsa a km 122) ± 250 kV (SM)	Red Eléctrica	220	2	238.0 (1)
L/Morvedre-Santa Ponsa (Santa Ponsa a km 122) ± 250 kV (U)	Red Eléctrica	220	2	6.0 (1)
L/Valdurgent-Santa Ponsa 1 (U)	Red Eléctrica	220	1	0.4
L/Valdurgent-Santa Ponsa 2 (U)	Red Eléctrica	220	1	0.4
L/Sta Ponsa-Santa Ponsa EC 1 (U)	Red Eléctrica	220	1	0.3
L/Sta Ponsa-Santa Ponsa EC 2 (U)	Red Eléctrica	220	1	0.4
Capdepera-Arta	Red Eléctrica	110	2	14.2
Capdepera-Arta (U)	Red Eléctrica	110	2	0.2
L/Santa Ponsa-Calviá 1 66 kV (U)	Red Eléctrica	66	1	0.1
L/Palmanova-Santa Ponsa 66 kV (U)	Red Eléctrica	66	1	0.1
Total				**260.1**

(1) Of the 488 km of circuit that make up this link, half is accounted for on the peninsula and the other half on the Balearic Islands.
(U) Underground (SM) Submarine

New substations

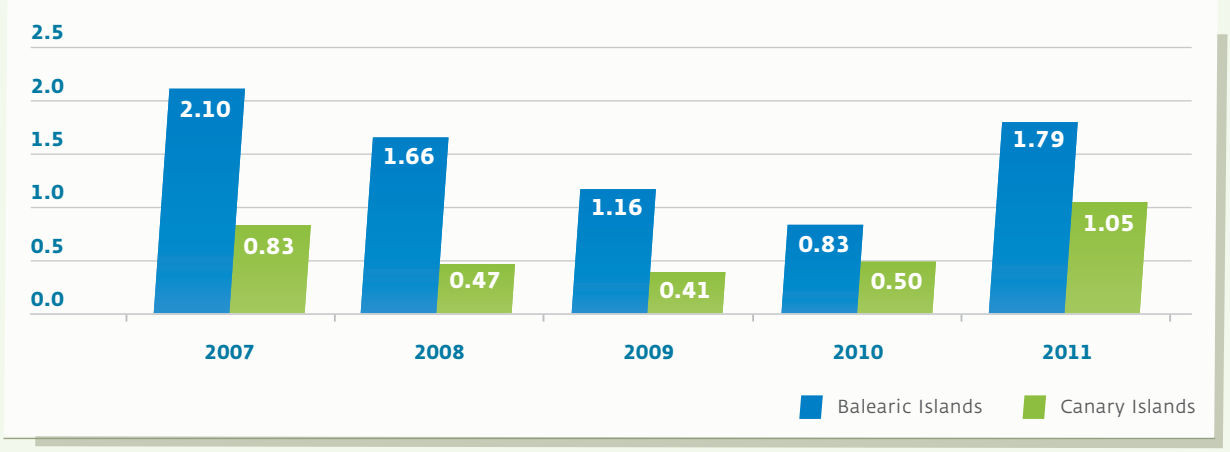
Substation	Company	Voltage kV	Transformer Capacity kV	MVA
Balearic Islands				
Santa Ponsa	Red Eléctrica	220	66	250
Santa Ponsa	Red Eléctrica	66	-	-
Capdepera	Red Eléctrica	66	-	-

Evolution of the transmission and transformer capacity system

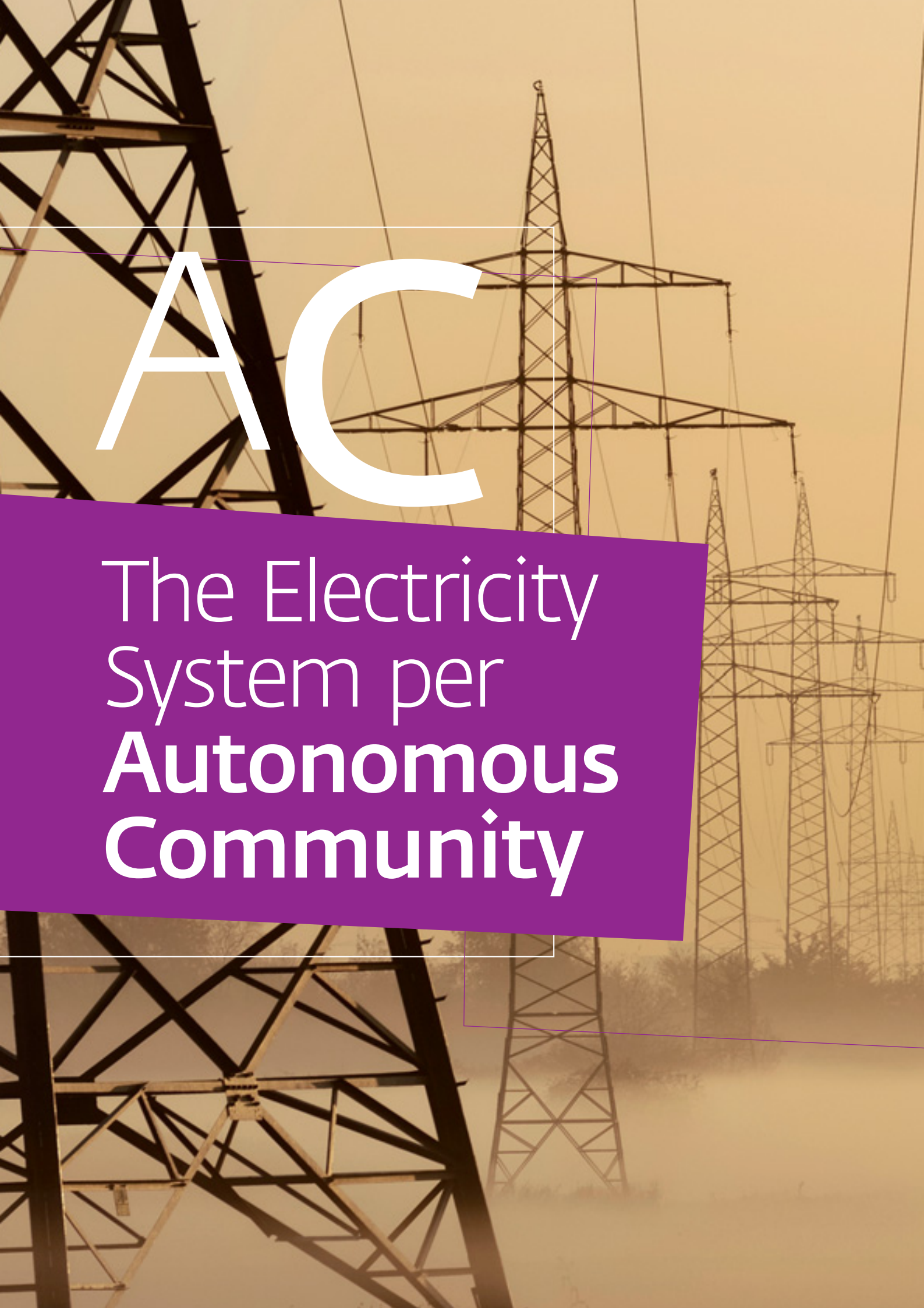
		2007	2008	2009	2010	2011
km of 220 kV circuit						
	Balearic Islands	177	177	185	185	430
	Canary Islands	163	163	163	163	163
	Total	**340**	**340**	**348**	**348**	**594**
km of ≤ 132 kV circuit						
	Balearic Islands	1,054	1,075	1,083	1,095	1,110
	Canary Islands	1,091	1,091	1,108	1,136	1,136
	Total	**2,145**	**2,166**	**2,191**	**2,231**	**2,246**
Transformer capacity (MVA)						
	Balearic Islands	1,998	1,998	1,998	1,998	2,248
	Canary Islands	1,250	1,250	1,375	1,625	1,625
	Total	**3,248**	**3,248**	**3,373**	**3,623**	**3,873**

Includes submarine links.

Annual evolution of the non-availability rate of the transmission grid (%)



Note: Classification accoding to Royal Decree 1955/2000.



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The Electricity System per **Autonomous Community**

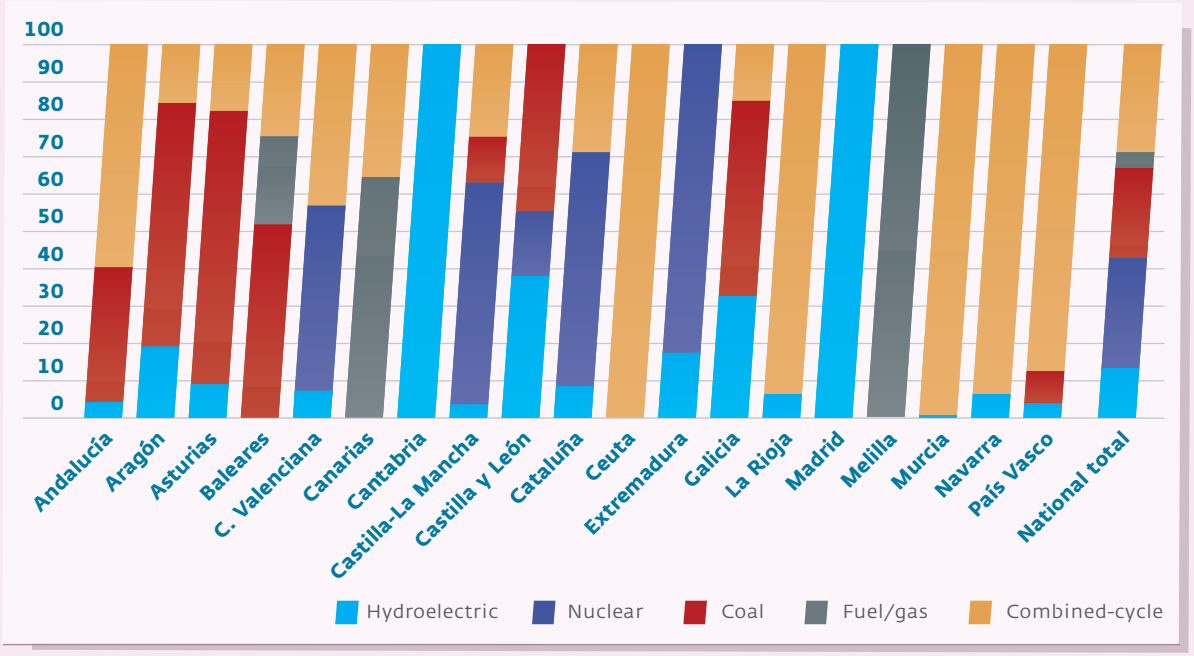
Electrical power balance (GWh)

	Andalucía	Aragón	Asturias	Baleares	C. Valenciana	Canarias	Cantabria	Castilla-La Mancha	Castilla y León	Cataluña
Hydroelectric	1,125	2,017	1,059	-	1,303	0	415	561	8,594	3,053
Nuclear	0	0	0	-	7,901	-	0	8,383	3,742	21,849
Coal (1)	8,708	6,680	7,787	3,031	0	-	0	1,699	9,741	14
Fuel/gas (2)	0	0	0	1,330	0	5,704	0	0	0	0
Combined-cycle	14,032	1,505	1,817	1,390	6,891	3,016	0	3,353	0	9,587
Ordinary regime	**23,865**	**10,202**	**10,663**	**5,751**	**16,094**	**8,720**	**415**	**13,996**	**22,077**	**34,503**
- Generation consumption	-856	-617	-609	-376	-516	-472	-5	-882	-984	-1,336
Special regime	**15,598**	**8,208**	**2,167**	**368**	**4,485**	**621**	**1,581**	**10,875**	**13,765**	**9,046**
Net Generation	**38,607**	**17,792**	**12,221**	**5,743**	**20,063**	**8,869**	**1,991**	**23,988**	**34,857**	**42,213**
- Pumped consumption	-302	-279	-25	-	-1,126	-	-499	-130	-367	-276
+ Energy Exchange Balance (3)	-953	-7,454	-1,726	0.5	7,702	-	3,133	-11,685	-20,172	7,598
Demand 2011	**37,353**	**10,060**	**10,470**	**5,743**	**26,639**	**8,869**	**4,625**	**12,173**	**14,318**	**49,536**
Demand 2010	**38,541**	**9,782**	**10,706**	**5,840**	**27,515**	**8,895**	**4,768**	**12,360**	**14,793**	**50,169**
% 11/10	**-3.1**	**2.8**	**-2.2**	**-1.7**	**-3.2**	**-0.3**	**-3.0**	**-1.5**	**-3.2**	**-1.3**

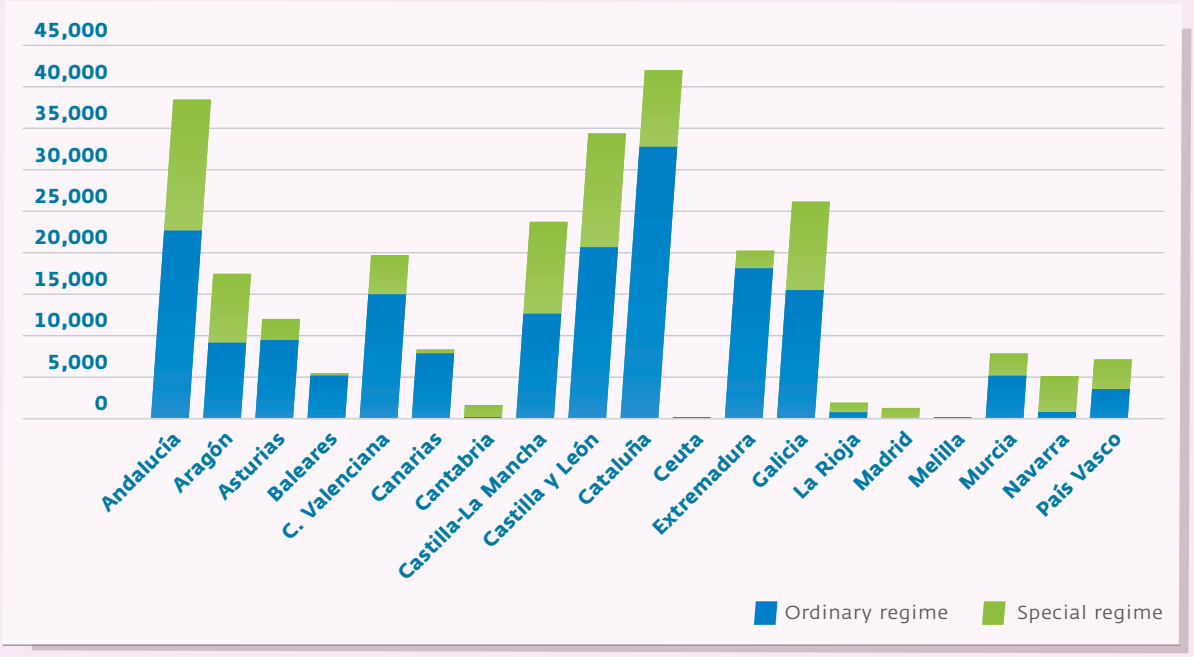
	Ceuta	Extremadura	Galicia	La Rioja	Madrid	Melilla	Murcia	Navarra	País Vasco	Total
Hydroelectric	-	3,531	5,350	75	139	-	75	90	186	27,571
Nuclear	-	15,857	0	0	0	-	0	0	0	57,731
Coal (1)	-	0	8,503	0	0	-	0	0	357	46,519
Fuel/gas (2)	222	0	0	0	0	222	0	0	0	7,479
Combined-cycle	-	0	2,304	998	0	-	5,535	1,221	3,489	55,140
Ordinary regime	**222**	**19,388**	**16,157**	**1,073**	**139**	**222**	**5,610**	**1,311**	**4,032**	**194,440**
- Generation consumption	-20	-652	-536	-29	-2	-14	-138	-38	-47	-8,129
Special regime	**0**	**1,955**	**11,000**	**1,332**	**1,611**	**7**	**2,621**	**4,203**	**3,369**	**92,811**
Net Generation	**203**	**20,690**	**26,621**	**2,376**	**1,748**	**215**	**8,093**	**5,476**	**7,354**	**279,121**
- Pumped consumption	-	-63	-149	0	0	-	0	0	0	-3,215
+ Energy Exchange Balance (3)	-	-16,151	-6,274	-650	29,069	-	-316	-565	12,352	-6,090
Demand 2011	**203**	**4,477**	**20,198**	**1,725**	**30,817**	**215**	**7,778**	**4,911**	**19,706**	**269,816**
Demand 2010	**218**	**4,641**	**20,739**	**1,759**	**30,863**	**213**	**8,043**	**5,130**	**20,720**	**275,696**
% 11/10	**-6.7**	**-3.5**	**-2.6**	**-1.9**	**-0.1**	**0.7**	**-3.3**	**-4.3**	**-4.9**	**-2.1**

(1) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the security of supply.
(2) Generation by auxiliary units is included in the Balearic Islands electricity system.
(3) Provisional value. Includes values corresponding to intra-national and international energy exchange balances. Positive values indicate an import exchange balance and negative values show an export exchange balance.

Ordinary regime production structure by power station type (%)



Ordinary regime and special regime generation (GWh)



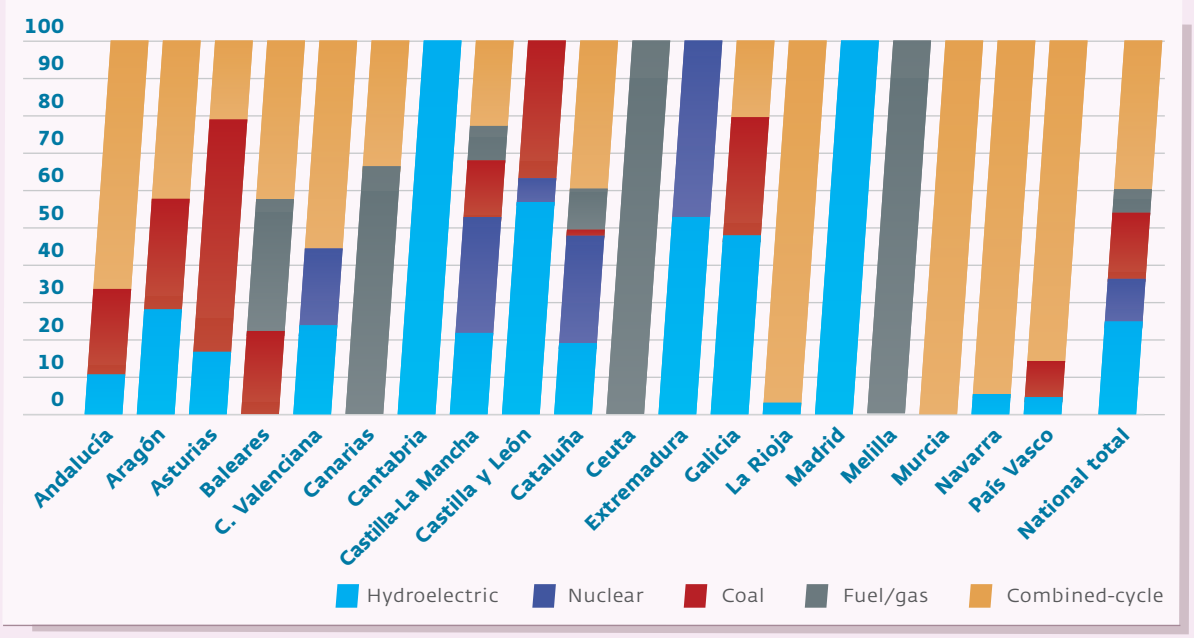
Installed power ordinary regime (MW)

	Andalucía	Aragón	Asturias	Baleares	C. Valenciana	Canarias	Cantabria	Castilla-La Mancha	Castilla y León	Cataluña
Hydroelectric	1,051	1,310	748	-	1,279	1	389	781	4,247	2,104
Nuclear	-	-	-	-	1,085	-	-	1,066	466	3,142
Coal (1)	2,072	1,341	2,628	510	-	-	-	541	2,707	162
Fuel/gas	0	-	-	802	-	1,899	-	314	-	1,178
Combined-cycle	6,043	1,898	865	934	2,909	920	-	774	-	4,240
Total 2011	**9,165**	**4,550**	**4,242**	**2,246**	**5,273**	**2,820**	**389**	**3,476**	**7,420**	**10,827**
Total 2010	9,176	4,550	4,242	2,262	5,273	2,792	389	3,476	7,420	10,782
% 11/10	-0.1	0.0	0.0	-0.7	0.0	1.0	0.0	0.0	0.0	0.4

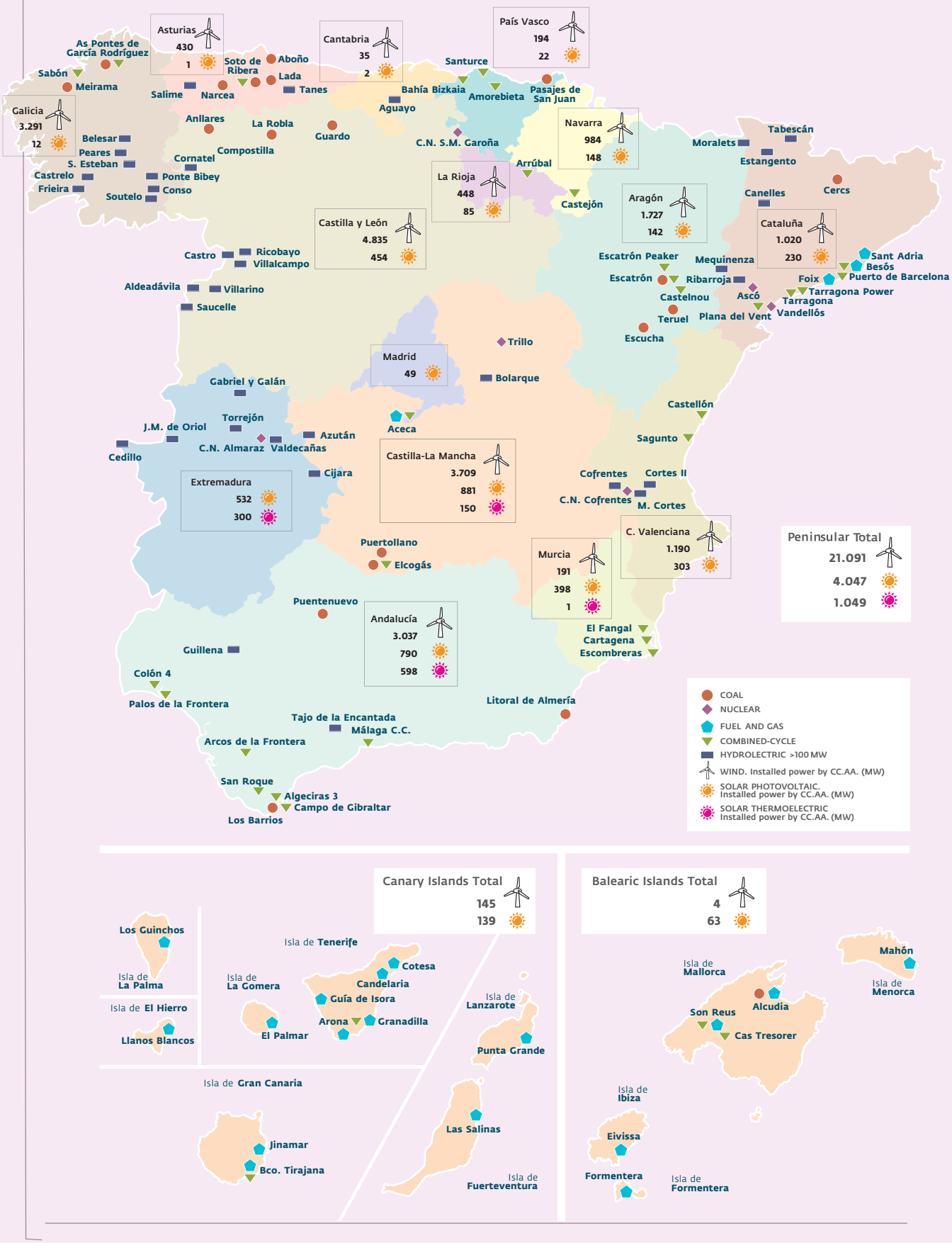
	Ceuta	Extremadura	Galicia	La Rioja	Madrid	Melilla	Murcia	Navarra	País Vasco	Total
Hydroelectric	-	2,292	3,056	30	56	-	24	77	120	17,564
Nuclear	-	2,018	-	-	-	-	-	-	-	7,777
Coal (1)	-	-	2,031	-	-	-	-	-	217	12,210
Fuel/gas	99	-	0	-	-	85	0	-	0	4,376
Combined-cycle	-	-	1,238	799	-	-	3,318	1,233	1,951	27,123
Total 2011	**99**	**4,310**	**6,325**	**829**	**56**	**85**	**3,342**	**1,310**	**2,288**	**69,050**
Total 2010	99	4,310	6,795	829	56	85	3,342	1,310	2,288	69,475
% 11/10	0.0	0.0	-6.9	0.0	0.0	0.0	0.0	0.0	0.0	-0.6

(1) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the security of supply.

Ordinary regime installed power structure by power station type (%)



Location of the main electricity power stations



Generation at alternator terminals in thermal power stations on the peninsula (GWh)

Power stations	Type of power station	Power MW	Energy (GWh) 2010	2011	%11/10
Puentenuevo 3	Coal	324	590	1,258	113.1
Litoral de Almería	Coal	1,159	4,409	5,109	15.9
Los Barrios	Coal	589	2,489	2,341	-5.9
C.Colón (1)	Fuel/gas	0	-	-	-
San Roque 1	Combined-cycle	397	1,109	1,654	49.1
San Roque 2	Combined-cycle	402	836	751	-10.1
Arcos 1	Combined-cycle	396	170	121	-29.0
Arcos 2	Combined-cycle	379	63	18	-70.6
Arcos 3	Combined-cycle	844	2,229	1,094	-50.9
Palos 1	Combined-cycle	401	2,022	1,124	-44.4
Palos 2	Combined-cycle	396	1,944	887	-54.4
Palos 3	Combined-cycle	398	1,719	894	-48.0
Campo de Gibraltar 1	Combined-cycle	393	2,194	1,467	-33.1
Campo de Gibraltar 2	Combined-cycle	388	1,552	1,445	-6.9
Colón 4	Combined-cycle	398	771	755	-2.1
Algeciras 3 CC	Combined-cycle	831	126	1,754	1,293.3
Málaga 1 CC	Combined-cycle	421	1,401	2,068	47.6
Andalucía		**8,114**	**23,625**	**22,740**	**-3.7**
Escatrón	Coal	80	0	0	0.0
Escucha	Coal	159	156	419	169.6
Teruel	Coal	1,102	1,793	6,260	249.2
Castelnou	Combined-cycle	798	1,957	358	-81.7
Escatrón 3	Combined-cycle	818	3,359	1,129	-66.4
Escatrón Peaker	Combined-cycle	283	82	18	-78.3
Aragón		**3,240**	**7,346**	**8,184**	**11.4**
Aboño	Coal	916	3,663	4,437	21.1
Lada	Coal	513	698	675	-3.3
Narcea	Coal	595	1	1,359	134,486
Soto de la Ribera	Coal	604	927	1,315	41.9
Soto de la Ribera 4	Combined-cycle	432	1,418	1,379	-2.7
Soto de la Ribera 5	Combined-cycle	434	359	438	21.9
Asturias		**3,494**	**7,066**	**9,604**	**35.9**
Trillo I	Nuclear	1,066	8,243	8,383	1.7
Puertollano	Coal	221	255	81	-68.2
Aceca	Fuel/gas	314	84	0	-
Aceca 3	Combined-cycle	400	1,225	909	-25.8
Aceca 4	Combined-cycle	374	1,838	2,444	33.0
GICC-PL ELCOGAS (2)	Coal	320	1,681	1,617	-3.8
Castilla-La Mancha		**2,695**	**13,326**	**13,435**	**0.8**
Garoña	Nuclear	466	3,830	3,742	-2.3
Anllares	Coal	365	0	1,684	0.0
Compostilla	Coal	1,171	209	5,194	2,383.6
Guardo	Coal	516	63	1,847	2,834.6
La Robla	Coal	655	29	1,016	3,360.1
Castilla y León		**3,173**	**4,131**	**13,483**	**226.4**
Ascó I	Nuclear	1,028	8,354	6,988	-16.4
Ascó II	Nuclear	1,027	7,680	7,514	-2.2
Vandellós II	Nuclear	1,087	8,875	7,347	-17.2
Cercs	Coal	162	516	14	-97.4
Foix	Fuel/gas	520	8	0	-
San Adrián	Fuel/gas	659	52	0	-

(continues on following page →)

Generation at alternator terminals in thermal power stations on the peninsula (GWh)

Power stations	Type of power station	Power MW	Energy (GWh) 2010	2011	%11/10
(→ continued)					
Besós 3	Combined-cycle	412	1,710	655	-61.7
Besós 4	Combined-cycle	407	2,183	1,715	-21.4
Besós 5	Combined-cycle	873	479	1,786	273.1
Tarragona Endesa	Combined-cycle	400	1,079	353	-67.3
Tarragona Power	Combined-cycle	424	1,712	1,414	-17.4
Plana del Vent 1	Combined-cycle	412	213	801	276.3
Plana del Vent 2	Combined-cycle	421	188	838	345.1
Puerto de Barcelona 1	Combined-cycle	447	678	1,140	68.1
Puerto de Barcelona 2	Combined-cycle	445	289	886	206.8
Cataluña		**8,723**	**34,015**	**31,450**	**-7.5**
Cofrentes	Nuclear	1,085	9,549	7,901	-17.3
Castellón 3	Combined-cycle	800	93	169	82.2
Castellón 4	Combined-cycle	854	2,619	2,419	-7.6
Sagunto 1	Combined-cycle	417	2,127	1,569	-26.2
Sagunto 2	Combined-cycle	420	2,255	1,238	-45.1
Sagunto 3	Combined-cycle	419	2,119	1,496	-29.4
C.Valenciana		**3,994**	**18,761**	**14,791**	**-21.2**
Almaraz I	Nuclear	1,035	8,168	7,762	-5.0
Almaraz II	Nuclear	983	7,292	8,095	11.0
Extremadura		**2,018**	**15,460**	**15,857**	**2.6**
Meirama	Coal	563	856	1,151	34.4
Puentes García Rodríguez	Coal	1,468	4,955	7,352	48.4
Sabón (3)	Fuel/gas	0	-	-	-
Puentes García Rodríguez 5	Combined-cycle	849	694	432	-37.8
Sabón 3	Combined-cycle	389	1,497	1,872	25.1
Galicia		**3,269**	**8,003**	**10,808**	**35.0**
Arrúbal 1	Combined-cycle	402	695	424	-39.0
Arrúbal 2	Combined-cycle	397	612	575	-6.0
La Rioja		**799**	**1,306**	**998**	**-23.6**
Cartagena 1	Combined-cycle	425	726	1,422	95.7
Cartagena 2	Combined-cycle	425	1,062	1,030	-3.0
Cartagena 3	Combined-cycle	419	952	1,193	25.3
Escombreras (4)	Fuel/gas	0	-	-	-
El Fangal 1	Combined-cycle	409	1,310	187	-85.7
El Fangal 2	Combined-cycle	408	1,028	239	-76.8
El Fangal 3	Combined-cycle	402	1,170	353	-69.8
Escombreras 6	Combined-cycle	831	1,161	1,111	-4.3
Murcia		**3,318**	**7,410**	**5,535**	**-25.3**
Castejón 1	Combined-cycle	429	1,454	530	-63.6
Castejón 2	Combined-cycle	378	704	204	-71.0
Castejón 3	Combined-cycle	426	1,350	488	-63.9
Navarra		**1,233**	**3,508**	**1,221**	**-65.2**
Amorebieta	Combined-cycle	749	2,483	1,029	-58.6
Pasajes	Coal	217	487	357	-26.7
Bahía de Bizkaia	Combined-cycle	800	2,939	2,283	-22.3
Santurce 4	Combined-cycle	403	650	178	-72.7
País Vasco		**2,168**	**6,559**	**3,846**	**-41.4**
Total		**46,238**	**150,516**	**151,953**	**1.0**

(1) Colón 2 decommissioned in June 2010. (2) As of 1 January 2011, GICC (Elcogás) has been included in the National coal figures as, in accordance with Royal Decree 134/2010, this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the process of resolving restrictions regarding the security of supply.
(3) Decommissioned in December 2011. (4) Decommissioned in January 2010.

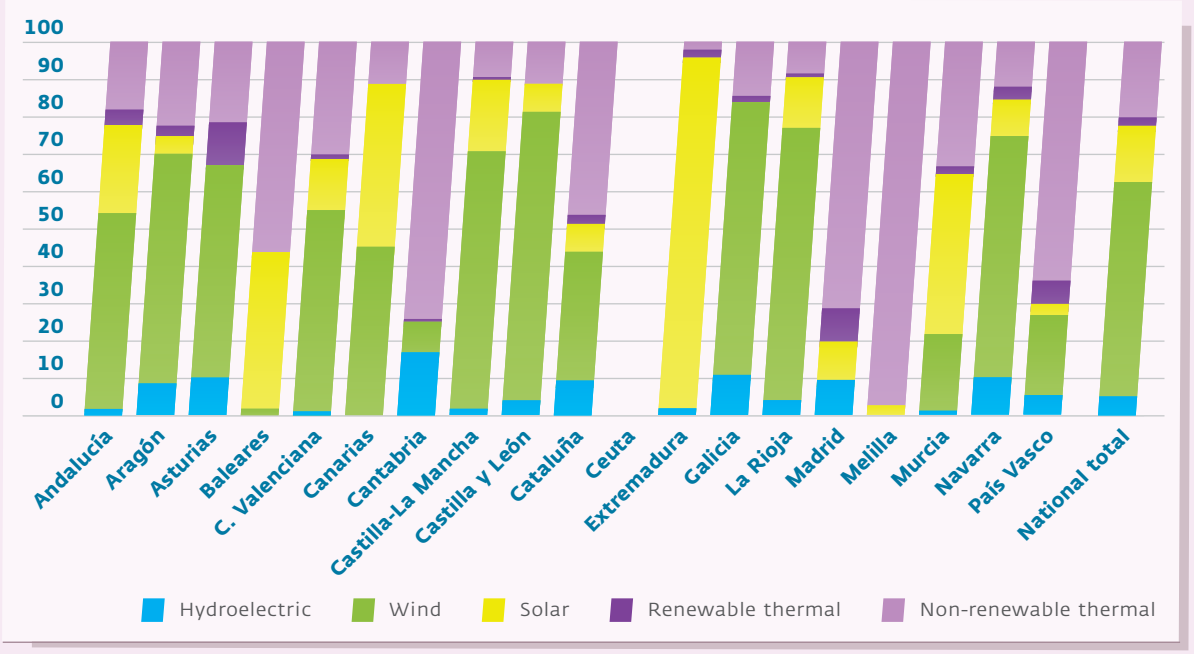
Installed power special regime (1) (MW)

	Andalucía	Aragón	Asturias	Baleares	C. Valenciana	Canarias	Cantabria	Castilla-La Mancha	Castilla y León	Cataluña
Renewables	**4,805**	**2,208**	**594**	**67**	**1,557**	**286**	**114**	**4,925**	**5,562**	**1,589**
Hydro	143	255	77	0	31	0.5	74	128	248	281
Wind	3,037	1,727	430	4	1,190	145	35	3,709	4,835	1,020
Other renewables	1,625	226	87	63	336	140	5	1,088	479	288
Biogas	19	13	9	0	10	1	3	9	5	47
Biomass	218	71	77	0	23	0	0	48	20	12
Solar photovoltaic	790	142	1	63	303	139	2	881	454	230
Solar thermoelectric	598	0	0	0	0	0	0	150	0	0
Non-renewables	**1,031**	**615**	**156**	**83**	**650**	**33**	**314**	**466**	**636**	**1,339**
Residual heat	12	0	0	0	9	0	0	0	0	0
Fuel, gasoil and liquified petroleum gases	130	30	24	5	48	33	9	93	45	97
Natural gas	833	575	59	4	539	0	251	289	591	1,195
Mining subproducts (2)	56	10	73	0	54	0	44	84	0	0
Urban solid waste	0	0	0	75	0	0	10	0	0	47
Total 2011	**5,836**	**2,823**	**750**	**150**	**2,208**	**319**	**427**	**5,391**	**6,197**	**2,928**
Total 2010	**5,274**	**2,714**	**666**	**145**	**2,112**	**342**	**424**	**5,251**	**5,376**	**2,691**
% 11/10	**10.7**	**4.0**	**12.6**	**3.5**	**4.5**	**-6.9**	**0.8**	**2.7**	**15.3**	**8.8**

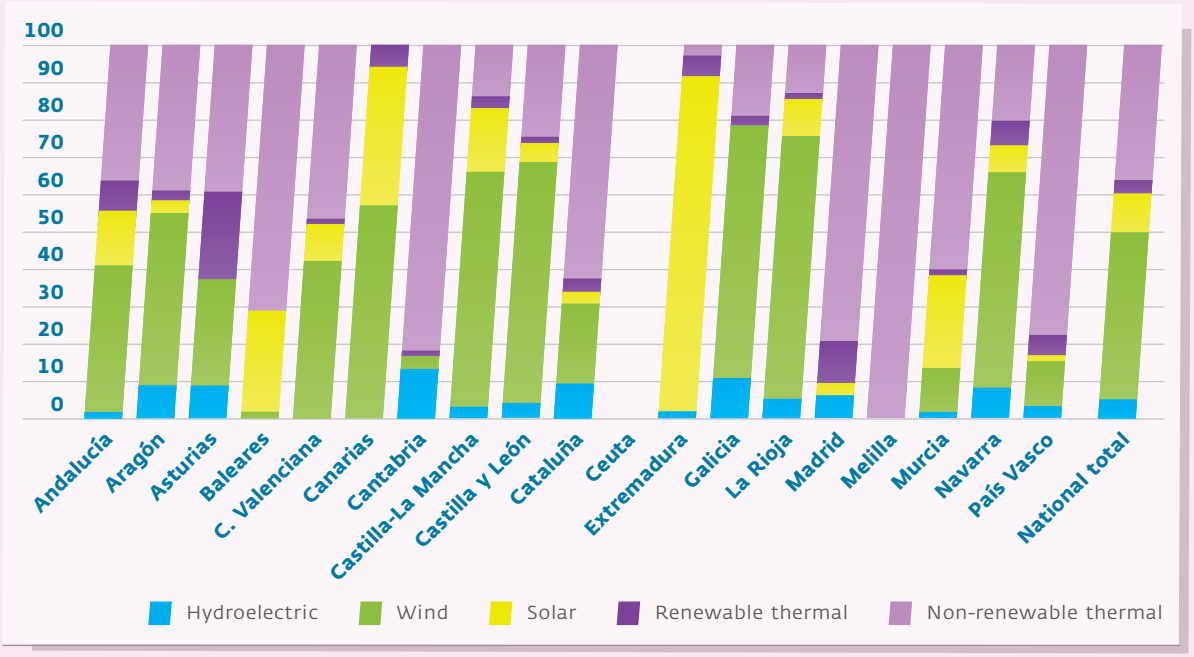
	Ceuta	Extremadura	Galicia	La Rioja	Madrid	Melilla	Murcia	Navarra	País Vasco	Total
Renewables	**0**	**868**	**3,874**	**565**	**135**	**0**	**624**	**1,329**	**335**	**29,437**
Hydro	0	20	493	27	44	0	14	151	54	2,041
Wind	0	0	3,291	448	0	0	191	984	194	21,239
Other renewables	0	849	90	90	91	0	418	194	87	6,157
Biogas	0	1	11	5	43	0	3	7	23	209
Biomass	0	16	67	0	0	0	16	38	42	650
Solar photovoltaic	0	532	12	85	49	0.1	398	148	22	4,249
Solar thermoelectric	0	300	0	0	0	0	1	0	0	1,049
Non-renewables	**0**	**19**	**622**	**48**	**330**	**2**	**309**	**175**	**571**	**7,401**
Residual heat	0	4	0	0	0	0	3	0	40	68
Fuel, gasoil and liquified petroleum gases	0	0	312	2	16	0	30	7	35	916
Natural gas	0	16	289	45	284	0	276	169	388	5,801
Mining subproducts (2)	0	0	0	0	0	0	0	0	9	332
Urban solid waste	0	0	22	0	30	2	0	0	100	285
Total 2011	**0**	**888**	**4,497**	**612**	**466**	**2**	**933**	**1,505**	**906**	**36,838**
Total 2010	**0**	**709**	**4,419**	**608**	**453**	**2**	**872**	**1,472**	**834**	**34,364**
% 11/10	**-**	**25.2**	**1.8**	**0.8**	**2.9**	**0.0**	**7.0**	**2.2**	**8.6**	**7.2**

(1) Provisional data.
(2) Includes non-commercial products obtained from mining exploitations, coal, residual gas and refinery gas.
Source: National Energy Commission (CNE).

Special regime installed power structure (%)



Structure of the energy acquired from special regime (%)



Energy acquired from special regime (1) (GWh)

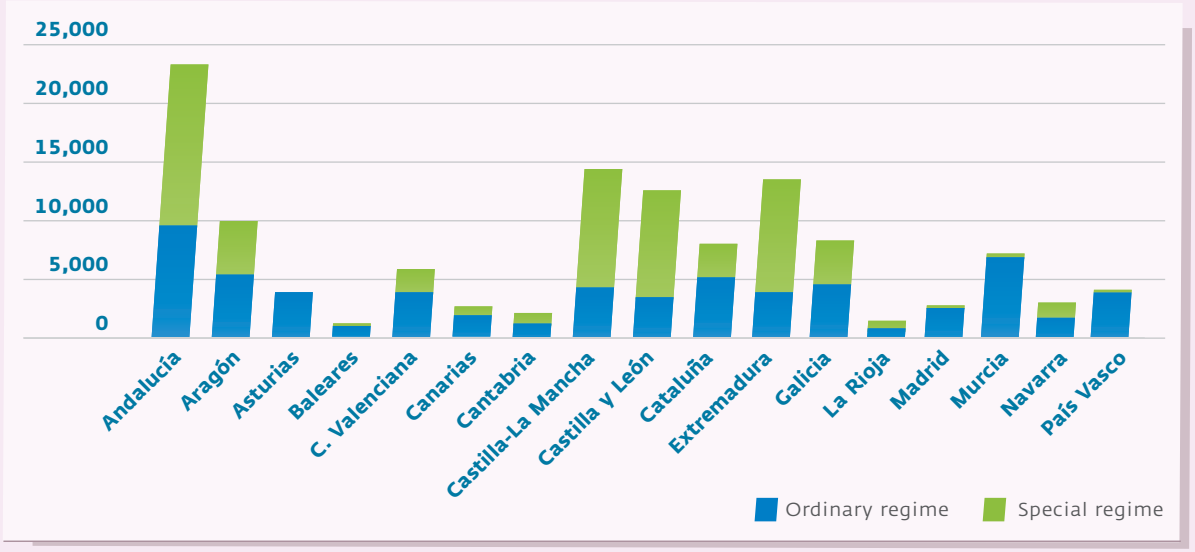
	Andalucía	Aragón	Asturias	Baleares	C. Valenciana	Canarias	Cantabria	Castilla-La Mancha	Castilla y León	Cataluña
Renewables	**10,068**	**5,045**	**1,325**	**107**	**2,408**	**621**	**294**	**9,360**	**10,378**	**3,424**
Hydro	292	714	192	0	22	1	213	441	614	925
Wind	6,225	3,867	617	6	1,893	355	64	6,753	8,847	1,884
Other renewables	3,552	463	516	101	494	265	17	2,167	917	615
Biogas	87	38	45	0	33	9	15	56	9	224
Biomass	1,227	158	470	0	15	24	0	214	149	35
Solar photovoltaic	1,400	268	1	101	446	232	2	1,660	760	357
Solar thermoelectric	838	0	0	0	0	0	0	236	0	0
Non-renewables	**5,530**	**3,163**	**842**	**261**	**2,077**	**0**	**1,287**	**1,514**	**3,386**	**5,622**
Residual heat	34	0	0	0	4	0	0	0	0	0
Fuel, gasoil and liquified petroleum gases	376	27	184	10	28	0	0	296	39	130
Natural gas	4,492	3,136	226	3	1,629	0	1,124	1,218	3,348	5,270
Mining subproducts (2)	628	0	432	0	416	0	92	0	0	0
Urban solid waste	0	0	0	247	0	0	71	0	0	222
Total 2011	**15,598**	**8,208**	**2,167**	**368**	**4,485**	**621**	**1,581**	**10,875**	**13,765**	**9,046**
Total 2010	**13,840**	**8,690**	**2,257**	**270**	**4,415**	**687**	**1,877**	**11,364**	**13,004**	**8,418**
% 11/10	**12.7**	**-5.6**	**-4.0**	**36.4**	**1.6**	**-9.6**	**-15.8**	**-4.3**	**5.8**	**7.5**

	Ceuta	Extremadura	Galicia	La Rioja	Madrid	Melilla	Murcia	Navarra	País Vasco	Total
Renewables	**0**	**1,897**	**8,911**	**1,160**	**331**	**0**	**1,052**	**3,359**	**765**	**60,506**
Hydro	0	33	1,150	76	107	0	56	330	119	5,284
Eólica	0	0	7,500	937	0	0	305	2,468	439	42,160
Other renewables	0	1,864	261	147	223	0	691	561	207	13,062
Biogas	0	4	20	11	163	0	16	22	24	776
Biomass	0	100	226	0	0	0	19	254	158	3,049
Solar photovoltaic	0	1,011	15	136	60	0.1	656	284	25	7,414
Solar thermoelectric	0	748	0	0	0	0	0	0	0	1,823
Non-renewables	**0**	**58**	**2,089**	**172**	**1,281**	**7**	**1,569**	**844**	**2,604**	**32,305**
Residual heat	0	3	0	0	0	0	8	0	58	107
Fuel, gasoil and liquified petroleum gases	0	0	1,143	6	6	0	46	9	139	2,438
Natural gas	0	55	741	165	1,122	0	1,515	834	1,693	26,569
Mining subproducts (2)	0	0	0	0	0	0	0	0	32	1,602
Urban solid waste	0	0	206	0	154	7	0	0	682	1,589
Total 2011	**0**	**1,955**	**11,000**	**1,332**	**1,611**	**7**	**2,621**	**4,203**	**3,369**	**92,811**
Total 2010	**0**	**1,163**	**12,740**	**1,413**	**1,573**	**8**	**2,545**	**4,398**	**3,129**	**91,790**
% 11/10	**-**	**68.1**	**-13.7**	**-5.7**	**2.5**	**-12.2**	**3.0**	**-4.4**	**7.7**	**1.1**

Source: National Energy Commission (CNE).
(1) Provisional data. Energy actually evacuated into the electricity system by special regime generators. Does not include the generation destined to the auto-consumption of the power station owners.
(2) Includes non-commercial products obtained from mining exploitations, coal, residual gas and refinery gas.

Energy exchange balance per Autonomous Community (GWh)

Transmission grid access requests from new generation 1999-2012 (MW)



Access to the transmission grid. New ordinary regime generation 1999-2012 (1)(2)

	Number of requests received	Requests received (MW)	Requests managed (MW)	Requests pending reply (complete documentation) (MW)	Requests pending reply (incomplete documentation (MW)
Andalucía	13	9,620	9,620	0	0
Aragón	9	5,444	5,444	0	0
Asturias	5	3,823	3,823	0	0
C. Valenciana	6	3,942	3,942	0	0
Cantabria	3	1,169	1,169	0	0
Castilla-La Mancha	10	4,317	3,567	250	500
Castilla y León	6	3,421	3,421	0	0
Cataluña	10	5,122	5,122	0	0
Extremadura	4	3,807	3,807	0	0
Galicia	12	4,514	4,514	0	0
La Rioja	2	890	890	0	0
Madrid	2	2,543	2,543	0	0
Murcia	13	6,913	3,913	400	2,600
Navarra	4	1,641	1,641	0	0
País Vasco	5	3,920	3,920	0	0
Peninsular total	**104**	**61,085**	**57,335**	**650**	**3,100**
Balearic Islands	19	1,010	1,010	0	0
Canary Islands	17	1,988	1,793	0	195
Extra-peninsular total	**36**	**2,998**	**2,803**	**0**	**195**
National total	**140**	**64,083**	**60,138**	**650**	**3,295**

(1) Of the 64,083 MW requested, 75.7% correspond to combined-cycle generation, 1.6% to coal generation, 13.7% to hydroelectric generation, 7.4% to solar photovoltaic generation and 1.6% to other generation.
(2) Data as at 31 March 2012. Current magnituds that show for each of the indicated facilities the available updated values that take into account power cancellations and variations.

Access to the transmission grid. New special regime generation 1999-2012 (1)

	Number of requests received	Requests received (MW)	Requests managed (MW)	Requests pending reply (complete documentation) (MW)	Requests pending reply (incomplete documentation (MW)
Andalucía	221	13,866	7,186	88	6,592
Aragón	51	4,634	2,910	0	1,724
Asturias	1	7	7	0	0
C. Valenciana	8	1,880	1,880	0	0
Cantabria	4	923	923	0	0
Castilla-La Mancha	56	10,247	9,278	194	775
Castilla y León	79	9,279	8,416	47	817
Cataluña	35	3,053	2,683	0	370
Extremadura	126	9,740	4,758	0	4,983
Galicia	57	3,930	3,710	0	220
La Rioja	8	509	368	0	141
Madrid	4	177	177	0	0
Murcia	1	342	342	0	0
Navarra	18	1,446	1,047	0	399
País Vasco	2	136	36	0	100
Peninsular total	**671**	**60,168**	**43,719**	**329**	**16,120**
Balearic Islands	6	175	99	76	0
Canary Islands	28	670	663	0	7
Extra-peninsular total	**34**	**845**	**762**	**76**	**7**
National total	**705**	**61,013**	**44,481**	**405**	**16,127**

(1) Data as at 31 March 2012. Current magnituds that show for each of the indicated facilities the available updated values that take into account power cancellations and variations.

Access to the transmission grid. Demand and distribution 1999-2012 (1)

	Number of requests received	Requests received (MVA)	Requests managed (MVA)	Requests pending reply (complete documentation) (MVA)	Requests pending reply (incomplete documentation (MVA)
Andalucía	93	13,162	12,716	0	446
Aragón	30	4,131	4,031	0	100
Asturias	12	2,555	2,555	0	0
C. Valenciana	79	11,110	10,685	275	150
Cantabria	11	931	931	0	0
Castilla-La Mancha	27	3,815	3,815	0	0
Castilla y León	28	2,865	2,865	0	0
Cataluña	111	13,500	13,220	0	280
Extremadura	22	3,043	2,793	0	250
Galicia	33	3,538	3,008	0	530
La Rioja	6	505	380	0	125
Madrid	91	12,385	12,205	0	180
Murcia	12	2,685	2,685	0	0
Navarra	11	1,055	1,055	0	0
País Vasco	22	1,750	1,465	0	285
Peninsular total	**588**	**77,030**	**74,409**	**275**	**2,346**
Balearic Islands	34	1,615	1,615	0	0
Canary Islands	38	1,491	1,491	0	0
Extra-peninsular total	**72**	**3,106**	**3,106**	**0**	**0**
National total	**660**	**80,136**	**77,515**	**275**	**2,346**

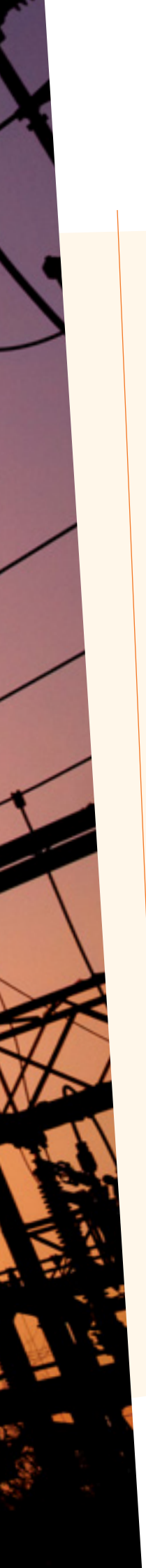
(1) Data as at 31 March 2012. Current magnituds that show for each of the indicated facilities the available updated values that take into account power cancellations and variations.

Energy Not Supplied and Average Interruption Time

	ENS (MWh)		AIT (minutes)	
	Red Eléctrica	Transmission Grid	Red Eléctrica	Transmission Grid
Andalucía	0.0	0.0	0.00	0.00
Aragón	0.1	0.1	0.01	0.01
Asturias	66.9	66.9	3.36	3.36
Baleares	34.9	38.7	3.19	3.54
C. Valenciana	8.0	8.0	0.16	0.16
Canarias	0.0	17.3	0.00	1.02
Cantabria	26.7	26.7	3.03	3.03
Castilla-La Mancha	0.0	0.0	0.00	0.00
Castilla y León	0.0	0.0	0.00	0.00
Cataluña	41.8	41.8	0.44	0.44
Extremadura	0.8	0.8	0.10	0.10
Galicia	8.2	8.2	0.21	0.21
La Rioja	30.6	30.6	9.33	9.33
Madrid	52.9	73.1	0.90	1.25
Murcia	3.3	3.3	0.22	0.22
Navarra	5.6	5.6	0.60	0.60
País Vasco	14.6	14.6	0.39	0.39

IC

International **Comparison**

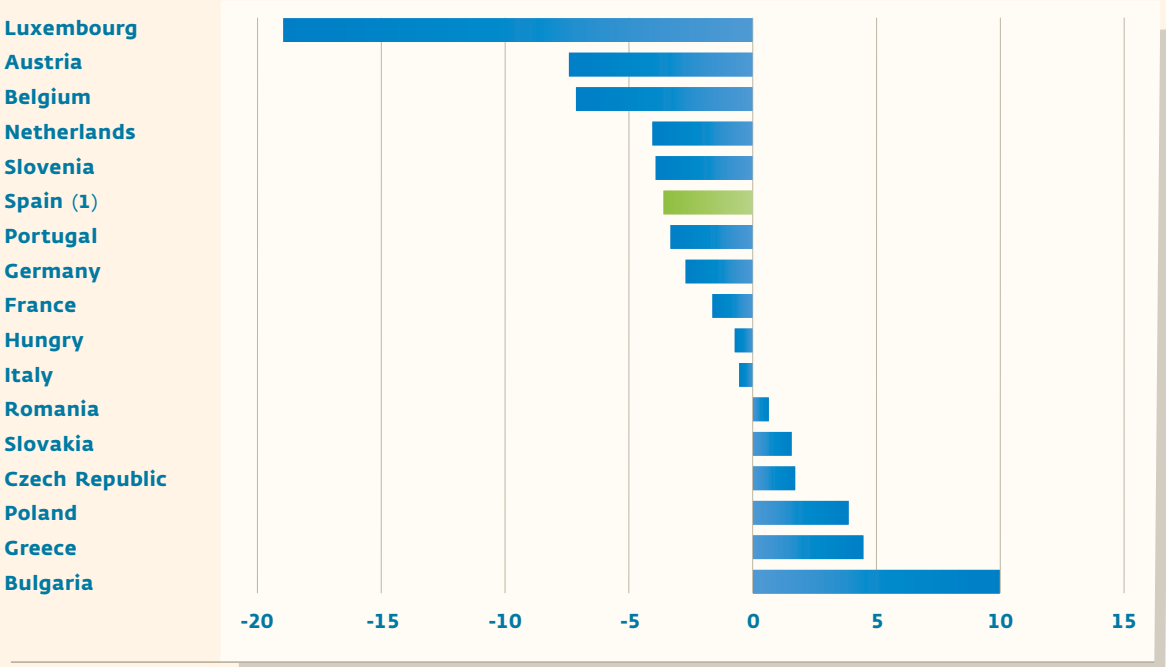


Total net electricity generation of European Union countries members of the Continental Europe (ENTSO-E) (TWh)

	2010	2011	% 11/10
Austria	70.7	65.4	-7.5
Belgium	91.6	85.1	-7.1
Bulgaria	41.0	45.1	10.0
Czech Republic	79.5	81.0	1.9
France	550.3	541.9	-1.5
Germany	573.2	557.9	-2.7
Greece	47.9	50.1	4.6
Hungry	33.8	33.6	-0.6
Italy	290.7	289.0	-0.6
Luxembourg	4.5	3.7	-18.9
Netherlands	113.7	109.0	-4.1
Poland	145.8	151.6	4.0
Portugal	50.1	48.4	-3.3
Romania	56.5	57.0	0.7
Slovakia	26.1	26.5	1.6
Slovenia	14.4	13.9	-3.9
Spain (1)	273.3	264.1	-3.4
Total	**2,463.1**	**2,423.2**	**-1.6**

(1) Peninsular system. Source: ENTSO-E, Spain REE.

Increase in total net electricity generation 2011/2010 (%)



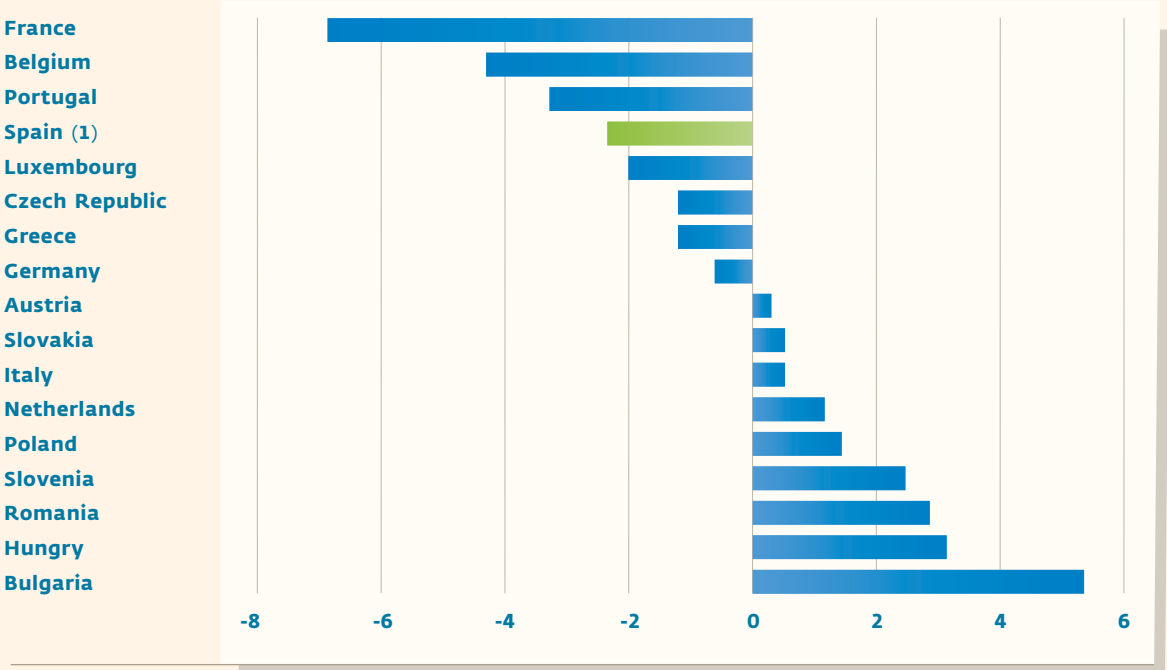
(1) Peninsular system.

Electricity demand of European Union countries members of the Continental Europe (ENTSO-E) (TWh)

	2010	2011	% 11/10
Austria	68.3	68.6	0.4
Belgium	90.4	86.5	-4.3
Bulgaria	31.5	33.2	5.4
Czech Republic	63.7	63.0	-1.2
France	513.3	478.2	-6.8
Germany	547.4	544.3	-0.6
Greece	53.6	52.9	-1.2
Hungry	39.0	40.2	3.2
Italy	330.5	332.3	0.6
Luxembourg	6.7	6.6	-2.0
Netherlands	116.5	117.8	1.2
Poland	143.6	145.7	1.5
Portugal	52.2	50.5	-3.3
Romania	53.4	54.9	2.9
Slovakia	26.6	26.8	0.5
Slovenia	12.2	12.6	2.5
Spain (1)	260.5	254.8	-2.2
Total	**2,409.4**	**2,368.8**	**-1.7**

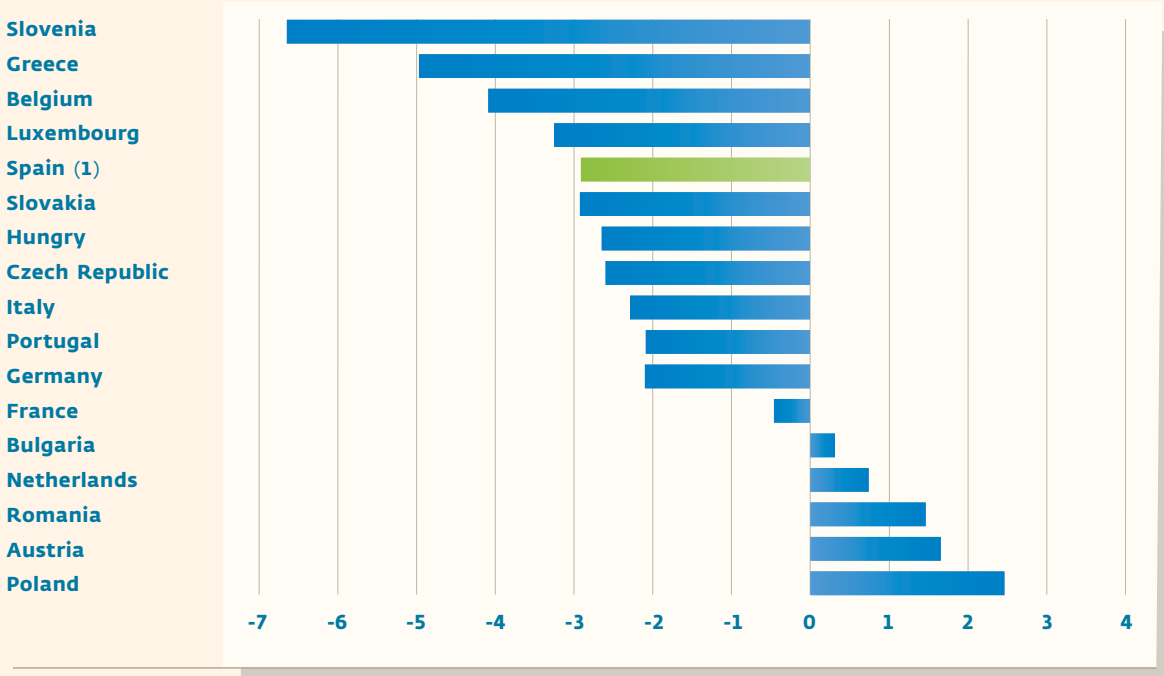
(1) Peninsular demand at power station busbars. Source: ENTSO-E, Spain REE.

Increase in electricity demand 2011/2010 (%)



(1) Peninsular system.

Increase in electricity demand 2011/2007 (%)



(1) Peninsular system.

Maximum instantaneous power of European Union countries members of the Continental Europe (ENTSO-E)

	Week day	Date	Time	Maximum Peak (MW)	Avg. Temperature (ºC)
Austria	Wednesday	21 December	17:00	10,580	(*)
Belgium	Wednesday	12 January	17:45	14,314	6.5
Bulgaria	Tuesday	1 February	19:00	6,973	-1.7
Czech Republic	Tuesday	1 February	12:00	10,127	-7.3
France	Tuesday	4 January	19:00	91,720	-1.2
Germany	Wednesday	7 December	18:00	76,400	(*)
Greece	Wednesday	20 July	13:00	10,055	33.0
Hungry	Thursday	24 November	16:45	5,931	-2.4
Italy	Wednesday	13 July	12:00	56,474	29.5
Luxembourg	Wednesday	21 December	18:00	1,188	2.1
Netherlands	Wednesday	14 December	17:30	16,791	5.0
Poland	Thursday	22 December	17:15	22,906	-1.8
Portugal	Monday	24 January	20:45	9,192	7.7
Romania	Thursday	3 February	19:00	8,724	-7.8
Slovakia	Tuesday	1 February	9:00	4,279	-7.1
Slovenia	Wednesday	2 March	20:00	1,995	0.8
Spain	Monday	24 January	19:50	43,896	4.9

(*) Data not available. Source: ENTSO-E, Spain REE.

Consumption per capita of European Union countries members of the Continental Europe (ENTSO-E) (kWh/hab.)

	2010	2011	% 11/10
Austria	8,158	8,159	0.0
Belgium	8,338	7,897	-5.3
Bulgaria	4,170	4,428	6.2
Czech Republic	6,066	5,979	-1.4
France	7,934	7,351	-7.3
Germany	6,692	6,658	-0.5
Greece	4,737	4,679	-1.2
Hungry	3,892	4,027	3.5
Italy	5,477	5,481	0.1
Luxembourg	13,325	12,813	-3.8
Netherlands	7,026	7,075	0.7
Poland	3,762	3,814	1.4
Portugal	4,908	4,748	-3.3
Romania	2,486	2,565	3.1
Slovakia	4,910	4,927	0.3
Slovenia	5,983	6,125	2.4
Spain (1)	5,665	5,520	-2.6
Total	**5,931**	**5,818**	**-1.9**

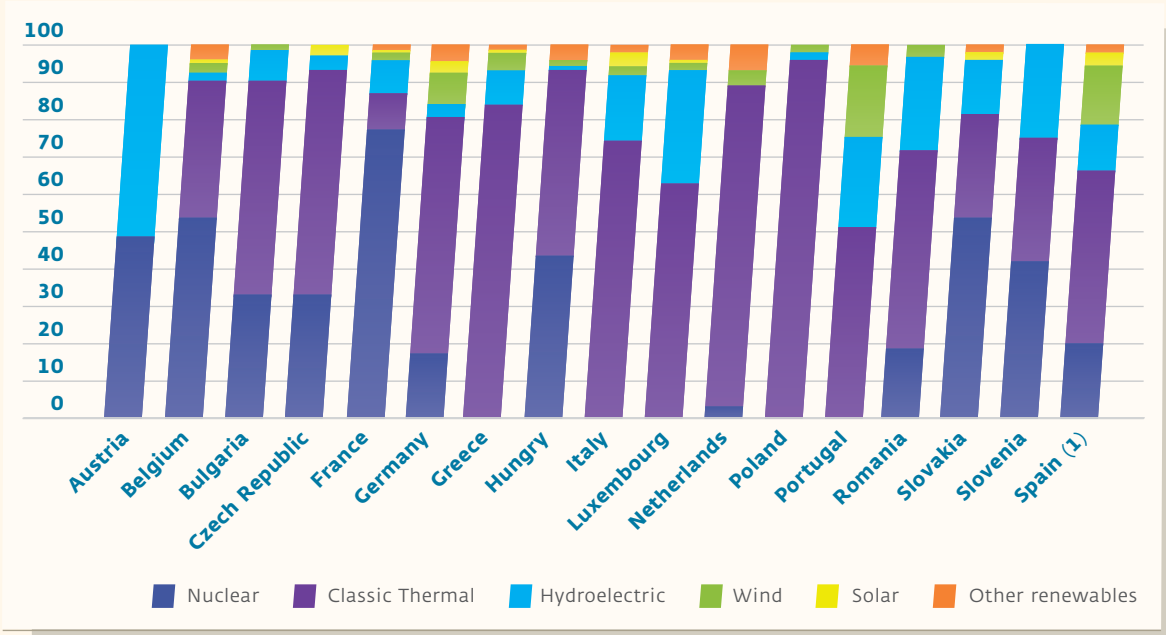
Consumption per capita = Total consumption / nº inhabitants.
Population data: Eurostat; consumption data: ENTSO-E, Spain REE.

Origin of total net generation of European Union countries members of the Continental Europe (ENTSO-E) (TWh)

	Nuclear	Classic Thermal (2)	Hydroelectric	Wind	Solar	Other renewables	Total
Austria	0.0	31.7	33.7	0.0	0.0	0.0	65.4
Belgium	45.9	31.2	1.4	2.3	1.3	3.0	85.1
Bulgaria	15.2	25.9	3.5	0.5	0.0	0.0	45.1
Czech Republic	26.7	49.0	2.8	0.4	2.1	0.0	81.0
France	421.1	51.3	50.3	11.9	1.8	5.6	541.9
Germany	101.5	350.5	19.9	44.6	18.3	23.1	557.9
Greece	0.0	42.4	4.3	2.6	0.4	0.3	50.1
Hungry	14.7	16.8	0.2	0.6	0.0	1.2	33.6
Italy	0.0	217.2	47.7	9.6	9.3	5.3	289.0
Luxembourg	0.0	2.3	1.1	0.1	0.0	0.1	3.7
Netherlands	3.9	93.0	0.0	5.1	0.0	7.0	109.0
Poland	0.0	145.8	2.6	2.7	0.0	0.4	151.6
Portugal	0.0	24.8	11.8	9.0	0.3	2.6	48.4
Romania	10.8	30.1	14.7	1.2	0.0	0.2	57.0
Slovakia	14.4	7.3	4.0	0.0	0.3	0.6	26.5
Slovenia	5.9	4.6	3.4	0.0	0.0	0.0	13.9
Spain (1)	55.1	122.0	32.5	41.8	8.9	3.8	264.1
Total	**715.2**	**1,246.0**	**233.7**	**132.5**	**42.7**	**53.1**	**2,423.2**

(1) Peninsular system. (2) Includes combined cycle. Source: ENTSO-E, Spain REE.

Structure of total net generation of European Union countries members of the Continental Europe (ENTSO-E) (%)



(1) Peninsular system.

Demand coverage of electricity of European Union countries members of the Continental Europe (ENTSO-E) (TWh)

	Hydroelectric and others	Nuclear	Classic Thermal (2)	Total net generation	Pumped storage consumption	Net Energy Exchange	Demand
Austria	33.7	0.0	31.7	65.4	5.1	8.2	68.6
Belgium	7.9	45.9	31.2	85.1	1.6	3.0	86.5
Bulgaria	4.1	15.2	25.9	45.1	1.2	-10.7	33.2
Czech Republic	5.2	26.7	49.0	81.0	0.9	-17.0	63.0
France	69.6	421.1	51.3	541.9	6.8	-56.9	478.2
Germany	106.0	101.5	350.5	557.9	7.3	-6.3	544.3
Greece	7.6	0.0	42.4	50.1	0.4	3.2	52.9
Hungry	2.0	14.7	16.8	33.6	0.0	6.6	40.2
Italy	71.8	0.0	217.2	289.0	2.5	45.8	332.3
Luxembourg	1.3	0.0	2.3	3.7	1.5	4.4	6.6
Netherlands	12.1	3.9	93.0	109.0	0.0	8.8	117.8
Poland	5.8	0.0	145.8	151.6	0.6	-5.2	145.7
Portugal	23.7	0.0	24.8	48.4	0.7	2.8	50.5
Romania	16.1	10.8	30.1	57.0	0.2	-1.9	54.9
Slovakia	4.9	14.4	7.3	26.5	0.5	0.7	26.8
Slovenia	3.4	5.9	4.6	13.9	0.0	-1.3	12.6
Spain (1)	87.0	55.1	122.0	264.1	3.2	-6.1	254.8

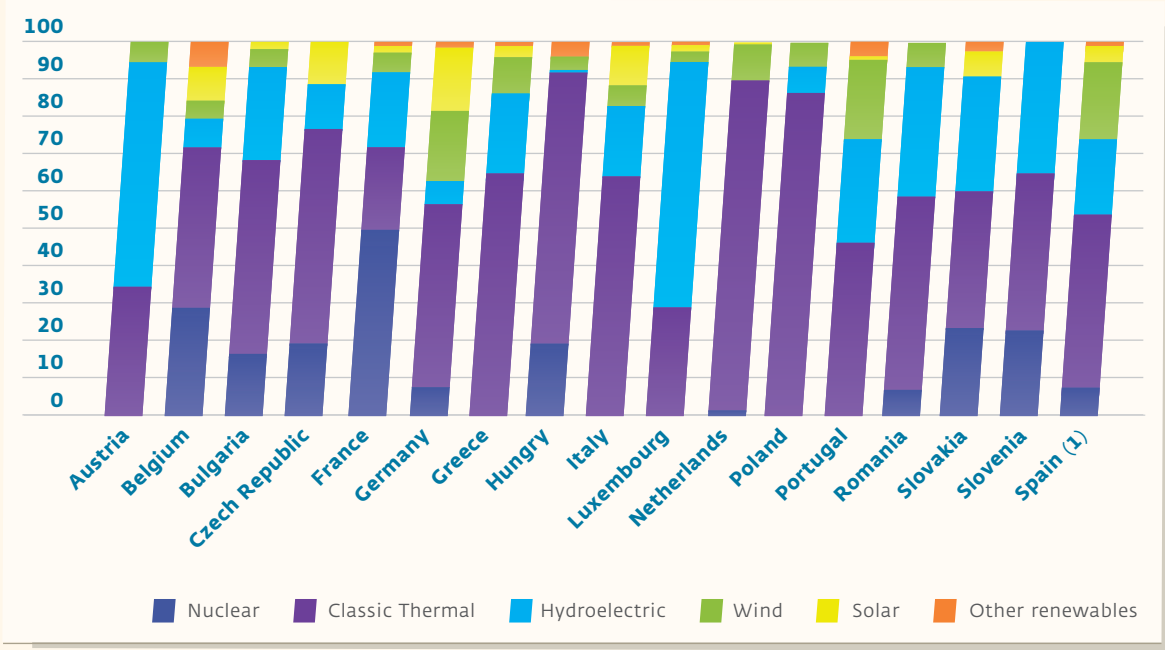
(1) Peninsular system. (2) Includes combined cycle. Source: ENTSO-E, Spain REE.

Net installed power in European Union countries members of the Continental Europe (ENTSO-E) (GW)

	Nuclear	Classic Thermal (2)	Hydroelectric	Wind	Solar	Other renewables	Total
Austria	0.0	7.4	12.9	1.0	0.0	0.0	21.4
Belgium	5.9	8.5	1.4	1.1	1.9	1.2	20.0
Bulgaria	2.1	6.4	3.2	0.6	0.2	0.0	12.4
Czech Republic	3.7	10.9	2.2	0.2	2.0	0.0	19.0
France	63.1	27.8	25.4	6.6	2.2	1.3	126.5
Germany	12.0	70.2	9.2	28.3	22.3	3.0	145.0
Greece	0.0	9.6	3.2	1.4	0.4	0.1	14.8
Hungry	1.9	6.9	0.1	0.3	0.0	0.4	9.5
Italy	0.0	76.4	21.6	7.0	12.7	0.7	118.4
Luxembourg	0.0	0.5	1.1	0.0	0.0	0.0	1.7
Netherlands	0.5	21.1	0.0	2.3	0.1	0.0	24.1
Poland	0.0	30.1	2.3	2.1	0.0	0.1	34.7
Portugal	0.0	8.8	5.4	4.1	0.2	0.6	19.0
Romania	1.3	8.9	6.1	1.0	0.0	0.0	17.4
Slovakia	1.9	3.0	2.5	0.0	0.5	0.2	8.2
Slovenia	0.7	1.3	1.1	0.0	0.0	0.0	3.0
Spain (1)	7.4	44.5	19.3	21.1	5.1	0.9	98.3
Total	**100.7**	**342.4**	**117.0**	**77.0**	**47.7**	**8.6**	**693.4**

(1) Peninsular system. (2) Includes combined cycle. Source: ENTSO-E, Spain REE.

Structure of net installed power in European Union countries members of the Continental Europe (ENTSO-E) (%)



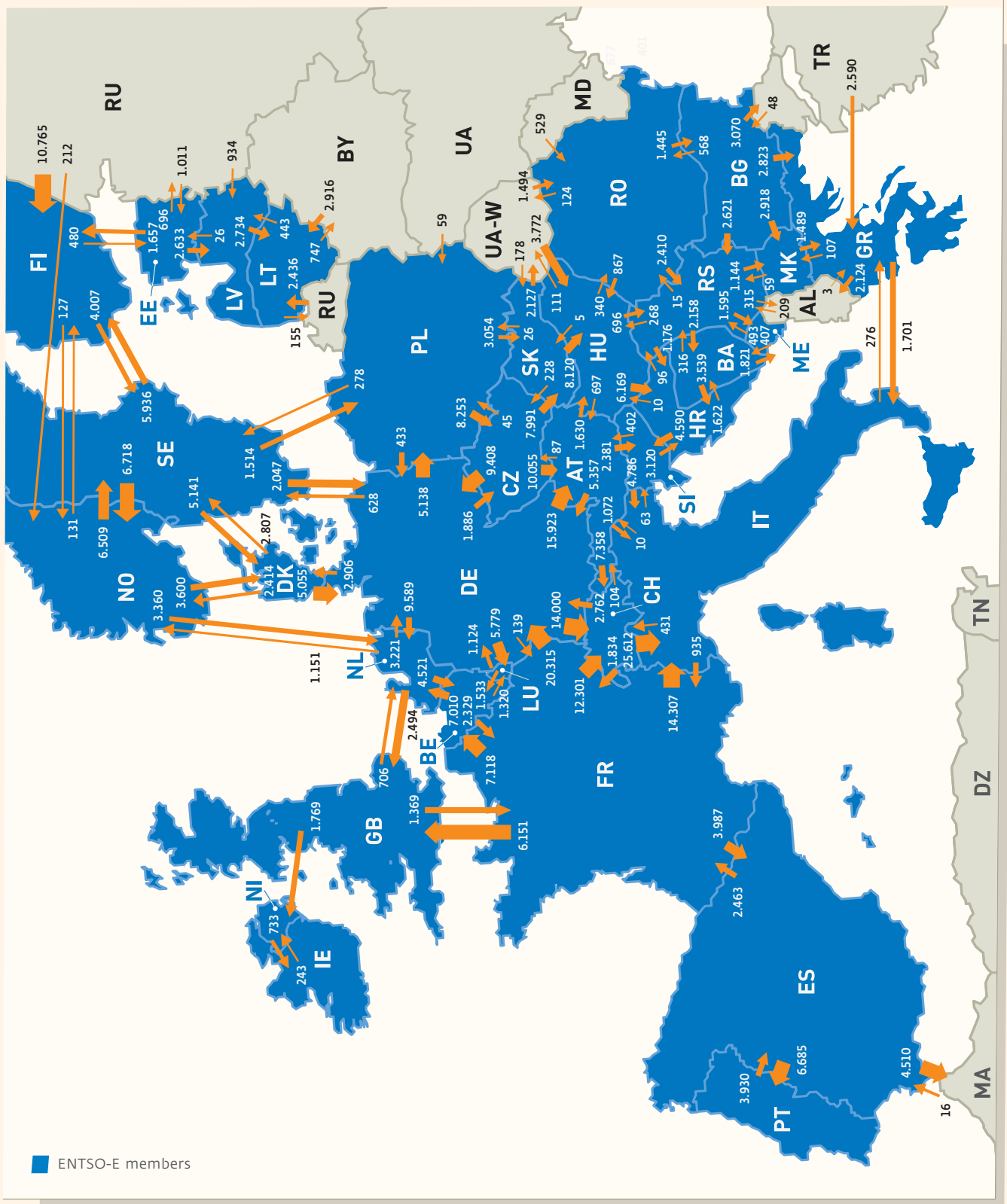
(1) Peninsular system.

International physical energy exchanges in ENTSO-E member countries and neighbouring countries (1) (GWh)

	Importations	Exportations	Balance
Albania (AL)	2,439	212	2,227
Austria (AT)	27,191	17,885	9,306
Belarus (BY)	747	2,916	-2,169
Belgium (BE)	13,172	10,659	2,513
Bosnia-Herzegovina (BA)	4,187	5,676	-1,489
Bulgaria (BG)	1,493	12,000	-10,507
Croatia (HR)	14,004	6,318	7,686
Czech Republic (CZ)	10,454	27,499	-17,045
Dinamarca (DK)	11,647	10,276	1,371
Estonia (EE)	1,517	4,986	-3,469
Finlandia (FI)	18,489	4,614	13,875
France (FR)	9,069	64,179	-55,110
FYROM (MK)	4,169	1,548	2,621
Germany (DE)	49,722	55,988	-6,266
Great Britain (GB)	8,645	3,844	4,801
Greece (GR)	7,181	3,932	3,249
Hungry (HU)	14,667	8,018	6,649
Ireland (IE)	733	243	490
Italy (IT)	47,478	1,715	45,763
Latvia (LV)	4,010	2,760	1,250
Lithuania (LT)	8,086	1,345	6,741
Luxembourg (LU)	7,099	2,657	4,442
Moldava (MD)	0	529	-529
Montenegro (ME)(2)	n,d,	n,d,	n,d,
Morocco (MA)	4,510	16	4,495
Netherlands (NL)	20,665	11,787	8,878
North Ireland (NI)	2,012	733	1,279
Norway (NO)	11,022	13,600	-2,578
Poland (PL)	6,779	12,023	-5,244
Portugal (PT)	6,685	3,930	2,756
Romania (RO)	2,946	4,846	-1,900
Russia (RU)	851	15,358	-14,507
Serbia (RS)	6,900	6,671	229
Slovakia (SK)	11,228	10,501	727
Slovenia (SI)	7,034	8,308	-1,274
Spain (ES)	7,932	13,658	-5,726
Sweden (SE)	14,229	21,356	-7,127
Switzerland (CH)	34,090	30,312	3,778
Turkey (TR)	3,070	2,638	432
Ukraine (UA)	2,362	5,503	-3,141

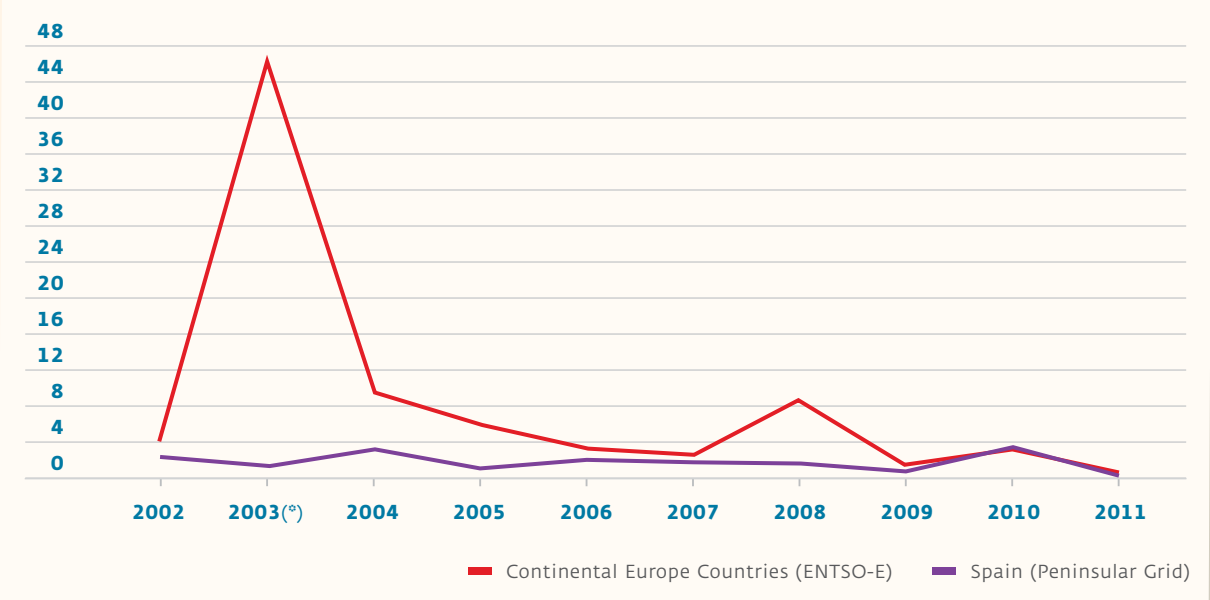
(1) Exchanges between blocks in interconnections of no less than 100 kV.
(2) Complete data values regarding international exchanges for Montenegro (ME) is not available.
Source: ENTSO-E, Spain REE

International physical energy exchanges in ENTSO-E member countries and neighbouring countries (*) (GWh)



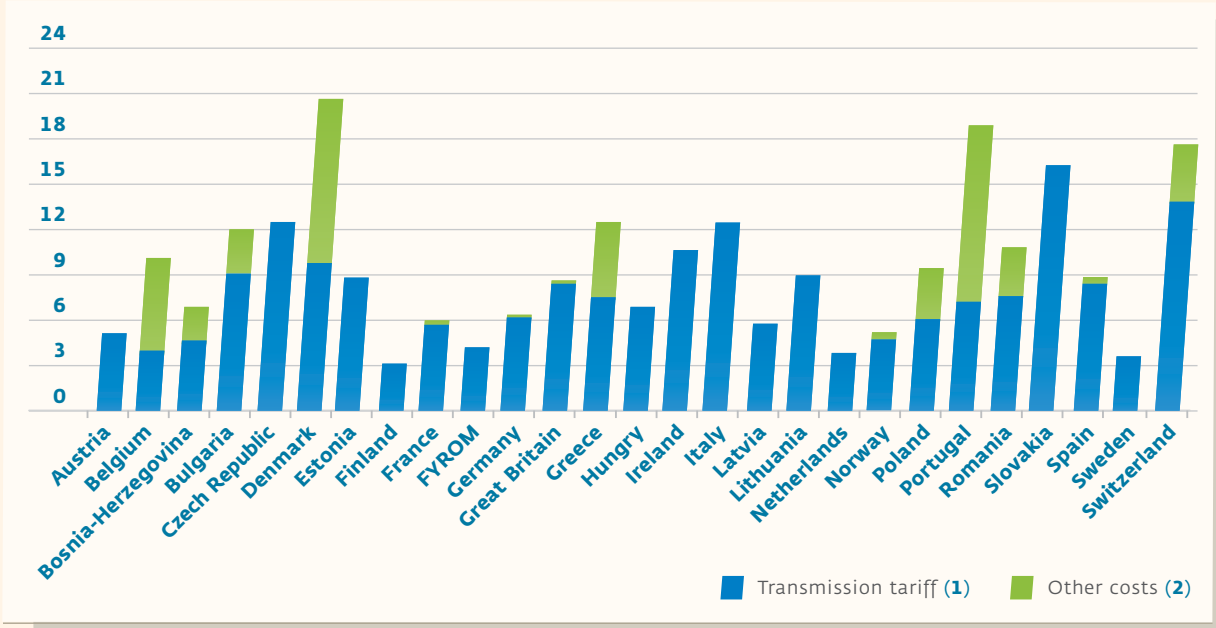
(*) Exchanges between blocks in interconnections of no less than 100 kV. Source: ENTSO-E, Spain REE.

Average interruption time (AIT) due to incidences in the transmission grid (minutes)



AIT = ENS/Average power of the system.
(*) Includes power outage occured in Italy in September 2003.

Transmission tariffs in ENTSO-E member countries (*) (€/MWh)



(*) Tariffs applied to consumer connected to the 400-380 kV transmission grid, with maximum power demand of 40 MW and 5,000 hours of utilization.
(1) Costs related to TSO activities: infrastructure (capital and all operation charges), losses, system services, congestion.
(2) Other regulatory charges not directly related to TSO activities: stranded costs, public interest contribution, renewable energy and other.
Source: ENTSO-E. Overview of transmission tariffs in Europe: Synthesis 2011.

Glossary of **terms**

AIT (Average Interruption Time). Time, in minutes, which results from dividing the ENS (energy not supplied to the system due to interruptions of the service occurred in the transmission grid), by the average power of the peninsular system.

Ancillary services. Services which are necessary to ensure the electricity supply under the suitable conditions of security, quality and reliability. These include: primary control, secondary control, tertiary control and voltage control of the transmission grid.

Average hourly power. Is the total of all instantaneous power values within an interval of time equal to one hour.

Balance markets. Are those system adjustment services markets which allow the generation and demand to be balanced (deviation management services and tertiary and secondary control energy).

Bilateral contracts. The producers, auto-producers, external agents, distributors, traders, consumers or representatives of any of the aforementioned, as participants in the production market may formalise bilateral contracts regarding physical electricity delivery.

Capacity payments. Regulated payment to finance the medium and long-term power capacity service, offered by the generation facilities to the electricity system.

Closed-cycle pumped storage generation. Production of electricity carried out by the hydroelectric power stations whose higher elevation reservoir does not receive any type of natural contributions of water, but uses water solely from the lower elevation reservoir.

Combined cycle. Technology for the generation of electricity in which two thermodynamic cycles coexist within one system: one involves the use of steam, and the other one involves the use of gas. In a power station, the gas cycle generates electrical energy by means of a gas turbine and the steam cycle involves the use of one or more steam turbines. The heat generated by combustion in the gas turbine is passed to a conventional boiler or to a heat-recovery element to produce steam which is then used to move one or more steam turbines, increasing the yield of the process. Electricity generators are coupled to both the gas and steam turbines.

Commercial exchange capacity. Technical maximum import and export capacity of the Spanish electricity system with that of a neighbouring country's system and that is both compatible and which complies with the security criteria established for each system.

Congestion rents. Revenues derived from the management of the interconnection capacity between electricity systems.

Congestion. A situation in which the link which interconnects two national transmission grids is not able to accept all the resulting physical flows of the international trade which has been requested by market participants. This is done through bilateral contracts or as a result of the Market Splitting process, due to an insufficient interconnection capacity of the elements and/or the own national transmission grids in question.

Consumers. Natural or legal persons who buy energy for their own use. Those consumers who acquire energy directly from the production market are known as Direct Market Consumers.

Control deviations. Deviations which occur between two electricity systems and are measured as the difference between the scheduled international exchanges and the international physical energy exchanges.

Counter-trading (also called Coordinated Balancing Actions). Schedule for exchanging energy between two electricity systems. It is established in real time and is carried out in a coordinated way between both system operators. This is super-imposed on the pre-existing final exchange schedules, whilst maintaining these, in order to solve a congestion situation identified in real time in the interconnection.

Daily base operating schedule (PDBF). Is the daily energy schedule, broken-down in scheduled periods for the different energy generation selling and purchasing agents/units within the Spanish peninsular electricity system. This schedule is established by the System Operator based on the schedule resulting from matching the day-ahead market and the data regarding the execution of bilateral contracts with physical dispatch of energy.

Day-ahead market. This is the market in which the purchasing and sales transactions of electricty for the following day are carried out.

Demand (at power station busbars). Energy injected in to the transmission grid from the ordinary and special regime power stations and imports, after deducting the consumption of pumps and exports. In order to transport this energy to the consumption points it would be necessary to subtract the losses originated in the transmission and distribution grid.

Demand in regulated market for last resort supply. Electricity demand of the consumers on the peninsula (measured at power station busbars after subtracting standard losses) who contract energy from a last resort trader/reseller.

Deviation management. The mechanism of deviation management is an optional service managed and remunerated by market mechanisms. The objective is to resolve the deviations between generation and demand superior to 300 MWh which could appear in the period between the end of one intraday market and the beginning of the next intraday market horizon.

Distribution network technical restrictions. Are those technical restrictions, corresponding to requests sent by the

distribution network managers to the System Operator, to guarantee the security of the distribution network under its management.

Distributors. Those mercantile societies which have the function of distributing electricity, as well as to construct, maintain and operate the distribution facilities required to transfer and distribute the energy at the consumption points.

Energy market balance . This is the balance resulting from the difference between the measured losses in transmission and distribution and the standard losses used in the balancing procedure of the system as a whole.

Explicit auction. A congestion management method used to allocate solely the interconnection capacity right.

Generation consumption. Energy used by the auxiliary elements of power stations, necessary for the everyday functioning of the production facilities.

Generation Market. This is comprised of the set of commercial purchase transactions and the sale of energy and other services related to the supply of electricity. It is structured on credit markets, day-ahead market, intraday market, non-organised markets and system adjustment services, understanding as such the resolution of technical restrictions of the system, ancillary services and deviation management.

Hydroelectric reserves. The hydroelectric reserve of a reservoir is the quantity of electricity that could be produced in its own power station and in all the power stations situated downstream, with the total drainage of its current useable water reserves and providing that drainage occurs without natural contributions. The annual regime reservoirs are those in which complete drainage would take place in less than one year. Hyper-annual regime reservoirs are those in which the total drainage time takes more than one year.

Installed power. Maximum power that a production unit can reach, during a determined period of time, measured at the generator terminals.

Instantaneous Power. Instantaneous power is the energy absorbed by the demand at any given moment of time.

International physical exchange. The movements of energy which have taken place across lines of international interconnection during a certain period of time. It includes the loop flow of energy as a consequence of the grid design.

International scheduled exchanges. These are the schedules that are established between two electricity systems as a consequence of a set of scheduled individual transactions in the market by Market Participants, or by means of bilateral contracts.

Interruptibility. This is a demand management tool managed by Red Eléctrica as system operator and is used to provide an efficient and rapid response to the needs of the electricity system. The concept of interruptibility has changed into that of demand management in which large consumers who acquire energy through the electricity market can take part and can establish the corresponding service level contracts with the system operator. These companies obtain discounts on their invoices in exchange for a reduction in their electrical consumption, upon demand, and under special circumstances as determined by the system operator. In any case, the reductions of consumption to which these consumers must agree to are typified in

the regulation and have as fundamental variables, the notice period, its duration and the number of times it can happen in an electrical year (November 1 - October 31).

Intraday market. The objective is to manage the adjustments occurring in the generation and demand of energy which may be produced after having fixed the day-ahead market.

Last resort supply. Electricity power supply scheme that replaces the integral tariffs, and that is established for specific consumers who, owing to their characteristics, may have trouble contracting their consumption in the free market, and to whom last resort tariffs (TUR) would be applied. The TUR sets out the maximum and minimum prices which may be charged by traders/resellers assigned the role of last resort supply (also called last resort traders/resellers), to consumers who meet the established criteria that allow power supply under this scheme and who willingly choose to sign-up to this regime. As of July 1, 2009, last resort consumers are those low-voltage electricity consumers whose contracted power is less than or equal to 10KW.

Market Operator. A mercantile society which assumes the management of the bid system for the purchase and sale of electricity in the day-ahead and intraday market under the established regulations.

Market splitting. Management mechanism for the exchange capacity between two or more electricity systems which is carried out simultaneously with the Iberian generation market and uses as its criteria the economic efficiency of the spare capacity between the electricity systems. In the case of congestion between the systems, the market splits into zones of differing price. In the contrary case, an overall unique price for the market exists.

Measured deviation. Difference between the energy measured at the power station busbars and the energy scheduled in the market.

Measured downward deviations. Measured downward deviations are those which result when the production measured at the power station busbars is smaller than that scheduled in the market, or when the consumption measured at the busbars is higher than that scheduled in the market. Therefore, the system must manage that difference by increasing production through the adjustment markets in real time.

Measured upward deviations. Measured upward deviations are those which result when the production measured at the power station busbars is greater than that scheduled in the market, or when the consumption measured at the busbars is lower than that scheduled in the market: Therefore, the system must manage that difference by reducing production through the adjustment markets in real time.

National demand in free market. Electricity demand of the consumers on the peninsula (measured at power station busbars) who directly contract energy from a trader or in the market.

Net energy. Maximum energy which a production unit can reach measured at outgoing feeder connections of the power station, that is to say, subtracting the power consumed in any way in electricity generation.

Net generation. Production of energy measured at the generator terminals, minus the consumption in the auxiliary services and the losses in the transformers.

Net production. The electricity production of a generation unit, measured at the generator

terminals, having subtracted that consumed by the auxiliary services and transformer losses.

Non-renewable energies. Those obtained from fossil fuels (liquid or solid) and their derivatives.

Ordinary regime. The production of electricity from all those facilities which are not included under the special regime.

Producible hydroelectric index. This is the quotient between the producible energy and the average producible energy, both related to the same period and to the same hydroelectric equipment.

Producible hydroelectric. Maximum quantity of electricity that theoretically could be produced considering the water supplies registered during a specific period of time, and once the supplies used for irrigation or uses other than the generation of electricity have been subtracted.

Production (at generator terminals). The electricity production of a generation unit, measured at the outgoing generator terminals.

Production (at power station busbars). Energy measured at the generator terminals having deducted the consumption required for generation and pumped storage.

Programming unit. Minimum element with capacity to bid in a market.

Pumped storage consumption. Electrical energy used by pumped storage hydroelectric power stations for elevating water from the lower to the upper reservoir for the generation of electricity.

Real time restrictions. The process carried out by the System Operator consisting of the resolution of the technical restrictions identified during real-time operation of the system by means of the modification of the schedules of the Programming Units.

Renewable energies. Those obtained from natural resources and also from both industrial and urban waste. These different types of energy sources include biogas, biomass, wind, hydroelectric, marine-hydroelectric, solar and industrial/ urban residues.

Restrictions due to security of supply. A security of supply restriction is understood as the generation from thermal electricity production sources using local primary energy fuel deemed necessary to ensure security of supply in the Spanish electricity system, taking into account the limit established in Article 25 of Law 54/1997 of November 27, and taking into account the possible safety limitations for energy delivery schedules that, in accordance with the system operation procedures, might be necessary to apply. To solve security of supply restrictions, power delivery schedules of certain production units can be modified to contemplate the thermal production of those power stations using local coal as fuel, whereby only enabled power stations as providers of this service can participate in this process.

Secondary capacity market. A mechanism which allows the transfer and resale, on behalf of a participant, of acquired physical capacity rights in the annual and monthly auctions, or by means of transfers.

Secondary control band and secondary control. Secondary control is an optional ancillary service with the objective of maintaining the generation-demand balance, correcting deviations with respect to the anticipated power exchange schedules between

Spain and France, and frequency deviations. Its temporary action horizon stretches from 20 seconds to 15 minutes. This service is remunerated by means of market mechanisms via two concepts: availability (control band) and usage (energy).

Solar photovoltaic. Sunlight converted into electricity through the use of solar cells, generally made of semiconductor material that, when exposed to sunlight, generates electricity.

Solar thermoelectric. Heat produced by solar radiation that can be taken advantage of for the production of mechanical energy and, subsequently, electricity.

Special regime. Production of electricity which falls under a unique economic regime, originating from facilities with installed power not exceeding 50 MW whose production originates from cogeneration, or other forms of electricity generation associated with non-electrical activities, if and when they entail a high energy yield: Groups that use renewable non-consumable energies, biomass or any type of biofuel as a primary energy source: Groups which use non-renewable or agricultural waste, livestock and service sector waste as primary energy sources, with an installed power lower than or equal to 25 MW, when they entail a high energy yield.

Support exchanges. Schedules which are established between two electricity systems to guarantee the conditions for the security of supply of either of the two interconnected systems. This is done in case of emergency to solve a specific risk situation in the operation of one of the systems and with the previous agreement between the respective operators and in the absence of alternative means of resolution in the system requiring support.

Surplus/deficit of deviations. Difference between the amount of the settlements of the deviations and the energy used to maintain the generation-demand balance.

System adjustment services. Services required to ensure the electricity supply under the necessary conditions of quality, reliability and security. The adjustment services can be of an obligatory or optional character. Resolution of restrictions due to guarantee of supply, resolution of technical restrictions of the system, ancillary services and deviation management are all considered adjustment services.

System operation processes. Those system adjustment services which are necessary to assure the electricity supply under the necessary conditions of quality, reliability and security. The adjustment services can have obligatory or optional character. Adjustment services are understood as the resolution of technical restrictions of the system, ancillary services and deviation management.

System Operator. A mercantile society whose main function is to guarantee the continuity and security of the electricity supply, as well as the correct coordination of the generation and transmission system. It carries out its functions in coordination with the operators and particpants of the Iberian Electricity Market under the principles of transparency, objectivity and independence. Under the current Spanish model, the system operator is also the manager of the transmission grid.

Technical restrictions due to upward reserve to raise. Are those technical restrictions associated to the existence of insufficient upward energy reserve in the system.

Technical restrictions PDBF. A mechanism integrated in the electricity production market carried out by the System Operator consisting of the resolution of the technical restrictions identified in the Daily Base Operating Schedule by means of the modification of the schedules of the Programming Units and the subsequent process of re-balancing generation-demand.

Tertiary control. An optional ancillary service that, if subscribed to, is accompanied by the obligation to bid and is managed and compensated by market mechanisms. Its objective is to resolve the deviations between generation and consumption and the restitution of the secondary control reserve which has been used. This is done by means of the adaptation of the operating schedules of the programming units corresponding to generation stations and pumped storage consumption facilities. The tertiary reserve is defined as the maximum variation of power generation that a generation unit can carry out within a maximum of 15 minutes, and which can be maintained for at least 2 hours.

Thermal line rating. The maximum energy which can be transported by an electricity line without breaking the established safety distances. This value depends on the characteristics of the line and on the environmental characteristics (temperature, wind and solar heating).

Traders/Retailers. Those mercantile societies that, accessing the transmission grid or distribution network, acquire energy to sell to consumers, to other system participants or to carry out international exchange transactions under the terms established in Law 54/1997.

Transmission grid availability rate. Indicates the percentage of total time in which each element of the transmission grid has been available for service. It is calculated from the nominal power of each installation once the downtime due to preventive and corrective maintenance, unforeseen unavailability, or other causes (such as the construction of new facilities, renovations and improvements) have been subtracted.

Transmission grid technical restrictions. Are those technical restrictions identified within the global system (generation-transmission grid), that require a modification to the schedules in order to comply with the operation and security criteria for operating the system.

Transmission grid. The complete set of lines, facilities, transformers and other electrical elements with volatages greater than or equal to 220 kV, and those other facilities, regardless of their power, which fulfil transmission functions, international interconnections and the interconnections with the Spanish insular and extra-peninsular power systems.

Unavailability of the production units. A production unit is completely available if it can participate in production without any limitation in generation capacity or, when applicable, pumped storage consumption. Otherwise, it is considered unavailable, such unavailability being of a partial or total nature. The net unavailable power of a generation unit is determined by the difference between the installed net power at the power station busbars and the net power truly available.

Voltage control. This is an ancillary system service whose aim is to guarantee the suitable voltage control in the nodes of the transmission grid, so that the operation of the system meets the established security and reliability requirements, to ensure that the energy supplied to the final consumers is in compliance with the required quality and that the generators can work in the established conditions for its normal operation.

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