

The Spanish Electricity System [2014]



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Explanatory notes:

1. The new Electricity Act (Law 24/2013, of December 26) eliminates the concepts of ordinary and special regime under which the different electricity generation technologies were grouped until that moment in time. In keeping with the new Electricity Act, as of the entry into force of the new law, these concepts have been removed from the electrical energy balance, while the rest of the data maintains a homogeneous structure with earlier electrical energy balances.
2. Due to the rounding up or down of decimal places, in some cases the final total figure may have some small differences with regard to the data included in the tables/graphics.



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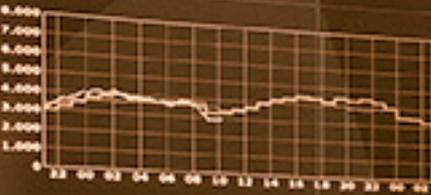
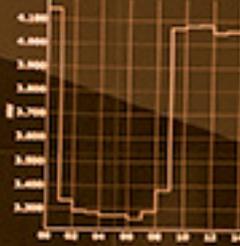
Generación eólica



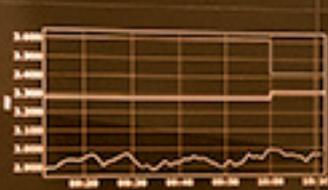
Generación solar térmica



Cogeneración



Hueco de tensión



Potencia instalada solar fotovoltaica



Generación renovable



The Spanish Electricity System 2014



In 2014, electricity demand continued the downward trend experienced over recent years. However, it is worth noting that in 2014 the fall was lower than that recorded in 2013, indicating that consumption, unlike in previous years, has shown some signs of recovery. Specifically, the demand for electrical energy on the Spanish peninsula (which represents 94.3% of the national total) closed the year at 243,530 GWh, a figure 1.2% lower than that registered in 2013. After factoring in the effects of the seasonal and working patterns, the demand for electricity, mainly attributable to economic activity, showed a slight decrease of 0.1%, compared to the fall of 2.2% experienced in 2013.

In view of the above data, it can be said that electricity demand in 2014 is reflecting, albeit at a slower pace, the positive evolution with which the Spanish economy ended 2014 with a growth in GDP of 1.4%. Compared with all the European Union countries that belong to the Continental Europe group of ENTSO-E (European Network of Transmission System Operators for Electricity), the fall in electricity consumption in Spain is

well below the decrease of 3.0% registered by this group of countries.

From the perspective of the supply of generation, the upward trend of renewable energy is maintained, albeit more moderately than in previous years, with a larger share of hydro. Consequently, non-renewable energies have reduced their share with the exception of coal-fired generation that showed a significant increase compared to 2013. As for energy exchanges with other countries, the export balance experienced a reduction of 49.4% compared to the previous year, closing the year at 3,406 GWh, the lowest level since 2007.

Regulatory framework

With regard to legislation, 2014 is the first year in which the new electricity sector regulatory framework was applied following the reform of the electricity sector regulation, which began in 2013

with the approval of Royal Decree-Law 9/2013 of 12 July, adopting urgent measures to guarantee the financial stability of the electricity system. Said reform was consolidated after the publication of the Electricity Sector Law 24/2013, of 26 December, which basically repeals Law 54/1997, with the exception of some of its additional provisions.

During 2014, this new regulatory framework continued its regulatory development with the approval of many provisions of unique importance for the electricity sector, noteworthy due to its impact on the majority of small electricity consumers was Royal Decree 216/2014, of 28 March, that sets out the methodology for calculating the voluntary prices for small electricity consumers and establishes the legal system applicable for the contracting of this service.

Pursuant to that established in this regulation, the Voluntary Price for the Small Consumer (VPSC) shall be the maximum price that reference traders (new terminology for last resort agents) can apply to these consumers. All consumers connected at low-voltage with a contracted power equal to or less than 10 kW may avail themselves of this voluntary price. The price shall be calculated hourly by adding to the regulated grid access tariff the following costs: a regulated trading cost and the cost of energy obtained from the actual hourly energy price in the production market,

which replaces the fixed quarterly price resulting from the former CESUR auctions.

In 2014, other regulations necessary to move forward with the regulatory framework reform of the electricity sector were also published, among which the following are noteworthy:

- Royal Decree 413/2014, of 6 June, by which the electricity production activity from renewable energy sources, cogeneration and waste is regulated, setting a new legal and economic regime for these electricity generating facilities, consistent with basic principles for setting the remuneration of these technologies as defined in Royal Decree-Law 9/2013 and in Law 24/2013 of the Electricity Sector.

This regulation, which completes the revision of the remuneration models of regulated activities to adapt them to the general principles established in Law 24/2013, has been developed through the approval in 2014 of four Ministerial Orders, among which Order IET/1045/2014, of 16 June, is worth noting as it approves the remuneration parameters for standard facilities, applicable to certain electricity production facilities based on renewable energy, cogeneration and waste.

- Royal Decree 1054/2014, of 12 December, regulating the procedure for the assignment of deficit collection rights in the electricity system for the year 2013. It also develops

the calculation methodology for the interest rate that will apply in relation to such deficit collection rights and, if relevant, any negative temporary mismatches.

This regulation establishes the methodology for calculating the interest rate that will apply in relation to the financing of the negative temporary mismatches between income and industry-regulated costs since 2014, as well as payments and outstanding amounts of these mismatches. It also establishes that the owners of the deficit collection rights for 2013 may assign all or part of these rights to third parties, and also sets out the general principles of the assignment procedure. In this manner, once the companies who were the initial holders of the deficit recognised for 2013 have carried out the assignment of their deficit collection rights, the entire net deficit of the Spanish electricity sector will be securitised.

Although with less regulatory scope than before, in 2014 the publication of three Ministerial Orders (Order IET/338/2014, of 5 March, Order IET/1131/2014, of 24 June, and the Order IET/1132/2014, of 24 June) can also be highlighted. Said Orders amend specific aspects of the Electricity Transmission Grid Development Plan and enable the Directorate General for Energy Policy and Mines to exceptionally authorise certain facilities, in accordance with the provisions of Article 10.5 of Royal Decree-Law 13/2012. Therefore, the annexes of said Orders specify those transmission facilities that fall outside the suspension of

the transmission grid planning established by Royal Decree-Law 13/2012 and that, therefore, may obtain the required administrative authorisation for their construction.

While not directly related to the Spanish electricity sector reform, also worth highlighting in 2014 are the two regulations that implement Directive 27/2014/EU, on energy efficiency. Thus, Royal Decree-Law 8/2014, of 4 July, on the approval of urgent measures for growth, competitiveness and efficiency in its section III, transposes some principles set out in said directive, which were subsequently developed by Law 18/2014, of 15 October, approving urgent measures for growth, competitiveness and efficiency, and whose main provisions relating to energy efficiency are the following:

- Creates the ‘National Fund for Efficiency’, which will be managed by IDAE (Institute for Energy Diversification and Energy Saving) and will be funded by ERDF (European Regional Development Fund), contributions from obligated parties, traders, and contributions from the Spanish General State Budget.
- Determines that the savings targets will be set by Ministerial Order, and will be distributed among traders depending on their energy sales.
- A possible mechanism for the accreditation of achieving savings targets may be established, which will be based on negotiable ‘Energy Saving Certificates’ (ESC).

Electrical energy demand

During 2014, the peninsular electrical energy demand again experienced a decline over the previous year, although this reduction was lower than in 2013. The monthly trend regarding the demand during the year showed signs of indecision, alternating between positive and negative changes, closing the annual demand

at 243,530 GWh, a figure that is 1.2% less than the year before.

This decrease primarily reflects the effect of temperatures that throughout the year have contributed to reducing the demand growth by 1%, while working patterns had an almost neutral effect. After factoring in these effects, the decline in demand primarily attributable to economic activity fell to 0.1%, against a fall of 2.2% in the previous year.

Components of the Peninsular Demand Variation at Power Station Busbars

	%13/12	%14/13
Demand at power station busbars	-2.2	-1.2
Components (1)		
Temperature effect (2)	-0.3	-1.0
Working pattern effect	0.2	0.0
Economic activity effect and others	-2.2	-0.1

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

Nonetheless, the peninsular electrical energy demand has started to show an upward trend but at a slower rate than other indicators of the Spanish economy. Thus, while GDP has had positive annual growth rates for all quarters of 2014, demand for electricity improved in the first three quarters, but still maintained a negative rate of change compared to 2013.

Annual Evolution of the Spanish GDP and the Demand for Electrical Energy on the Peninsula

	Δ Demand		
	GDP (1)	per Economic Activity	Δ Demand
2010	0.0	2.7	3.1
2011	-0.6	-1.0	-1.9
2012	-2.1	-1.8	-1.4
2013	-1.2	-2.2	-2.2
2014	1.4	-0.1	-1.2

(1) Source: INE

In the whole of the non-peninsular systems - Balearic Islands, Canary Islands, Ceuta and Melilla - electrical energy demand in 2014 stood at 14,588 GWh, which represents a negative rate of change of 0.8%. Both the Balearic Islands and Canary Islands have experienced declines, 1.6% and 0.5%, respectively, lower than in 2013, while in Ceuta and Melilla the changes have been positive, 5.1% and 0.1%.

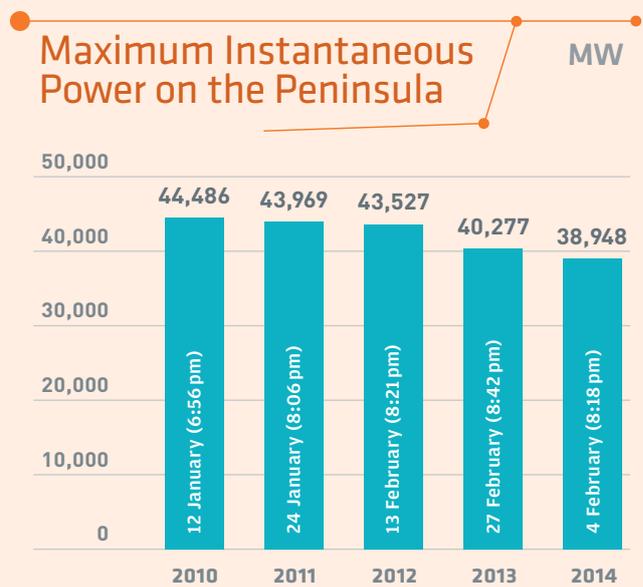
As a result, national demand registered a rate of decrease of 1.1% compared to 2013, with the electricity demand standing at 258,117 GWh.

Regarding annual maximum values for instantaneous power, and daily and hourly demand for the peninsular system, all failed to reach the all-time records registered in 2007. The maximum instantaneous power recorded in the year occurred at 8:18 pm on Wednesday 4 February when it reached a value of 39,948 MW, this value lower to that registered in 2007. The maximum hourly demand was also recorded on 4 February (between 8:00 pm and 9:00 pm) at 38,666 MWh, 13.8% below the maximum value reached in 2007. Regarding the annual maximum of daily energy was registered at 11,798 GWh on February, a value that is 12% lower than the all-time high also recorded in 2007.

In the summer months the maximum instantaneous power value was reached on 17 July at 1:21 pm with 37,299 MW, which represents a value 9.7% less than the all-time high recorded in July 2010.

In the non-peninsular systems, the maximum hourly demand in 2014 reached 1,187 MWh for the Balearic Islands (the all-time high is 1,226 MWh recorded in 2008) and 1,378 MWh for the Canary Islands (the all-time high is

1,496 MWh recorded in 2007). The maximum hourly demand during the year for Ceuta was 7MWh (the all-time high is 41MWh recorded in 2008) and Melilla 38 MWh (the all-time high is 40 MWh recorded in 2012).



Installed Capacity as at 31.12.2014. National Electricity System

	Peninsular System		Non-Peninsular Systems		National Total	
	MW	%14/13	MW	%14/13	MW	%14/13
Hydro	17,791	0.0	1	0.0	17,792	0.0
Nuclear	7,866	0.0	-	-	7,866	0.0
Coal	10,972	-1.4	510	0.0	11,482	-1.4
Fuel/gas	520	0.0	2,789	0.0	3,309	0.0
Combined Cycle (1)	25,348	0.0	1,851	0.0	27,199	0.0
Hydro-wind	-	-	12	-	12	-
Other hydro (2)	2,105	0.0	0,5	0.0	2,106	0.0
Wind	22,845	0.0	158	0.0	23,002	0.0
Solar photovoltaic	4,428	0.1	244	0.4	4,672	0.1
Solar thermal	2,300	0.0	-	-	2,300	0.0
Renewable thermal	1,012	3.9	5	0.0	1,018	3.8
Cogeneration and others	7,075	-0.1	121	0.0	7,196	-0.1
Total	102,262	-0.1	5,692	0.2	107,954	-0.1

(1) Includes operation in open cycle mode. Fuel and gasoil are the primary fuels used in the electricity system of the Canary Islands. (2) Includes all those units less than 50 MW that do not belong to a Hydro Management Unit (UGH).

Source: National Commission for Markets and Competition (CNMC) regarding: other hydro, wind, solar photovoltaic, solar thermal, renewable thermal, and cogeneration and others.

National Electrical Energy Balance (1)

	Peninsular System		Non-Peninsular Systems		National Total	
	GWh	%14/13	GWh	%14/13	GWh	%14/13
Hydro	35,860	5.6	0	-	35,860	5.6
Nuclear	57,376	1.0	-	-	57,376	1.0
Coal	44,064	10.7	2,416	-6.8	46,480	9.6
Fuel/gas (2)	0	-	6,663	-4.8	6,663	-4.8
Combined Cycle (3)	22,060	-12.1	3,859	7.7	25,919	-9.6
Generation consumption (4)	-6,561	4.6	-755	-3.7	-7,317	3.7
Hydro-wind	-	-	1	-	1	-
Other hydro (5)	7,067	-0.4	3	14.1	7,071	-0.4
Wind	50,630	-6.8	396	7.4	51,026	-6.7
Solar photovoltaic	7,794	-1.6	405	-0.9	8,199	-1.5
Solar thermal	4,959	11.6	-	-	4,959	11.6
Renewable thermal	4,718	-6.9	11	15.6	4,729	-6.8
Cogeneration and others	25,596	-20.1	290	11.8	25,887	-19.8
Net generation	253,564	-2.6	13,289	-1.1	266,853	-2.5
Pumped storage consumption	-5,330	-10.5	-	-	-5,330	-10.5
Peninsula-Balearic Islands' link (6)	-1,298	2.3	1,298	2.3	0	-
International exchanges (7)	-3,406	-49.4	-	-	-3,406	-49.4
Demand (at power station busbars)	243,530	-1.2	14,588	-0.8	258,117	-1.1

(1) Allocation of generation units based on primary fuel. (2) Generation from auxiliary generation units is included in the Balearic Islands' electricity system. (3) Includes operation in open cycle mode. Fuel and gasoil are the primary fuels used in the electricity system of the Canary Islands. (4) Consumption in generation corresponding to hydro, nuclear, coal, fuel/gas and combined cycle production. (5) Includes all those units less than 50 MW that do not belong to a Hydro Management Unit (UGH). (6) Positive value: incoming energy; negative value: outgoing energy. (7) Positive value: importer balance; negative value: exporter balance.

Demand coverage

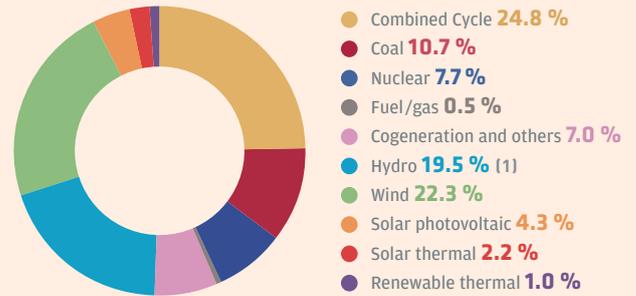
The installed power capacity on the Spanish Peninsula remained virtually unchanged regarding the previous year and closed 2014 at 102,262 MW, 116 MW (0.1%) less than in December 2013. The largest variation recorded was that of coal, which reduced its power capacity by 159 MW, as a result of the closure of the 'Escucha' power station. The remaining technologies had no power variations or the variations were of little significance.

In the non-peninsular systems, the installed power capacity also remained practically unchanged across the board, except for the Canary Islands where noteworthy was the incorporation of 12 MW on the island of 'El Hierro', corresponding to a new power station that combines wind and pumped storage (included in the balance as hydro-wind).

Regarding demand coverage, nuclear has been the technology with the greatest contribution as it covered 22% (21.2% in 2013) of total generation, followed by wind with 20.3% (21.2% in 2013). Coal has increased its participation this year, reaching 16.5% (14.6% in 2013). Another technology that in 2014 had a greater contribution was hydro, covering 15.5% and that again performed well as it did in 2013 when it covered 14.2% of demand, when it doubled the contribution that it had in 2012.

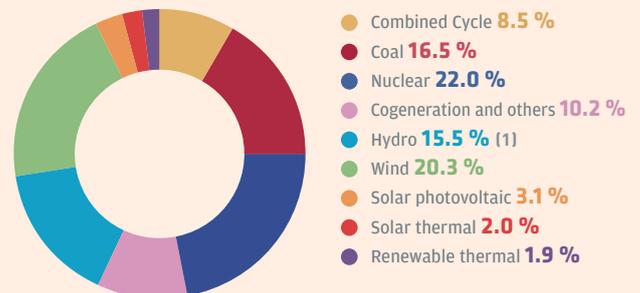
On the contrary, cogeneration and combined cycle have seen their share reduced, contributing 10.2% and 8.5%, respectively (12.5% and 9.5% in 2013). Solar technologies and renewable thermal were below 10%, and jointly covered 7% of the demand, a share similar to that of 2013.

Installed Capacity as at 31.12.2014. Peninsular Electricity System



(1) Includes power obtained from pure pumped storage. (2,517 MW)

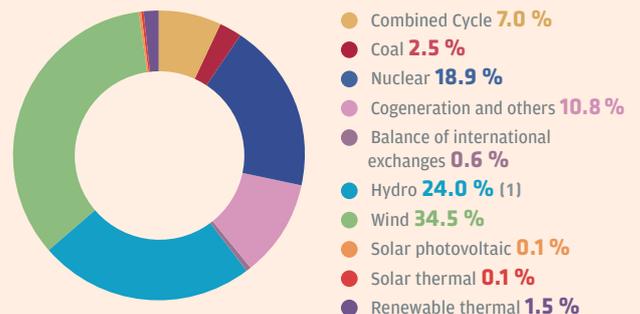
Annual Electricity Demand Coverage of the Peninsula



(1) Does not include pumped storage generation.

Coverage of Peninsular Maximum Hourly Demand 38,666 MWh

4 February 2014 (8-9 pm)



(1) Does not include pumped storage generation.

Evolution of the Minimum 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

Renewable energies have continued to maintain a prominent role in the overall production of energy in the electricity system covering 42.8% of the total production (42.2% in 2013). Among these energies, for yet another year it is worth highlighting the important role of wind generation, which although it reduced its production regarding the previous year, its contribution to the annual peninsular production stood at 20.3%, which places this technology in second place in share terms regarding the different types of energy used in covering peninsular demand, just behind nuclear. Similarly, in the months of January, February, November and December wind generation technology was the largest contributor to total energy production of the peninsular electricity system, reaching 29.2%, 27.8%, 25.6% and 21.7%, respectively. Regarding CO₂ emissions from the peninsular electricity sector, the increase in production from coal-fired power stations was offset by generation from renewable sources, resulting in an emissions balance of 60.5 million tonnes in 2014, a value similar to the 60.1 million tonnes registered in 2013.

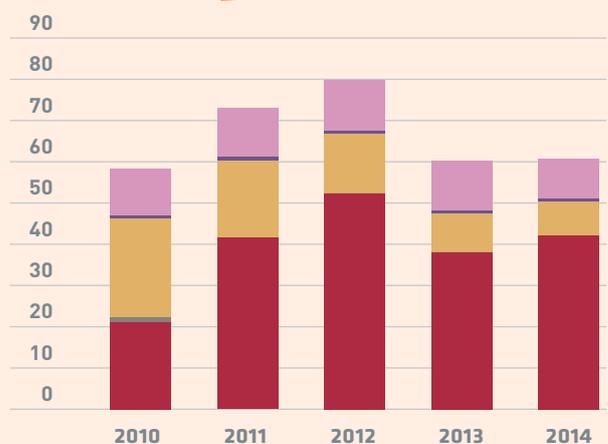
The electricity exchanges through the Spanish Peninsula - Balearic Islands submarine link registered an export balance to the Balearic

Demand Coverage Structure at Power Station Busbars



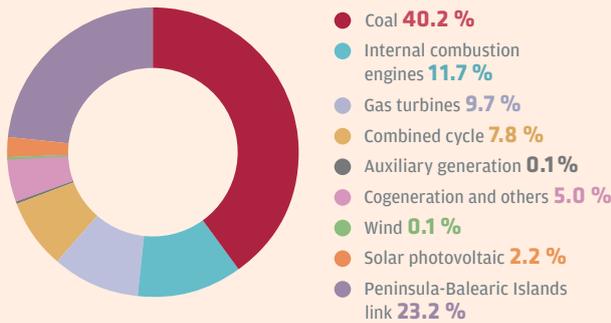
■ Renewables: hydro ⁽¹⁾, wind, solar and renewable thermal.
 ■ Non-renewables: nuclear, coal, fuel/gas, combined cycle, and Cogeneration and others.
 (1) Does not include pumped storage generation.

CO₂ Emissions associated to Electricity Generation on the Peninsula



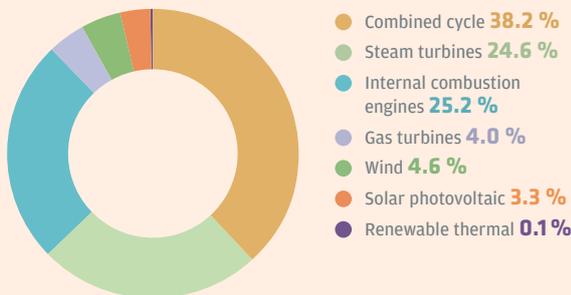
■ Coal ■ Fuel/gas ■ Combined cycle ■ Renewable thermal ■ Cogeneration and others

Annual Electricity Demand Coverage of the Balearic Islands



Regarding the Balearic Islands' electricity system, the energy transferred in 2014 through the link that connect the island of Majorca with the electricity system on the Spanish peninsula covered 23.2% of demand for these islands. Coal again reduced its contribution by two points and other technologies registered slight variations. As for the Canary Islands' electricity system, technologies repeated the same behaviour as in 2013, combined cycle again increased its contribution covering 38.2% of demand (35.2% in 2013) while fuel-gas power stations reduced their joint contribution to 53.8% (57.2% in 2013).

Annual Electricity Demand Coverage of the Canary Islands



Generation

Net generation on the Spanish peninsula in 2014 was 253,564 GWh, 2.6% less than the previous year, a value similar to that of 2005. The installed power capacity on the peninsula remained virtually unchanged from the previous year, finishing 2014 at 102,262 MW, with a decrease of 116 MW (0.1%) compared to 2013. The power stations that had increased production in 2014 were those of hydro, nuclear, coal and solar thermal.

Islands of 1,293 GWh (2.3% higher than 2013), representing 0.5% of the peninsular generation, a value with is the same as that registered in 2013.

For yet another year, the balance of physical international electricity exchanges has continued to be as exporter, reaching a value of 3,406 GWh in 2014, though the value with regard to 2013 was 49.4% less. Exports stood at 15,716 GWh (16,936 GWh in 2013) and imports at 12,310 GWh (10,204 GWh in 2013).

In this regard, hydroelectric generation from those power stations belonging to a Hydro Management Unit (acronym in Spanish: UGH) continued to increase, albeit with a variation of 5.6%, far from the high growth in 2013 which stood at 74.6 %, mainly due to the fact that 2012 was extremely dry.

In hydrological terms, 2014 on the whole was a wet year, as was the case in 2013. The registered producible hydroelectric energy was higher than the average historical value in most months, which has meant that the year finished with a value that stood at 32,408 GWh, a value 17% higher than the average annual historical value.

Hydroelectric reserves, for the complete set of reservoirs on the Spanish peninsula, closed 2014 with a level close to 63.8% of their total capacity, six points above that registered the year before.

With regard to non-renewable thermal generation, growth experienced by nuclear and coal-fired power stations has been offset by the decrease in production of combined cycle and cogeneration.

The growth in nuclear generation in 2014 was not very significant, especially considering that during 2013 there was a decline of 7.6%, mainly due to the withdrawal from production of the Garoña nuclear power station as it was in a state of temporary cessation of activity.

Coal-fired stations recorded a growth of 10.7%, representing a turnaround from the previous year, when the levels of generation coming from this technology fell 27.3% compared to 2012.

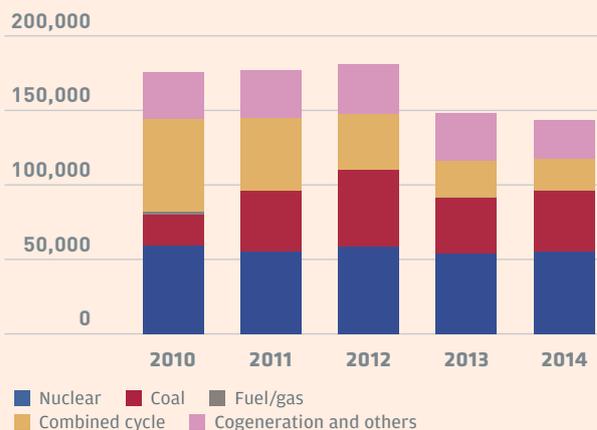
Production coming from combined cycle in 2014 registered a drop of 12.1% over the previous year,

continuing the downward trend started in 2009, despite a slowdown in its rate of decline, values are far from the rates of growth this technology had during its first years of life.

In 2014, cogeneration facilities have again reduced the installed power capacity and production they had in 2013, recording a negative variation of 0.1% and 20.1%, respectively, compared to 2013.

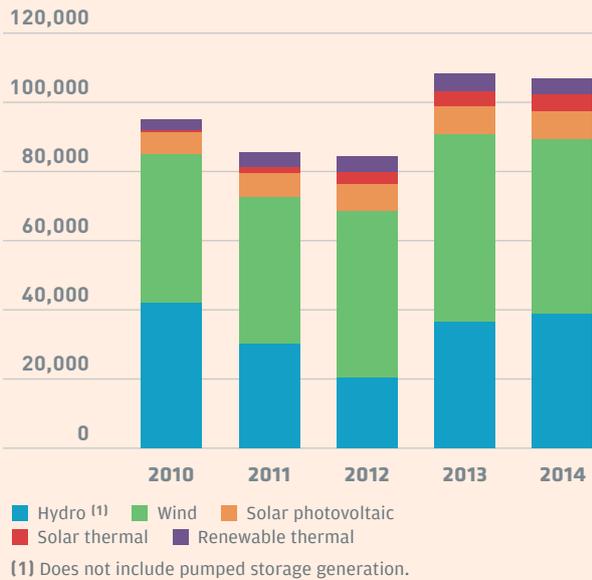
Evolution of Peninsular Non-renewable Energy Production

GWh



The peninsular generation coming from renewable energy sources was lower in all technologies except for hydro and solar thermal, which, in annual terms, has resulted in renewable production being 1.3% lower than in 2013. Wind-power generation in particular contributed to this decline in renewable contribution due to the fact that it reduced its production by 6.8% in the same period.

Evolution of Net Production from Renewable Energy on the Peninsula



Despite the drop in wind-power generation, the new highs for daily and monthly wind power production reached in 2014 are noteworthy. On 25 March the daily record was set with 346,745 MWh (1.2% above the previous all-time high on 16 January 2013) and the monthly record was in January with 6,539 GWh (1.7 % higher than that recorded in November 2013).

The growth in solar photovoltaic stations has stalled after more than ten years of continuous increases. The installed power capacity in 2014 grew by only 0.1%, while production declined for the first time by 1.6%. Solar thermal remained unchanged throughout 2014, but generation from this technology increased by 11.6% compared to 2013.

Renewable thermal was the technology with the biggest increase in installed power capacity, 3.9%. This increased power has not translated into increased production as in 2014 renewable thermal generation decreased by 6.9%.

System operation

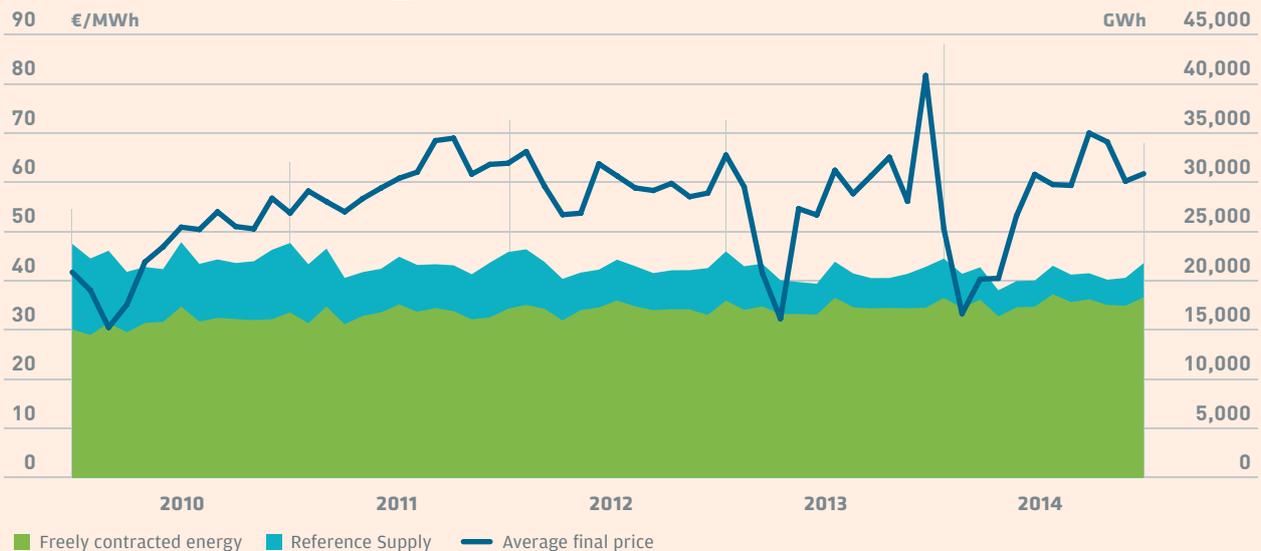
During 2014, energy contracted in the electricity market (national demand - reference supply companies plus free market contracting - and international exchange balances) was 0.4% lower than the previous year. Of this total, 85.1% corresponded to contracted supply on the free market and the remaining 15.9% to reference supply companies.

The final average purchase price of energy in the electricity market was 55.01 €/MWh, a value 4.8% lower than in 2013.

The combined price of the day-ahead and intraday markets accounted for 78.9% of the final price, whilst the cost resulting from the management of system adjustment services accounted for 10.4% and the cost derived from capacity payments accounted for the remaining 10.7%.

In the day-ahead market a total of 173,902 GWh was managed, with an average weighted price of 42.12 €/MWh. Compared to the previous year, the price decreased 5.0%, whilst the energy acquired in the day-ahead market grew by 6.1%. In the intraday market, energy sales reached 31,087 GWh, 36.5% of this total corresponds to a net increase in demand and/or pumped storage consumption. The average weighted price of energy managed in the intraday market stood at 43.08 €/MWh, a value 2.3% higher than the day-ahead market.

Evolution of Monthly Energy and Prices in the Electricity Market ⁽¹⁾



The energy managed in the system adjustment services markets in 2014 was 24,790 GWh, a value 1.1% less than the previous year. The impact of the cost of these services (not including security of supply restrictions) in the final price of energy was 5.69 €/MWh, a value 1.6% higher than in 2013.

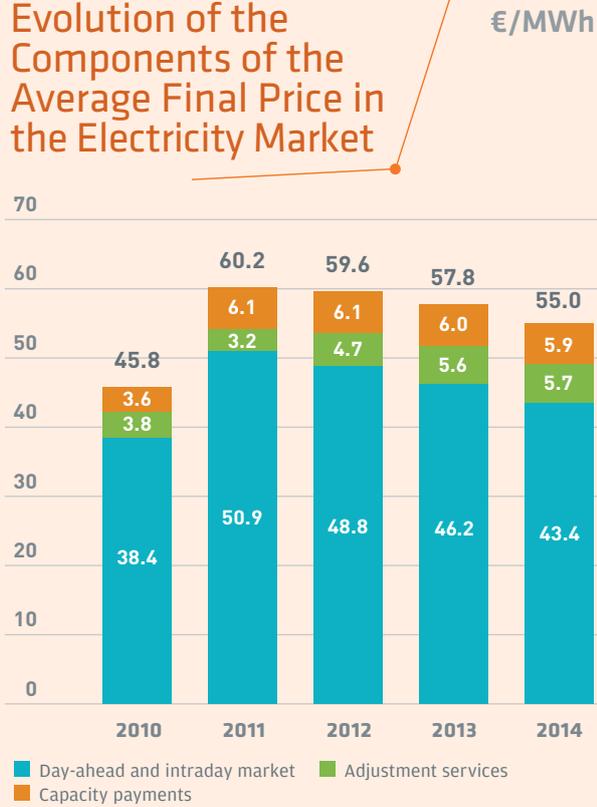
During 2014, the energy scheduled for resolving security of supply restrictions totalled 3,260 GWh, representing 15.6% of the maximum authorised production volume in 2014 for power stations signed up to this procedure. The total amount of energy produced by these power stations amounted to 15,379 GWh, representing 72.1%

of the maximum volume of production established by the Resolution of the Secretary of State for Energy for 2014.

The energy scheduled for resolving technical restrictions of the Daily Base Operating Schedule (PDBF) was 9,571 GWh upward and 110 GWh downward, with an impact on the final average price of 3.38 €/MWh compared to 2.83 €/MWh the previous year.

In 2014, the annual volume of additional upward power reserve which had to be allocated was 4,279 GW, with an impact of 0.59 €/MWh on the final average price of energy.

Evolution of the Components of the Average Final Price in the Electricity Market



The average hourly power band for secondary control assigned in 2014 was 1,179 MW, with an impact of 1.12 €/MWh on the final average price of energy, a value 23.2% higher than the previous year.

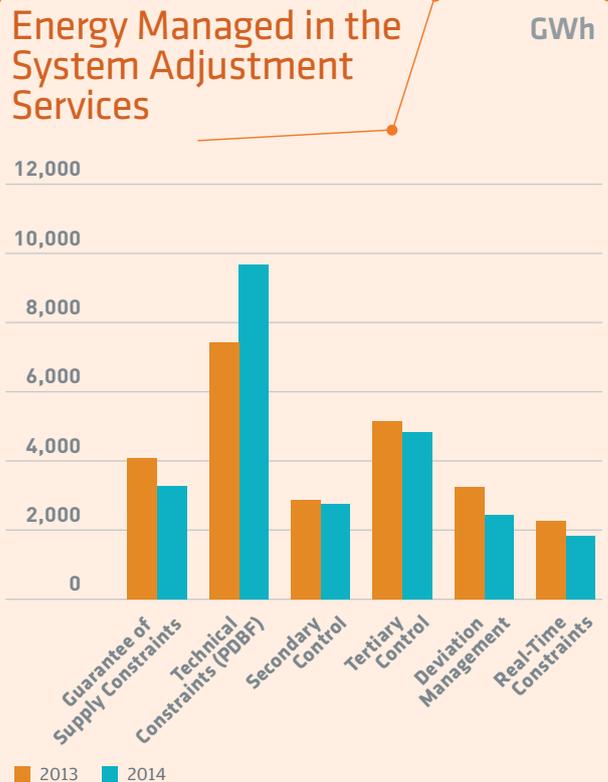
The management of ancillary services (including the power control factor) and deviation management, plus the resolution of real-time restrictions, had an impact of 0.60 €/MWh on the final average price of energy, a value slightly lower than the 0.86 €/MWh recorded in 2013.

In 2014, energy managed in the markets for secondary control, tertiary control, deviation management and resolution of real-time technical

restrictions, was 2,741 GWh, 4,832 GWh, 2,437 GWh and 1,830 GWh, respectively. In this energy group, upward energy scheduled represented 61.1% of the total, compared to 38.9% of downward energy managed.

Net deviations measured (difference between the measured energy at power stations busbars and energy scheduled in the market) that the system had to manage through market adjustment services totalled 6,584 GWh upward and 6,214 GWh downward, with an average price for deviations of 34.92 €/MWh upward and 48.60 €/MWh downward.

Energy Managed in the System Adjustment Services



International exchanges

The volume of energy traded through the exchange programmes with other countries stood at 22,707 GWh, 1.9% less than 2013. Exports fell 12.6% (13,057 GWh in 2014 compared to 14,944 GWh in 2013), while imports increased 17.6 % (9,651 GWh in 2014 compared to 8,209 GWh in 2013).

As a result, the annual balance of exchange schedules in 2014 fell by 49.4% compared to 2013, reaching 3,406 GWh, the lowest level since 2007.

In 2014, the scheduled net monthly balance regarding the Spanish interconnections was as an exporter in all months of the year except January (38 GWh) and November (197 GWh), with the maximum export balance being in April (658 GWh).

Net Scheduled International Exchanges

	2014
Transactions (market + physical bilateral contracts)	-3,348
France (1)	3,579
Portugal	-857
Andorra	-235
Morocco	-5,835
Counter-Trading France - Spain	-1
Counter-Trading Portugal - Spain	0
Support exchanges	0
Cross-border balancing service (2)	-57
Total	-3,406

(1) Includes exchanges with other European countries. (2) Since June 2014 Cross-Border balancing services are operating in the southwest region of Europe (SWE), said services use the vacant exchange capacity between systems after adjusting the exchange programmes in the intraday horizon.

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

Evolution of Scheduled International Exchanges



By interconnections, Spain was for yet another year a net exporter with all neighbouring countries except France; an interconnection through which an importer balance of 3,564 GWh was recorded, 108.8% higher than in 2013. Regarding the interconnections with Portugal and Andorra, the annual export balance decreased with regard to 2013, 67.8% and 18.3%, respectively, while the interconnection with Morocco increased by 8.6%.

On 13 May, 2014, in the day-ahead scheduling process, the coupling mechanism of the day-ahead markets (Multi-Regional Coupling -MRC-) was launched in the Spanish peninsular electricity system.

In June 2014, the operation of the new cross-border balancing services were commenced; for the Spain-France interconnection (as of 11 June) and Spain-Portugal interconnection (as of 17 June).

Until 31 December, a total of 73 GWh were scheduled (73% in the interconnection with Portugal). The highest levels of average utilisation of exchange capacity in 2014 were recorded in the interconnection with Morocco (77% in the export direction) and in the interconnection with France (61.9% in the importer direction).

Exchange capacity management system for the Spain-France interconnection

Congestion rents collected during 2014 represented €123 million with 50% of this amount corresponding to the Spanish electricity system.

The marginal price of the annual capacity auction for 2014 in the direction Spain to France recorded a value of 3.43 €/MW, representing an increase of 19.1% regarding the price registered in the annual auction for 2013 (2.88 €/MW).

In the direction France to Spain, the resulting marginal price was €9.48/MW, representing an increase of 21.4% regarding the price registered in the annual auction for 2013 (€7.81/MW).

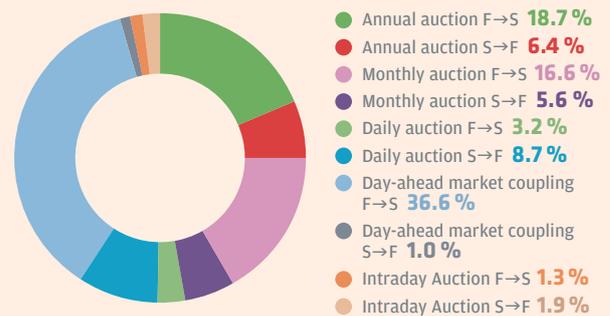
On 24 March 2014 (date of the monthly auction for April 2014), explicit auctions for long-term capacity for the interconnection between Spain and France were held in the supra-regional platform for explicit auctions CASC.EU.

The maximum price of the capacity allocated in monthly auctions in the direction France to Spain, was registered in June at 26 €/MW, a value representing an absolute maximum in this direction of flow. In the direction Spain to France, the highest price recorded was 20.23 €/MW (March 2014).

As of 13 May 2014, the daily explicit auction of the interconnection capacity between Spain and France was replaced by the day-ahead market coupling mechanism. Since then, and until the end of the year, the day-ahead horizon in the interconnection between Spain and France registered congestion for 90% of the hours (84% of the hours in the direction France to Spain and 6% of the hours in the direction Spain to France).

Congestion Rents in the Interconnection with France ⁽¹⁾

123,481 € Thousand



(1) On 13 May, 2014, the MRC (Multi-Regional Coupling) day-ahead markets coupling mechanism was launched.

Does not include the costs associated to counter trading, nor other costs.

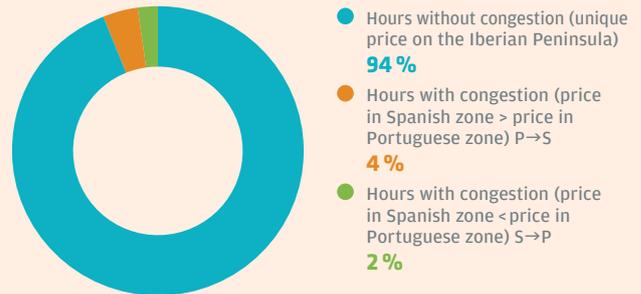
In 2014, it was deemed necessary to apply countertrading actions (establishment of exchange schedules, in a counter direction, when faced with reductions in capacity in order to guarantee already established commercial schedules), in a coordinated manner, between the electricity system operators of Spain and France for a total of 2,200 MWh.

Exchange capacity management system for the Spain-Portugal interconnection

In 94% of the hours in 2014, the MIBEL day-ahead market price was the same in both directions owing to the fact that there was no congestion in the interconnection between Spain and Portugal.

In 4% of the hours, congestion was detected in the direction Portugal to Spain and in 2% of the remaining hours congestion occurred in the direction Spain to Portugal.

Hours with/without Congestion in the Interconnection with Portugal



Congestion Rents in the Interconnection with Portugal ⁽¹⁾

	Thousands of €	%
Day-ahead market	6,835	96.75
Intraday market	230	3.25
Total	7,065	100.00

(1) On 13 May, 2014, the MRC (Multi-Regional Coupling) day-ahead markets coupling mechanism was launched.

Does not include the costs associated to counter trading, nor other costs.

Congestion rents arising from the management of this interconnection in 2014 accounted for €7.1 million, 50% of this amount corresponding to the Spanish electricity system. In 2014, it was not necessary to apply countertrading actions in this interconnection.

Demand-side management

The demand-side management interruptibility service came into force on 1 July 2008, pursuant to that set out in ITC/2370/2007, of 26 July,

Interruptible Power in Periods of Maximum Demand



which establishes the regulatory framework to provide the service in both the peninsular system and in insular systems. With the publication in November 2013 of Order IET/2013/2013 a new mechanism for the allocation of the interruptible resource was established based on an auction procedure solely for the peninsular suppliers. In 2014, this new mechanism was introduced for the first time for the allocation of the peninsular interruptible resource during the 2015 electricity season.

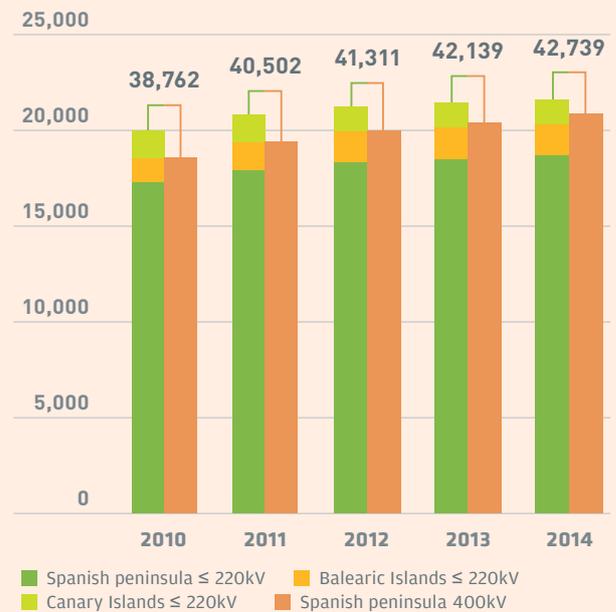
At 31 December 2014, 140 interruptibility contracts were in force, of which 124 correspond to the Spanish peninsular system, 15 to the Canary Islands' system and 1 to the Balearic Islands' system.

The total interruptible power manageable by the system operator during periods of peak demand is 2,414.6 MW, of which 2,362 MW corresponded to the peninsular system, 49.4 MW to the Canary Islands' system and 3.2 MW to the Balearic Islands' system.

Transmission grid

The development of the electricity transmission grid during 2014 has experienced a new boost with the commissioning of facilities that enhance

Evolution of the Transmission Grid in Spain



Evolution of the Transmission Grid in Spain

	400 kV		≤ 220 kV			Total
	Peninsula	Peninsula	Balearic Islands	Canary Islands		
Total lines (km)	21,094	18,811	1,545	1,289		42,739
Overhead lines (km)	20,977	18,096	1,089	1,023		41,185
Submarine lines (km)	29	236	306	30		601
Underground lines (km)	88	479	150	237		954
Transformer capacity (MVA)	79,808	63	2,793	1,875		84,539

Cummulative data regarding km of circuit and transformer capacity as at 31 December 2014.

the reliability and strengthen the degree of grid meshing, allowing the incorporation new renewable power.

During 2014, 600 km of new circuit was brought into service, meaning that at the end of the year the national transmission grid totalled 42,739 km of circuit. Additionally, transformer capacity grew by 3,250 MVA, bringing the total national installed transformer capacity to 84,539 MVA.

Amongst the projects concluded in 2014, noteworthy is the 400 kV Brovales-Guillena line (237,5 km), which completes the construction of the Almaraz-Guillena axis; whose main objective is to ensure the quality of supply of the demand expected in the regions of Extremadura and Andalusia. In addition, this axis gives continuity to the Puebla de Guzmán-Tavira 400 kV line, the new interconnection line with Portugal, commissioned in 2014.

As for international interconnections, the interconnection with France has been strengthened with the underground direct current line between Santa Llogaia-Baixas. This line will double the interconnection capacity between Spain and France from 1400 to 2800 MW, increasing the security, stability and quality of supply between the two countries and will facilitate the integration of renewable energies into the European grid.

Service quality

The results of the service quality indicators for 2014 show for yet another year the good performance of the transmission grid, evaluated based on the availability of the facilities comprising the grid and the supply disruptions caused by incidents in the grid.

Transmission Grid Quality

	ENS (MWh)			AIT (minutes)		
	Peninsula	Balearic Islands	Canary Islands	Peninsula	Balearic Islands	Canary Islands
2010	1,571	9	4,090	3.17	0.77	241.68
2011	280	39	17	0.58	3.54	1.02
2012	133	7	10	0.28	0.68	0.61
2013	1,156	81	3	2.47	7.50	0.18
2014 (1)	204	13	64	0.44	1.21	3.94

ENS: Energy not supplied. **AIT:** Average interruption time.
Average interruption time (AIT) = Energy not supplied (ENS) / Average power of the system.

The supply continuity indicators shown do not include the potential influence of incidents that are pending classification due to the fact that they are subject to an administrative proceeding currently underway.

(1) Provisional data pending audit (currently underway).

The transmission grid availability rates reflect the average service availability of the elements in each system. In 2014, this rate was 98.21% for the peninsular system, a value similar to that regarding the value registered in 2013, which was 98.20%. In the Balearic Islands' and Canary Islands' electricity systems, the availability rate was 98.01% and 98.35% respectively (97.97% and 98.30% in 2013). These values, for all systems, are provisional, pending an audit that is underway.

The continuity of supply indicators reflect the actual disruptions to final consumers resulting from incidents in the transmission grid. During 2014, there were 25 supply disruptions in the peninsular transmission grid, 39% less than in 2013. However, this increase did not have an effect on the total energy not supplied that fell considerably with regard to the previous year (204.35 MWh in 2014, compared to 1.156 MWh in 2013) and on the average interruption time that with a value of 0.44 minutes, stands well below the reference value of 15 minutes established in Article 26.2 of Royal Decree 1955/2000 of 1 December. (1)

In the Balearic Islands' electricity system, the continuity of supply indicators showed a significant improvement with respect to previous years. The values of energy not supplied and the average interruption time registered stood at 12.81 MWh and 1.21 minutes for the Balearic Islands. Regarding the Canary Islands, these values stood at 64.27 MWh and 3.94 minutes. (1)

(1) The continuity of supply indicators shown do not include the potential impact of incidents that are currently pending classification owing to the fact that they are subject to administrative proceedings underway.



Electricity Demand

PENINSULAR SYSTEM

[1]

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EVOLUTION OF THE ANNUAL GROWTH OF THE ELECTRICITY DEMAND AT POWER STATION BUSBARS

COMPONENTS OF THE MONTHLY GROWTH IN DEMAND

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MONTHLY DISTRIBUTION OF THE ELECTRICITY DEMAND AT POWER STATION BUSBARS

MONTHLY EVOLUTION OF THE ELECTRICITY DEMAND AT POWER STATION BUSBARS

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LOAD CURVES FOR THE DAYS OF MAXIMUM AVERAGE HOURLY DEMAND

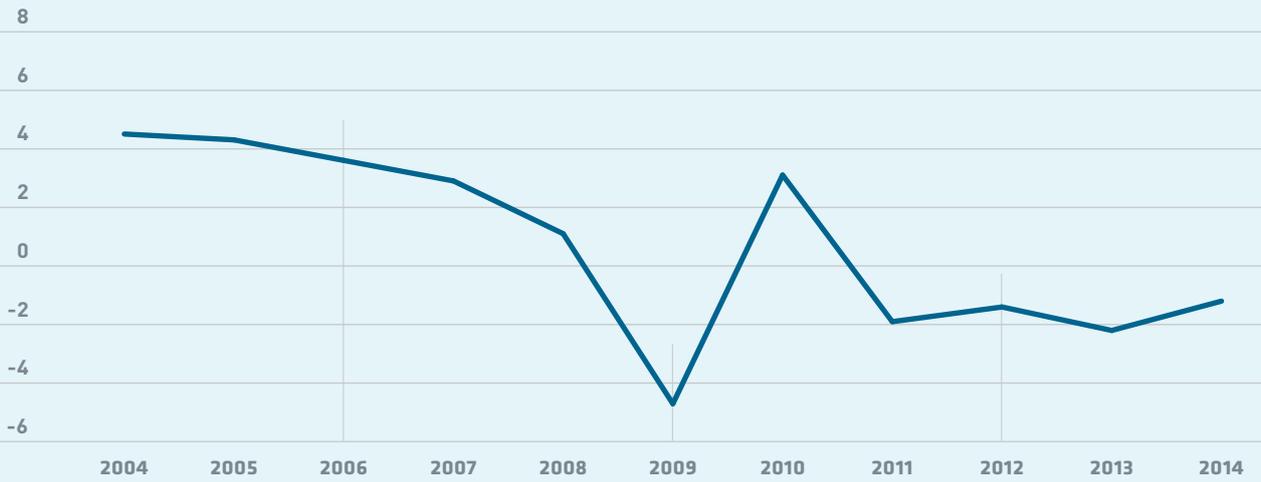
MAXIMUM AVERAGE HOURLY DEMAND AND DAILY ENERGY

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MAXIMUM INSTANTANEOUS POWER

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

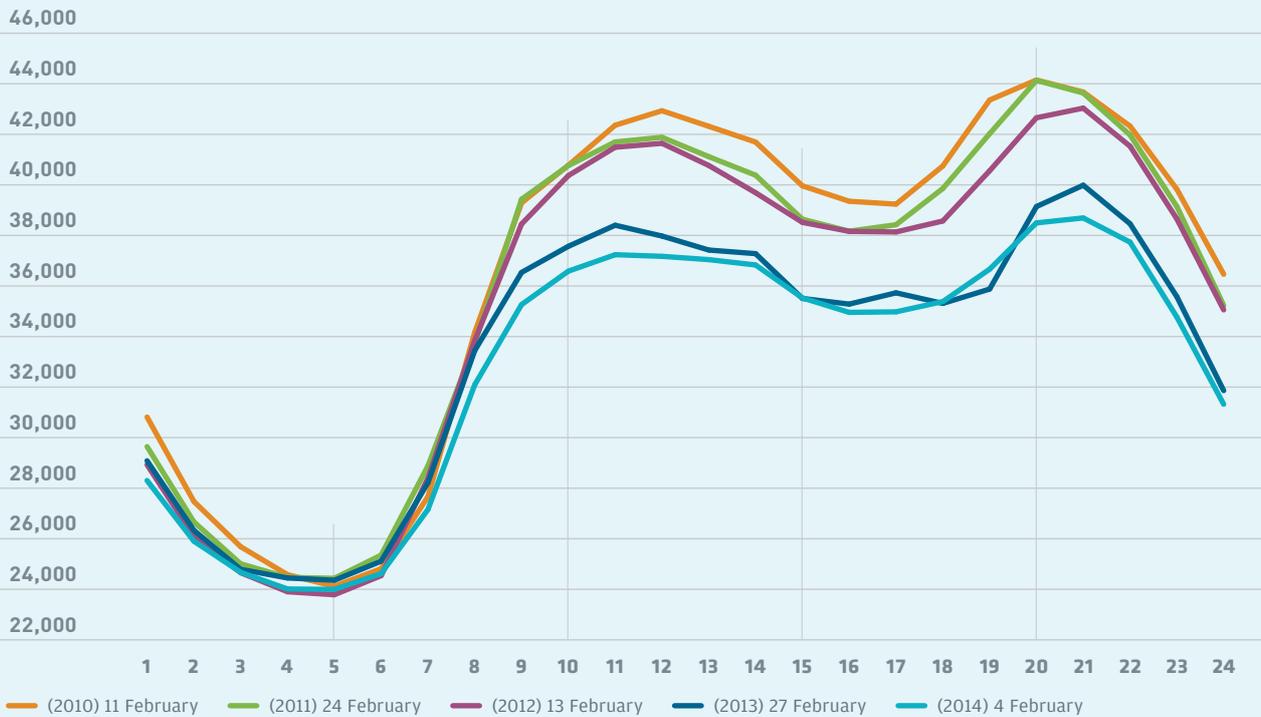
	2010		2011		2012		2013		2014	
	GWh	%								
January	23.751	9.1	23.668	9.3	23.090	9.2	22.553	9.2	22.054	9.1
February	21.911	8.4	21.415	8.4	22.948	9.1	20.549	8.3	20.372	8.4
March	22.816	8.8	22.737	8.9	21.328	8.5	21.218	8.6	20.920	8.6
April	19.935	7.7	19.254	7.5	19.477	7.7	19.498	7.9	18.766	7.7
May	20.423	7.8	20.346	8.0	20.191	8.0	19.447	7.9	19.478	8.0
June	20.439	7.8	20.740	8.1	20.752	8.2	19.144	7.8	19.600	8.0
July	23.145	8.9	21.997	8.6	21.671	8.6	21.638	8.8	21.120	8.7
August	21.456	8.2	21.589	8.4	21.448	8.5	20.608	8.4	20.170	8.3
September	20.702	7.9	21.021	8.2	19.794	7.9	19.706	8.0	20.260	8.3
October	20.499	7.9	20.339	8.0	19.717	7.8	19.780	8.0	19.687	8.1
November	22.012	8.4	20.615	8.1	20.270	8.0	20.481	8.3	19.785	8.1
December	23.440	9.0	21.877	8.6	21.328	8.5	21.746	8.8	21.319	8.8
Total	260.527	100.0	255.597	100.0	252.014	100.0	246.368	100.0	243.530	100.0

Monthly Evolution of the Electricity Demand at Power Station Busbars

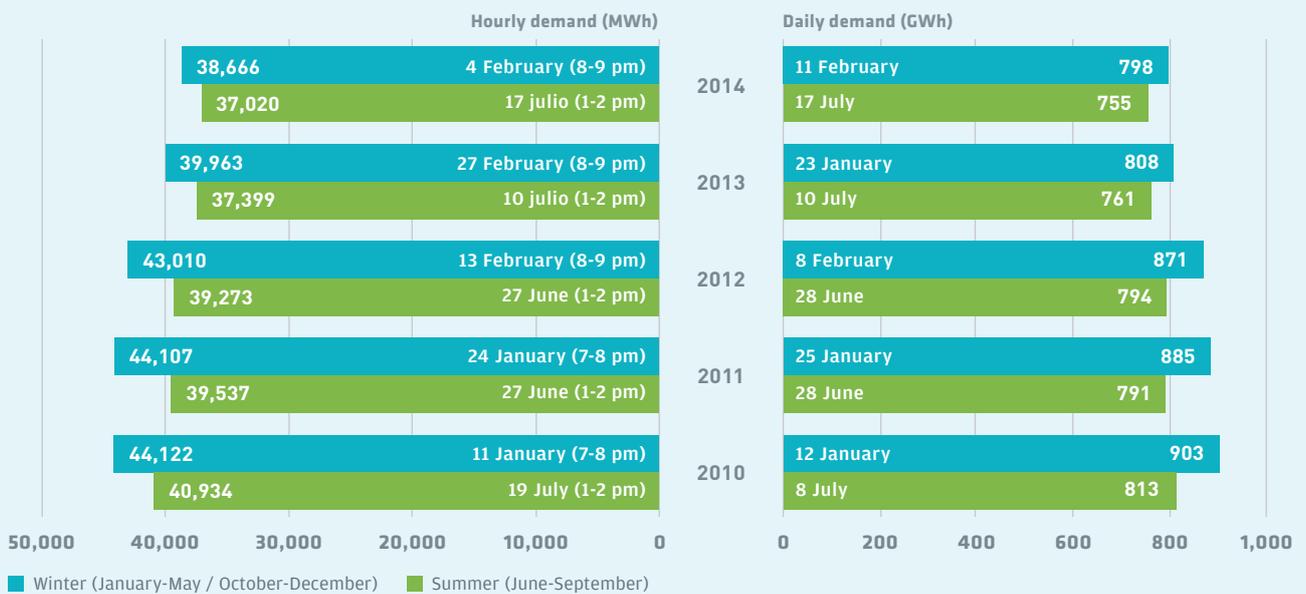


Load Curves for the Days of Maximum Hourly Demand

MWh



Maximum Hourly and Daily Electricity Demand



Instantaneous Peak Power Demand

MW





Demand Coverage

PENINSULAR SYSTEM

[2]

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COVERAGE OF MAXIMUM HOURLY DEMAND

ANNUAL EVOLUTION OF INSTALLED CAPACITY

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ANNUAL EVOLUTION OF ELECTRICITY DEMAND COVERAGE

DEMAND COVERAGE STRUCTURE AT POWER STATION BUSBARS

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MONTHLY EVOLUTION OF ELECTRICITY DEMAND COVERAGE

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MONOTONE LOAD CURVE

Coverage of Maximum Hourly Demand

	2010 11 January 7-8 pm	2011 24 January 7-8 pm	2012 13 February 8-9 pm	2013 27 February 8-9 pm	2014 4 February 8-9 pm
Conventional hydro and mixed pumped storage	6,946	8,469	3,435	5,988	7,905
Pumped storage	1,566	1,264	1,537	876	1,296
Hydro	8,512	9,733	4,972	6,864	9,201
Nuclear	5,410	6,486	7,463	7,096	7,107
Coal	5,021	2,878	7,789	8,037	955
Fuel / gas	389	0	0	0	0
Combined cycle	16,284	11,636	10,381	3,786	2,630
Other hydro (1)	935	918	517	963	1,107
Wind	4,846	8,279	9,216	8,787	12,969
Solar photovoltaic	0	0	0	73	48
Solar thermal	8	48	249	48	39
Renewable thermal	406	491	497	669	574
Cogeneration and others	3,815	4,305	4,637	4,734	4,027
Peninsula-Balearic Islands' link (2)	-	-	-	-102	-265
Balance Andorra	-23	-59	-30	-23	-8
Balance France	-500	-300	-1,000	-1,000	-1,000
Balance Portugal	-381	442	-930	813	2,000
Balance Morocco	-600	-750	-750	-780	-780
International exchanges (3)	-1,504	-667	-2,710	-990	212
Differences due to regulation	-	-	-	-	64
Demand at power station busbars	44,122	44,107	43,010	39,963	38,666

(1) Includes all those units less than 50 MW that do not belong to a Hydro Management Unit (UGH). (2) Positive value: incoming energy; negative value: outgoing energy. Peninsula-Balearic Islands' link working at minimum technical level until 13 August 2012. (3) Positive value: importer balance; negative value: exporter balance.

Annual Evolution of Installed Capacity

	2010	2011	Installed capacity as at 31 December		
	2010	2011	2012	2013	2014
Conventional hydro and mixed pumped storage	15,047	15,054	15,269	15,268	15,274
Pumped storage	2,517	2,517	2,517	2,517	2,517
Hydro	17,564	17,571	17,785	17,785	17,791
Nuclear	7,791	7,866	7,866	7,866	7,866
Coal (1)	11,409	11,649	11,114	11,132	10,972
Fuel / gas	2,282	833	520	520	520
Combined cycle (2)	25,278	25,312	25,348	25,348	25,348
Other hydro (3)	2,036	2,041	2,042	2,105	2,105
Wind	19,560	21,017	22,608	22,845	22,845
Solar photovoltaic	3,656	4,059	4,321	4,424	4,428
Solar thermal	532	999	1,950	2,300	2,300
Renewable thermal	780	884	970	975	1,012
Cogeneration and others	7,123	7,196	7,155	7,079	7,075
Total	98,009	99,426	101,679	102,378	102,262

(1) As of 1 January 2011 GICC (Elcogas) is 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) Includes operation in open cycle mode.

(3) Includes all those units less than 50 MW that do not belong to a Hydro Management Unit (UGH).

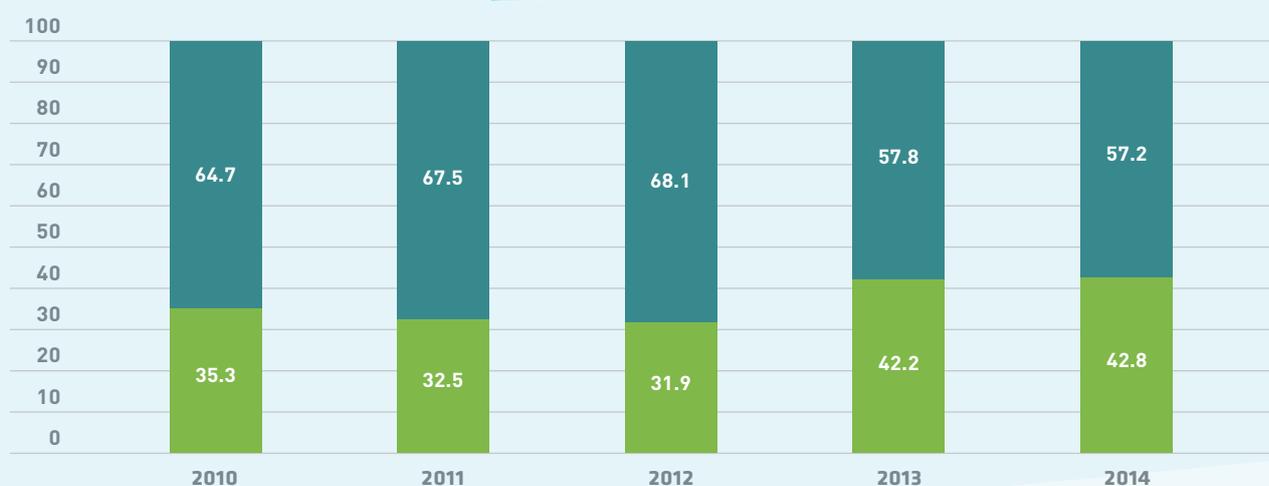
Source: National Commission for Markets and Competition (CNMC) regarding: other hydro, wind, solar photovoltaic, solar thermal, renewable thermal, and cogeneration and others.

Annual Evolution of Electricity Demand Coverage ⁽¹⁾

	2010	2011	2012	2013	2014	%14/13
Hydro	38,653	27,571	19,455	33,970	35,860	5.6
Nuclear	61,990	57,731	61,470	56,827	57,376	1.0
Coal (2)	22,097	43,488	54,721	39,807	44,064	10.7
Fuel / gas	1,825	0	0	0	0	-
Combined cycle (3)	64,634	50,750	38,593	25,091	22,060	-12.1
Generation consumption (4)	-6,706	-7,297	-7,730	-6,273	-6,561	4.6
Other hydro (5)	6,824	5,294	4,645	7,099	7,067	-0.4
Wind	43,208	42,105	48,140	54,344	50,630	-6.8
Solar photovoltaic	6,140	7,092	7,830	7,918	7,794	-1.6
Solar thermal	692	1,832	3,444	4,442	4,959	11.6
Renewable thermal	3,172	4,285	4,746	5,066	4,718	-6.9
Cogeneration and others	30,789	32,051	33,493	32,037	25,596	-20.1
Net generation	273,318	264,903	268,807	260,327	253,564	-2.6
Pumped storage consumption	-4,458	-3,215	-5,023	-5,958	-5,330	-10.5
Peninsula-Balearic Islands' link (6)		-0.5	-570	-1,269	-1,298	2.3
International exchanges (7)	-8,333	-6,090	-11,200	-6,732	-3,406	-49.4
Demand at power station busbars	260,527	255,597	252,014	246,368	243,530	-1.2

(1) Allocation of production units according to primary fuel. (2) As of 1 January 2011 GICC (Elcogas) is 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. (3) Includes operation in open cycle mode. (4) Consumption in generation corresponding to hydro, nuclear, coal, fuel/gas and combined cycle. (5) Includes all those units less than 50 MW that do not belong to a Hydro Management Unit (UGH). (6) Positive value: incoming energy; negative value: outgoing energy. Peninsula-Balearic Islands' link working at minimum technical level until 13 August 2012. (7) Positive value: importer balance; negative value: exporter balance.

Demand Coverage Structure at Power Station Busbars



■ Renewables: hydro ⁽¹⁾, wind, solar and Renewable thermal. ■ Non-renewables: nuclear, coal, fuel/gas, combined cycle, and Cogeneration and others.
 (1) Does not include pumped storage generation.

Monthly Evolution of Electricity Demand Coverage ⁽¹⁾

GWh

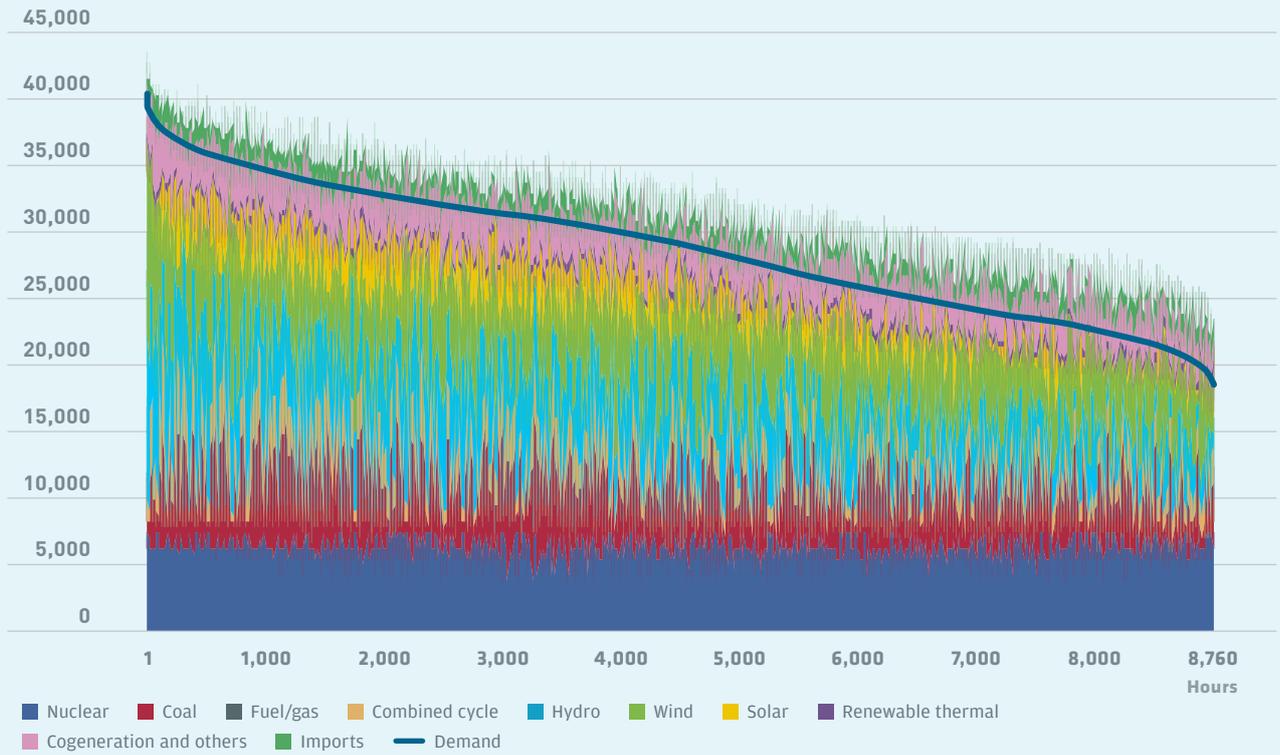
	Jan	Feb	Mar	Apr	May	Jun	
Hydro	3,960	5,427	4,887	4,579	2,520	2,192	
Nuclear	4,742	4,924	5,512	5,280	4,539	3,587	
Coal	2,279	816	1,244	1,325	3,400	5,353	
Fuel / gas	0	0	0	0	0	0	
Combined cycle (2)	1,610	1,323	1,335	1,284	1,469	1,827	
Generation consumption (3)	-469	-368	-418	-424	-498	-572	
Other hydro (4)	783	755	806	776	608	523	
Wind	6,539	5,884	5,050	3,950	4,135	3,276	
Solar photovoltaic	353	406	698	753	882	863	
Solar thermal	80	103	385	436	730	687	
Renewable thermal	424	331	365	339	410	406	
Cogeneration and others	2,681	1,981	1,894	1,710	2,060	2,193	
Net generation	22,982	21,583	21,758	20,007	20,256	20,336	
Pumped storage consumption	-858	-633	-524	-508	-435	-325	
Peninsula-Balearic Islands' link (5)	-99	-87	-88	-80	-86	-125	
International exchanges (6)	28	-491	-226	-652	-256	-286	
Demand at power station busbars	22,054	20,372	20,920	18,766	19,478	19,600	(continues...)

	Jul	Aug	Sep	Oct	Nov	Dec	Total
Hydro	2,072	1,813	1,621	1,558	2,261	2,970	35,860
Nuclear	4,470	4,434	5,044	5,374	4,562	4,909	57,376
Coal	5,752	5,400	6,076	4,697	3,388	4,335	44,064
Fuel / gas	0	0	0	0	0	0	0
Combined cycle (2)	1,910	2,281	2,736	2,212	1,998	2,075	22,060
Generation consumption (3)	-661	-644	-726	-644	-529	-609	-6,561
Other hydro (4)	480	401	358	363	543	671	7,067
Wind	3,590	2,857	2,131	3,383	5,072	4,763	50,630
Solar photovoltaic	909	870	654	615	361	431	7,794
Solar thermal	811	833	390	289	90	124	4,959
Renewable thermal	411	445	422	388	373	404	4,718
Cogeneration and others	2,251	2,099	2,253	2,265	2,069	2,141	25,596
Net generation	21,994	20,790	20,959	20,500	20,187	22,213	253,564
Pumped storage consumption	-240	-218	-216	-408	-518	-445	-5,330
Peninsula-Balearic Islands' link (5)	-153	-165	-147	-101	-80	-88	-1,298
International exchanges (6)	-482	-237	-336	-304	195	-361	-3,406
Demand at power station busbars	21,120	20,170	20,260	19,687	19,785	21,319	243,530

(1) Allocation of production units according to primary fuel. (2) Includes operation in open cycle mode. (3) Consumption in generation corresponding to hydro, nuclear, coal, fuel/gas and combined cycle. (4) Includes all those units less than 50 MW that do not belong to a Hydro Management Unit (UGH). (5) Positive value: incoming energy; negative value: outgoing energy. (6) Positive value: importer balance; negative value: exporter balance.

Monotone Load Curve

MW





Electricity Generation

PENINSULAR SYSTEM

[3]

Hydroelectric Production ⁽¹⁾

- 38** POWER VARIATIONS IN GENERATOR EQUIPMENT
HYDROELECTRIC PRODUCTION PER BASIN
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- 44** UTILISATION AND AVAILABILITY OF COAL-FIRED GENERATING UNITS
- 45** PRODUCTION (AT POWER STATION BUSBARS) OF NUCLEAR GENERATING UNITS
UTILISATION AND AVAILABILITY OF NUCLEAR GENERATING UNITS
- 46** PRODUCTION (AT POWER STATION BUSBARS) OF COMBINED-CYCLE STATIONS
- 48** UTILISATION AND AVAILABILITY OF COMBINED-CYCLE GENERATING UNITS
- 50** UTILISATION AND AVAILABILITY OF THERMAL POWER STATIONS
COMPARISON OF DAILY DEMAND AT POWER STATION BUSBARS WITH THE DAILY NON-AVAILABILITY OF THE THERMAL POWER STATIONS

Renewable Production ⁽³⁾

- 51** EVOLUTION OF RENEWABLE ENERGY PRODUCTION
EVOLUTION OF RENEWABLE INSTALLED POWER

(1) Includes all those units that belong to a Hydro Management Unit (UGH). **(2)** Data corresponding to nuclear, coal, fuel/gas and combined cycle production. **(3)** Includes hydro, other hydro, wind, solar photovoltaic, solar thermal and renewable thermal.

Hydroelectric Production

Power Variations in Generator Equipment

Power station	Type	Date	Power (MW)
Las Picadas 2	Hydroelectric	April-14	2.3
Portochao	Hydroelectric	March-14	0.1
Portodis	Hydroelectric	March-14	0.5
San Juan 2	Hydroelectric	April-14	3.4
Total commissioned			6.4

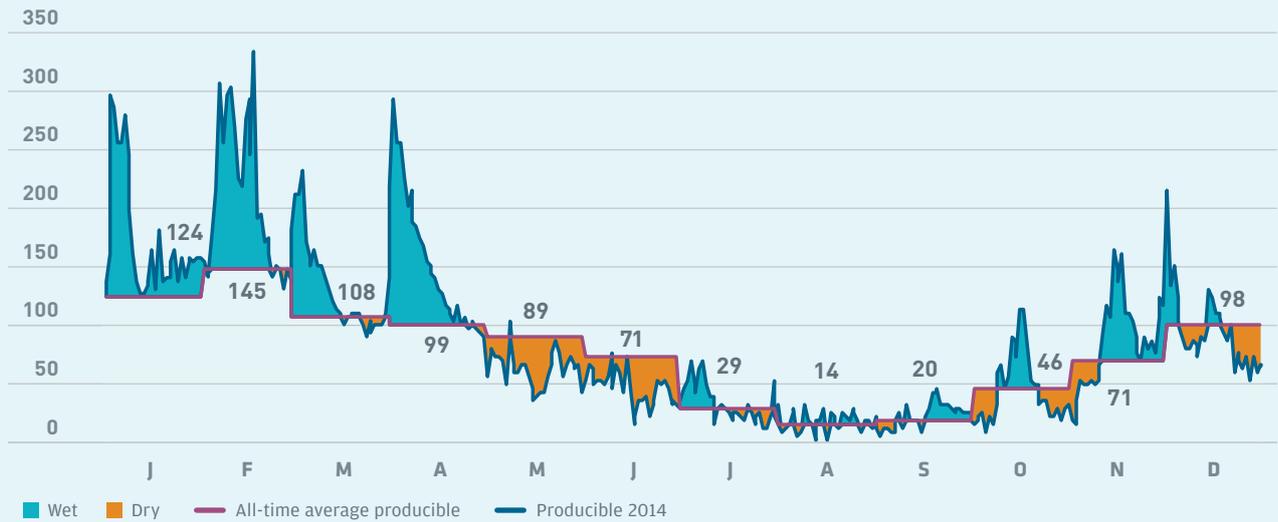
Hydroelectric Production per Basin

Basin	Power MW	Production (GWh)			Producible (GWh)		
		2013	2014	%14/13	2013	2014	%14/13
Norte	4,879	11,669	11,766	0.8	11,298	10,922	-3.3
Duero	3,887	7,531	9,541	26.7	7,968	9,161	15.0
Tajo-Júcar-Segura	4,349	5,034	5,563	10.5	4,280	4,362	1.9
Guadiana	226	273	197	-28.0	378	187	-50.5
Guadalquivir-Sur	1,025	1,224	945	-22.8	889	553	-37.8
Ebro-Pirineo	3,425	8,239	7,847	-4.8	7,818	7,223	-7.6
Total	17,791	33,970	35,860	5.6	32,631	32,408	-0.7

Hydroelectric Production

Daily Producible Hydroelectric Energy During 2014 Compared with the All-Time Average Producible

GWh



Monthly Producible Hydroelectric Energy

	2013		2014	
	Monthly	Cumulat.	Monthly	Cumulat.
January	3,828	3,828	0.99	0.99
February	3,480	7,309	0.86	0.92
March	6,538	13,847	1.96	1.23
April	5,608	19,454	1.89	1.37
May	3,074	22,528	1.11	1.33
June	2,094	24,622	0.98	1.29
July	1,165	25,787	1.28	1.29
August	628	26,414	1.43	1.29
September	649	27,063	1.09	1.28
October	1,464	28,527	1.03	1.27
November	2,014	30,541	0.95	1.24
December	2,089	32,631	0.69	1.18

Hydroelectric Production

Monthly Producibile of Hydroelectric Reserves

	2013				2014							
	Annual		Hiperannual		Overall		Annual		Hiperannual		Overall	
	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%
January	4,918	55	4,113	43	9,032	49	6,314	70	6,781	71	13,095	71
February	5,132	57	4,584	48	9,716	52	6,672	74	7,456	78	14,128	76
March	6,911	77	6,262	65	13,173	71	6,459	72	7,463	78	13,922	75
April	7,115	79	7,305	76	14,421	78	6,854	76	7,493	78	14,348	77
May	7,027	78	7,512	78	14,539	78	6,789	76	7,319	76	14,108	76
June	6,745	75	7,432	78	14,178	76	6,524	73	7,043	74	13,566	73
July	6,055	68	7,000	73	13,056	70	5,711	64	6,748	70	12,458	67
August	5,234	58	6,511	68	11,746	63	4,786	53	6,397	67	11,183	60
September	4,430	49	6,231	65	10,662	58	4,263	48	6,085	64	10,348	56
October	4,360	49	6,247	65	10,607	57	4,489	50	6,116	64	10,606	57
November	4,394	49	5,960	62	10,354	56	5,275	59	6,274	66	11,549	62
December	4,658	52	6,009	63	10,667	58	5,550	62	6,276	66	11,826	64

Extreme Values of Reserves

		2014			Valores históricos	
		GWh	Date	%	Date	%
Maximum	Annual	7,057	13 April	78.7	May 1969	92.0
	Hiperannual	7,642	11 March	79.8	April 1979	91.1
	Overall	14,655	13 April	79.1	April 1979	86.6
Minimum	Annual	4,176	8 October	46.6	January 1976	24.9
	Hiperannual	6,054	1 January	63.3	November 1983	17.6
	Overall	10,242	7 October	55.3	October 1995	23.6

Annual Evolution of Hydroelectric Production at Generator Terminals

GWh

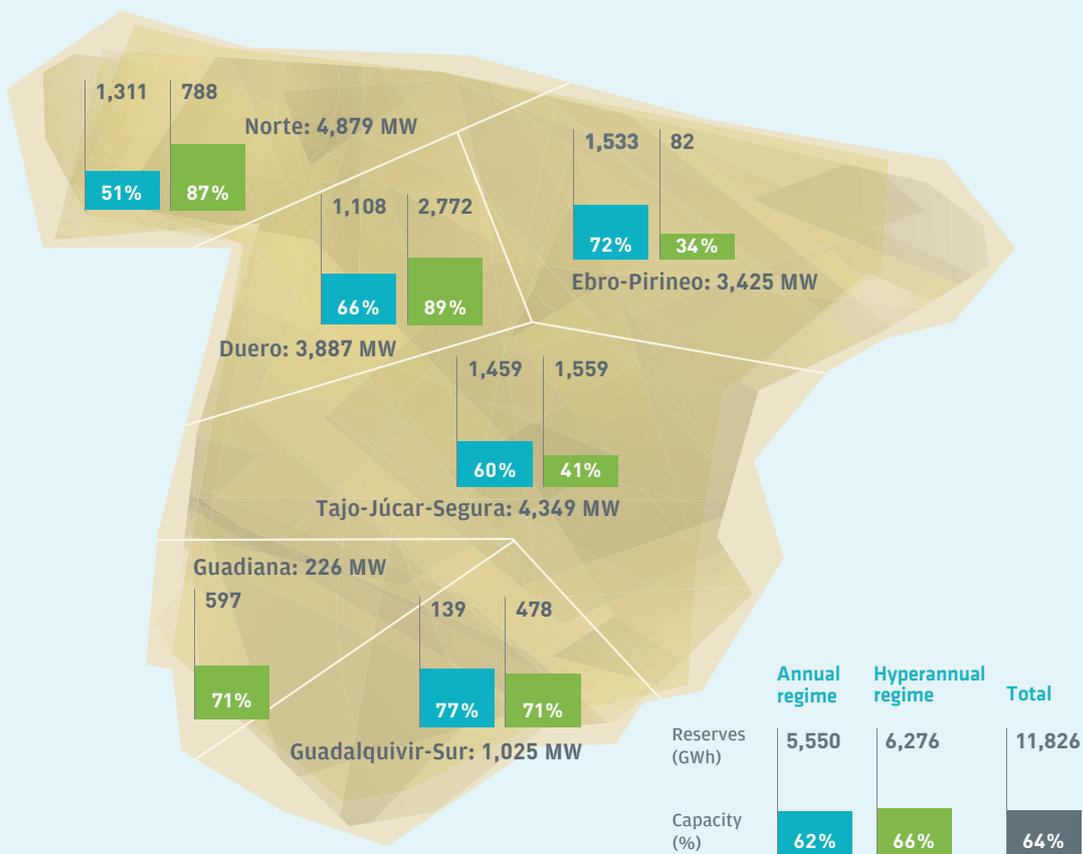


Hydroelectric Production

Annual Evolution Of Producible Hydroelectric Energy

Year	GWh	Index	Probability of being exceeded
2010	37,405	1.34	13%
2011	22,575	0.81	74%
2012	12,722	0.46	100%
2013	32,631	1.18	25%
2014	32,408	1.17	26%

Installed Power And Hydroelectric Reserves As At 31 December Per Drainage Basin



Hydroelectric Production

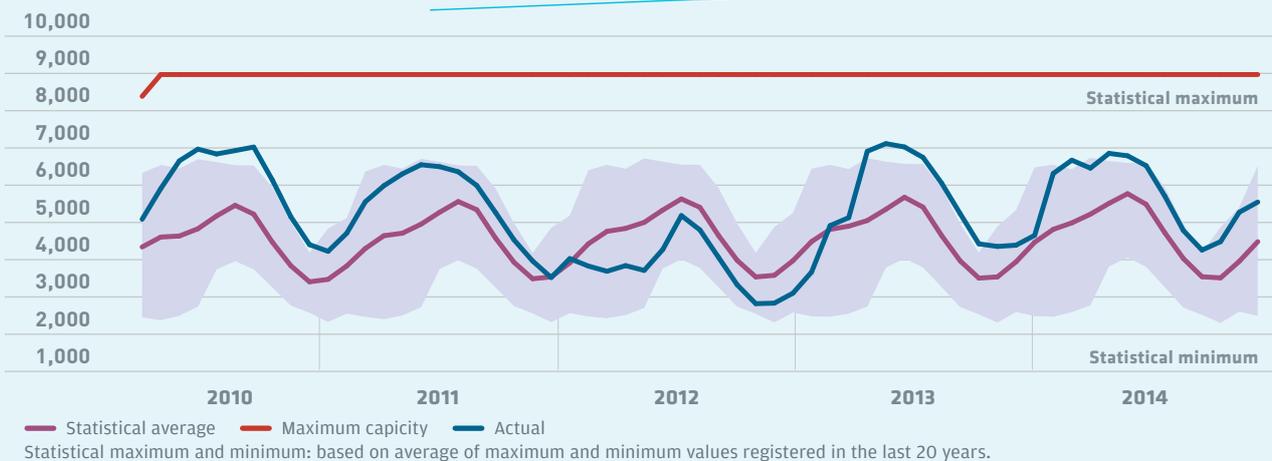
Evolution of the Hydroelectric Reserves

GWh



Evolution of the Annual Hydroelectric Reserves

GWh



Evolution of the Hyperannual Hydroelectric Reserves

GWh



Thermal Production

Power Variations in Generator Equipment

Power station	Type	Date	Power (MW)
Escucha	Coal	May-14	159.4
Total decommissioned			159.4

Production (at Power Station Busbars) of Coal-Fired Stations

Power stations	Power MW	2013		2014		%14/13
		GWh	%	GWh	%	
Aboño	916	5,748	14.4	5,455	12.4	-5.1
Anllares	365	863	2.2	1,182	2.7	37.1
Compostilla II	1,200	2,560	6.4	4,537	10.3	77.3
Escucha (1)	0	0	0.0	0	0.0	-
GICC-PL ELCOGAS	320	899	2.3	1,035	2.3	15.1
Guardo	516	1,105	2.8	1,250	2.8	13.1
La Robla	655	1,689	4.2	1,675	3.8	-0.8
Lada	358	1,432	3.6	1,410	3.2	-1.6
Litoral de Almería	1,159	6,148	15.4	5,912	13.4	-3.8
Los Barrios	589	2,924	7.3	3,005	6.8	2.8
Meirama	580	2,529	6.4	2,443	5.5	-3.4
Narcea	596	899	2.3	916	2.1	2.0
Puentenuevo 3	324	703	1.8	1,153	2.6	64.1
Puentes García Rodríguez	1,469	7,356	18.5	7,626	17.3	3.7
Puertollano (2)	221	30	0.1	0	0.0	-100.0
Soto de la Ribera	604	1,145	2.9	1,463	3.3	27.8
Teruel	1,101	3,777	9.5	5,002	11.4	32.4
Total	10,972	39,807	100.0	44,064	100.0	10.7

(1) Inactive since July 2013. Decommissioned in May 2014. (2) Inactive since November 2013.

Thermal Production

Utilisation and Availability of Coal-Fired Generating Units

Generating units	Power MW	Production GWh	Hours in operation	Utilisation coefficient (%)		Non-availability (%)		Availability %
				s/Available (1)	Hours connected to grid (2)	Foreseen	Not foreseen	
Aboño 1	360	1,834	6,116	63.2	83.3	0.0	8.0	92.0
Aboño 2	556	3,621	8,071	78.3	80.7	2.3	2.8	94.9
Anllares	365	1,182	3,532	37.1	91.7	0.0	0.3	99.7
Compostilla 2	148	309	2,589	25.4	80.6	0.0	6.3	93.7
Compostilla 3	337	1,272	4,043	44.3	93.3	0.0	2.8	97.2
Compostilla 4	359	1,545	4,716	50.1	91.3	0.0	1.9	98.1
Compostilla 5	356	1,412	4,304	47.5	92.2	0.0	4.7	95.3
Escucha (3)	0	0	0	0.0	0.0	100.0	0.0	0.0
GICC-PL ELCOGAS	320	1,035	4,498	49.2	71.9	0.0	25.0	75.0
Guardo 1	155	83	620	6.3	86.5	0.0	2.1	97.9
Guardo 2	361	1,167	3,486	37.9	92.8	0.0	2.7	97.3
La Robla 1	284	773	3,076	31.9	88.4	0.0	2.8	97.2
La Robla 2	371	902	2,746	29.9	88.6	0.0	7.2	92.8
Lada 4	358	1,410	4,616	47.2	85.2	0.0	4.8	95.2
Litoral de Almería 1	577	3,395	7,996	73.5	73.6	0.0	8.7	91.3
Litoral de Almería 2	582	2,517	5,559	56.9	77.8	10.3	3.0	86.7
Los Barrios	589	3,005	7,647	65.9	66.7	1.4	10.2	88.4
Meirama	580	2,443	5,522	50.5	76.2	0.0	4.9	95.1
Narcea 1	65	0	0	0.0	0.0	0.0	0.0	100.0
Narcea 2	166	144	1,082	10.0	80.0	0.0	0.6	99.4
Narcea 3	364	772	2,361	27.1	89.8	0.0	10.8	89.2
Puentenuevo 3	324	1,153	3,754	76.0	94.9	0.0	46.5	53.5
Puentes 1	369	2,109	6,883	65.7	83.1	0.0	0.6	99.4
Puentes 2	366	2,035	6,641	63.4	83.6	0.0	0.1	99.9
Puentes 3	366	1,984	6,321	61.9	85.7	0.0	0.0	100.0
Puentes 4	367	1,497	4,857	56.8	84.0	13.8	4.2	82.0
Puertollano (4)	221	0	0	0.0	0.0	100.0	0.0	0.0
Soto de la Ribera 2	254	590	2,975	28.3	78.1	0.0	6.2	93.8
Soto de la Ribera 3	350	873	2,772	33.5	90.0	0.0	14.9	85.1
Teruel 1	368	1,762	5,401	55.0	88.6	0.0	0.6	99.4
Teruel 2	368	1,469	4,547	53.9	87.9	12.1	3.3	84.7
Teruel 3	366	1,771	5,356	57.4	90.5	0.0	3.6	96.4
Total	10,972	44,064	4,877	51.1	82.3	4.1	6.3	89.7

(1) This is the quotient between actual production and the available production or maximum production that the power station could reach running at nominal power during the hours in which it is available. (2) This is the quotient between actual production and total production that the power station could have reached operating at nominal power in the whole of hours that has been coupled (producing). (3) Generator unit with permanent 100% unavailability due to long-term shutdown. Inactive since July 2013. Decommissioned in May 2014. (4) Generator unit with permanent 100% unavailability due to long-term shutdown. Inactive since November 2013.

Thermal Production

Production (at Power Station Busbars) of Nuclear Generating Units

Power stations	Power MW	2013		2014		%14/13
		GWh	%	GWh	%	
Almaraz I	1,049	8,001	14.1	7,518	13.1	-6.0
Almaraz II	1,044	7,720	13.6	8,299	14.5	7.5
Ascó I	1,033	9,055	15.9	7,394	12.9	-18.3
Ascó II	1,027	7,638	13.4	7,175	12.5	-6.1
Cofrentes	1,092	8,327	14.7	9,470	16.5	13.7
Garoña (1)	466	0	0.0	0	0.0	-
Trillo I	1,067	8,003	14.1	8,320	14.5	4.0
Vandellós II	1,087	8,083	14.2	9,201	16.0	13.8
Total	7,866	56,827	100.0	57,376	100.0	1.0

(1) Inactive since December 2012.

Utilisation and Availability of Nuclear Generating Units

Generating units	Power MW	Production GWh	Hours in operation	Utilisation coefficient (%)		Non-availability (%)		Availability %
				s/Available (1)	Hours connected to grid (2)	Foreseen	Not foreseen	
Almaraz I	1,049	7,518	7,351	97.6	97.5	15.9	0.4	83.8
Almaraz II	1,044	8,299	8,054	98.7	98.7	6.8	1.3	91.9
Ascó I	1,033	7,394	7,224	98.3	99.1	16.0	0.8	83.2
Ascó II	1,027	7,175	7,007	99.8	99.7	11.8	8.3	79.9
Cofrentes	1,092	9,470	8,758	100.0	99.0	0.0	1.3	98.7
Garoña (3)	466	0	0	0.0	0.0	100.0	0.0	0.0
Trillo I	1,067	8,320	7,898	97.3	98.7	8.4	0.1	91.5
Vandellós II	1,087	9,201	8,665	97.1	97.7	0.0	0.5	99.5
Total	7,866	57,376	7,398	98.5	98.6	13.8	1.7	84.5

(1) This is the quotient between actual production and the available production or maximum production that the power station could reach running at nominal power during the hours in which it is available. (2) This is the quotient between actual production and total production that the power station could have reached operating at nominal power in the whole of hours that has been coupled (producing). (3) Generator unit with permanent 100% unavailability. Inactive since December 2012.

Thermal Production

Production (at Power Station Busbars) of Combined-Cycle Stations

Power stations	Power MW	2013		2014		%14/13
		GWh	%	GWh	%	
Aceca 3	392	189	0.8	179	0.8	-5.4
Aceca 4	379	954	3.8	908	4.1	-4.8
Algeciras 3 CC	831	0	0.0	32	0.1	-
Amorebieta	795	169	0.7	176	0.8	4.1
Arcos 1	396	0	0.0	1	0.0	-
Arcos 2	379	15	0.1	7	0.0	-53.9
Arcos 3	844	102	0.4	76	0.3	-25.5
Arrúbal 1	402	228	0.9	17	0.1	-92.5
Arrúbal 2	397	177	0.7	149	0.7	-15.9
Bahía de Bizkaia	800	3,032	12.1	2,835	12.9	-6.5
Besós 3	419	162	0.6	272	1.2	68.4
Besós 4	407	2,186	8.7	2,247	10.2	2.8
Besós 5	873	702	2.8	668	3.0	-4.8
Campo Gibraltar 1	393	209	0.8	0	0.0	-100.0
Campo Gibraltar 2	388	207	0.8	0	0.0	-100.0
Cartagena 1	425	794	3.2	1,007	4.6	26.9
Cartagena 2	425	582	2.3	718	3.3	23.4
Cartagena 3	419	945	3.8	528	2.4	-44.2
Castejón 1	429	243	1.0	192	0.9	-21.2
Castejón 2	381	0	0.0	0	0.0	-
Castejón 3	426	138	0.6	198	0.9	43.4
Castellón 3	793	50	0.2	9	0.0	-82.6
Castellón 4	854	479	1.9	344	1.6	-28.1
Castelnou	798	90	0.4	157	0.7	75.1
Colón 4	398	165	0.7	181	0.8	9.4
El Fangal 1	409	34	0.1	22	0.1	-36.4
El Fangal 2	408	19	0.1	26	0.1	34.4
El Fangal 3	402	40	0.2	118	0.5	193.0
Escatrón 3	818	3	0.0	32	0.1	974.8
Escatrón Peaker	282	8	0.0	43	0.2	458.5
Escombreras 6	831	0	0.0	0	0.0	-
Málaga 1 CC	421	1,713	6.8	1,248	5.7	-27.2
Palos 1	394	335	1.3	133	0.6	-60.2
Palos 2	396	440	1.8	396	1.8	-10.1
Palos 3	398	723	2.9	69	0.3	-90.5
Plana del Vent 1	426	258	1.0	302	1.4	17.3
Plana del Vent 2	421	426	1.7	16	0.1	-96.2

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Thermal Production

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Production (at Power Station Busbars) of Combined-Cycle Stations

Power stations	Power MW	2013		2014		%14/13
		GWh	%	GWh	%	
Puentes García Rodríguez 5	870	258	1.0	336	1.5	30.0
Puerto de Barcelona 1	447	1,244	5.0	1,171	5.3	-5.8
Puerto de Barcelona 2	445	760	3.0	507	2.3	-33.3
Sabón 3	397	950	3.8	211	1.0	-77.8
Sagunto 1	417	1,547	6.2	894	4.1	-42.2
Sagunto 2	420	946	3.8	1,388	6.3	46.6
Sagunto 3	419	1,028	4.1	1,501	6.8	46.0
San Roque 1	397	1,858	7.4	2,022	9.2	8.8
San Roque 2	402	223	0.9	375	1.7	68.2
Santurce 4	403	1	0.0	6	0.0	483.9
Soto de la Ribera 4	432	236	0.9	232	1.1	-1.7
Soto de la Ribera 5	434	81	0.3	79	0.4	-2.4
Tarragona	395	0	0.0	0	0.0	-
Tarragona Power	424	138	0.5	31	0.1	-77.5
Total combined-cycle	25,348	25,091	100.0	22,060	100.0	-12.1

Thermal Production

Utilisation and Availability of Combined-Cycle Generating Units

Generating units	Power MW	Production GWh	Hours in operation	Utilisation coefficient (%)		Non-availability (%)		Availability %
				s/Available (1)	Hours connected to grid (2)	Foreseen	Not foreseen	
Aceca 3	392	179	1,054	5.7	43.4	7.7	0.3	92.0
Aceca 4	379	908	3,738	31.9	64.1	0.0	14.3	85.7
Algeciras 3 CC	831	32	152	0.5	25.7	0.0	6.8	93.2
Amorebieta	795	176	641	2.6	34.6	0.3	0.7	99.0
Arcos 1	396	1	11	0.0	18.8	2.6	0.1	97.3
Arcos 2	379	7	45	0.2	39.7	4.7	0.0	95.3
Arcos 3	844	76	342	1.2	26.3	7.6	6.1	86.3
Arrúbal 1	402	17	81	0.5	52.4	9.3	0.6	90.1
Arrúbal 2	397	149	531	4.3	70.7	0.1	0.3	99.5
Bahía Bizcaya	800	2,835	7,938	44.5	44.6	5.4	3.6	91.0
Besós 3	419	272	1,588	7.6	40.9	0.0	3.0	97.0
Besós 4	407	2,247	8,407	65.4	65.8	2.5	1.0	96.5
Besós 5	873	668	3,569	9.0	21.4	1.8	1.4	96.8
Campo de Gibraltar 1	393	0	0	0.0	0.0	100.0	0.0	0.0
Campo de Gibraltar 2	388	0	0	0.0	0.0	100.0	0.0	0.0
Cartagena 1	425	1,007	3,623	27.5	65.5	1.0	0.5	98.5
Cartagena 2	425	718	2,741	20.4	61.7	2.0	3.2	94.8
Cartagena 3	419	528	2,032	14.9	61.9	2.6	1.2	96.2
Castejón 1	429	192	901	5.3	49.5	3.4	0.7	95.8
Castejón 2	381	0	0	0.0	0.0	1.7	2.0	96.3
Castejón 3	426	198	969	5.6	48.1	1.9	3.1	95.0
Castellón 3	793	9	53	0.1	20.8	0.0	16.1	83.9
Castellón 4	854	344	1,695	5.0	23.8	0.0	8.3	91.7
Castelnou	798	157	837	2.3	23.6	0.0	0.0	100.0
Colón 4	398	181	1,040	5.2	43.7	0.0	0.1	99.9
El Fangal 1	409	22	131	0.6	40.2	0.0	0.1	99.9
El Fangal 2	408	26	161	0.7	39.7	0.0	0.2	99.8
El Fangal 3	402	118	584	3.4	50.5	0.0	0.1	99.9
Escatrón 3	818	32	162	0.5	23.8	13.1	0.3	86.7
Escatrón Peaker	282	43	729	1.8	21.1	2.2	0.2	97.6
Escombreras 6	831	0	0	0.0	0.0	9.0	0.0	91.0
Málaga 1 CC	421	1,248	4,610	34.3	64.3	1.1	0.1	98.8
Palos 1	394	133	554	3.9	61.0	0.0	2.0	98.0
Palos 2	396	396	1,624	11.7	61.6	1.3	1.3	97.4
Palos 3	398	69	285	2.7	60.4	11.7	14.8	73.5

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Thermal Production

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Utilisation and Availability of Combined-Cycle Generating Units

Generating units	Power MW	Production GWh	Hours in operation	Utilisation coefficient (%)		Non-availability (%)		Availability %
				s/Available (1)	Hours connected to grid (2)	Foreseen	Not foreseen	
Plana del Vent 1	426	302	1,597	8.4	44.5	1.9	1.8	96.3
Plana del Vent 2	421	16	120	0.5	32.3	1.6	0.6	97.7
Puentes Gcía. Rguez. 5	870	336	1,536	4.5	25.1	1.8	0.0	98.1
Puerto de Barcelona 1	447	1,171	4,289	30.1	61.1	0.0	0.8	99.2
Puerto de Barcelona 2	445	507	2,059	13.7	55.4	3.3	1.5	95.2
Sabón 3	397	211	846	7.0	62.6	12.4	0.7	86.9
Sagunto 1	417	894	3,406	24.5	62.9	0.0	0.1	99.9
Sagunto 2	420	1,388	5,097	39.1	64.9	3.2	0.2	96.5
Sagunto 3	419	1,501	5,545	41.2	64.7	0.0	0.7	99.3
San Roque 1	397	2,022	7,680	59.2	66.3	1.4	0.5	98.2
San Roque 2	402	375	2,593	12.1	36.0	9.1	2.5	88.4
Santurce 4	403	6	36	0.2	42.3	0.6	0.0	99.4
Soto de la Ribera 4	432	232	1,034	6.3	52.0	1.9	0.0	98.1
Soto de la Ribera 5	434	79	413	2.1	44.0	1.8	0.0	98.2
Tarragona	395	0	0	0.0	0.0	0.0	0.0	100.0
Tarragona Power	424	31	223	0.9	32.8	6.9	0.0	93.0
Total	25,348	22,060	1,698	10.8	51.2	6.0	2.3	91.7

(1) This is the quotient between actual production and the available production or maximum production that the power station could reach running at nominal power during the hours in which it is available. (2) This is the quotient between actual production and total production that the power station could have reached operating at nominal power in the whole of hours that has been coupled (producing).

Thermal Production

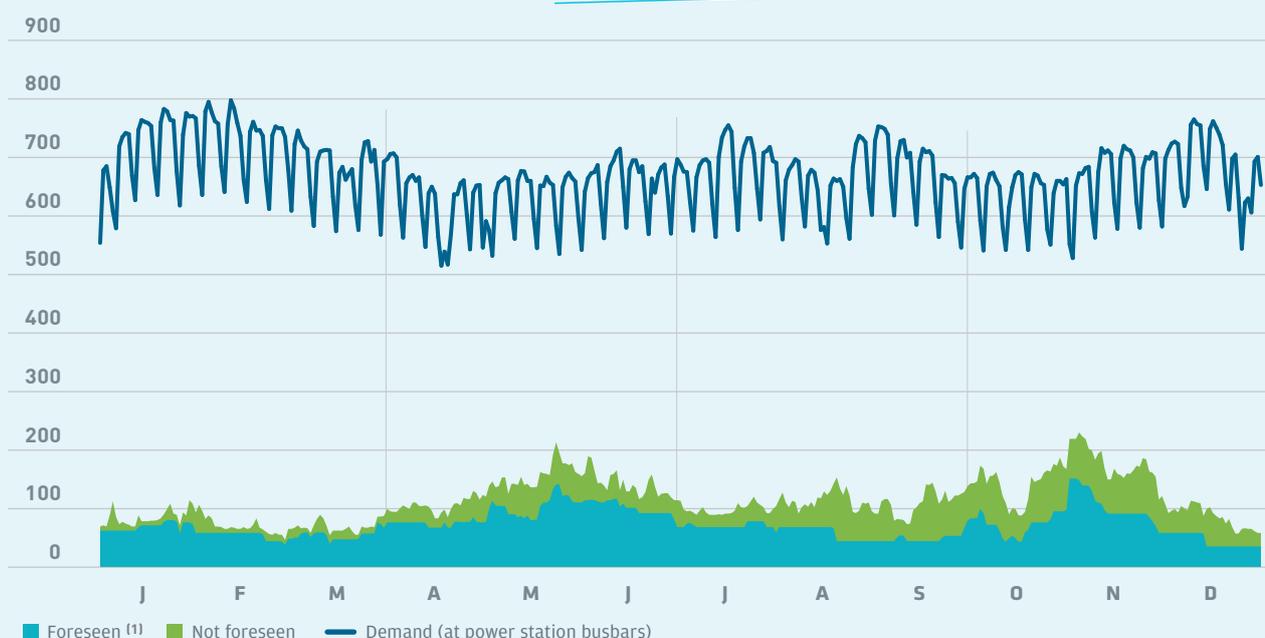
Utilisation and Availability of Thermal Power Stations

	Coal		Fuel/gas (1)		Combined cycle		Nuclear	
	2013	2014	2013	2014	2013	2014	2013	2014
Power (MW)	11,132	10,972	520	520	25,348	25,348	7,866	7,866
Production (GWh)	39,807	44,064	0	0	25,091	22,060	56,827	57,376
Hours in operation	4,350	4,877	0	0	1,736	1,698	7,367	7,398
Utilisation coefficients (%)								
Over available (2)	44.5	51.1	0.0	0.0	11.9	10.8	98.2	98.5
In No. of hours connected to grid (3)	82.2	82.3	-	-	57.0	51.2	98.1	98.6
Non-Availability (%)								
Foreseen	5.8	4.1	0.0	0.0	3.4	6.0	12.6	13.8
Not foreseen	2.5	6.3	0.0	68.9	1.6	2.3	3.4	1.7
Availability (%)	91.7	89.7	100.0	31.1	94.9	91.7	84.0	84.5

(1) Data corresponding to the Foix power station. (2) This is the quotient between actual production and the available production or maximum production that the power station could reach running at nominal power during the hours in which it is available. (3) This is the quotient between actual production and total production that the power station could have reached operating at nominal power in the whole of hours that has been coupled (producing).

Comparison of Daily Demand at Power Station Busbars with the Daily Non-Availability of the Thermal Power Stations

GWh



(1) Includes the permanent unavailability of the Escucha, Puertollano and Garoña stations.

Renewable Production

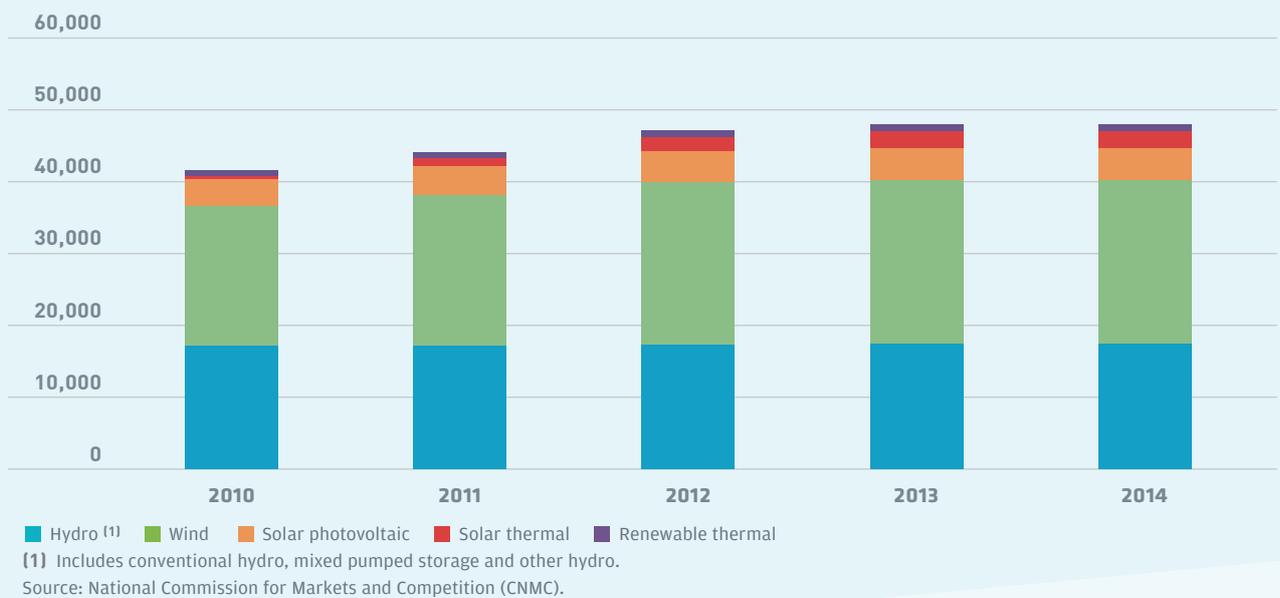
Evolution of Renewable Energy Production

GWh



Evolution of Installed Renewable Energy Power

MW





System Operation

PENINSULAR SYSTEM

[4]

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DEVIATION HOURS AGAINST THE SYSTEM

Source: OMIE and REE

Components of the Average Final Price. National Demand (Reference Supply + Free Contracting)

€/MWh

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	%14/13
Day-ahead market	36.39	18.77	27.90	27.26	43.18	51.92	49.09	50.70	59.90	56.84	48.57	49.31	43.46	-6.0
Intraday market	-0.08	-0.12	-0.07	-0.06	0.00	-0.03	-0.04	-0.02	0.03	-0.02	-0.01	-0.01	-0.04	-37.4
System adjustment services	7.20	7.79	7.03	8.00	4.88	3.56	3.30	4.20	4.82	6.28	6.07	5.36	5.69	1.6
Technical constraints (PDBF)	4.11	3.75	4.20	4.99	3.52	2.36	2.14	2.87	2.62	3.54	3.47	3.12	3.38	19.5
Additional upward power reserve	0.96	1.62	0.95	0.64	0.07	0.01	0.00	0.01	0.48	0.71	0.80	0.85	0.59	-19.8
Secondary control band	1.44	1.42	0.87	0.93	0.81	1.02	0.93	0.99	1.25	1.55	1.38	0.89	1.12	-23.2
Real-time constraints	0.29	0.69	0.58	1.17	0.26	0.15	0.16	0.19	0.30	0.30	0.27	0.16	0.37	-19.8
Deviations (1)	0.50	0.23	0.42	0.26	0.21	0.22	0.17	0.14	0.16	0.22	0.23	0.45	0.27	-10.8
Deviations surplus	-0.10	0.08	0.01	0.01	0.01	-0.13	-0.04	0.00	0.01	-0.04	-0.01	-0.04	-0.02	-120.90
Power control factor	0.00	0.00	0.00	0.00	0.00	-0.07	-0.06	0.00	0.00	0.00	-0.07	-0.07	-0.02	-
Capacity payment	7.00	6.89	5.46	5.29	5.14	6.14	7.17	4.47	5.23	5.09	5.58	7.06	5.90	-2.38
Final price 2014	50.51	33.33	40.32	40.49	53.20	61.59	59.52	59.35	69.98	68.19	60.21	61.72	55.01	-4.8
Final price 2013	65.50	59.06	41.58	32.30	54.62	53.35	62.43	57.66	61.32	65.08	56.13	81.67	57.79	

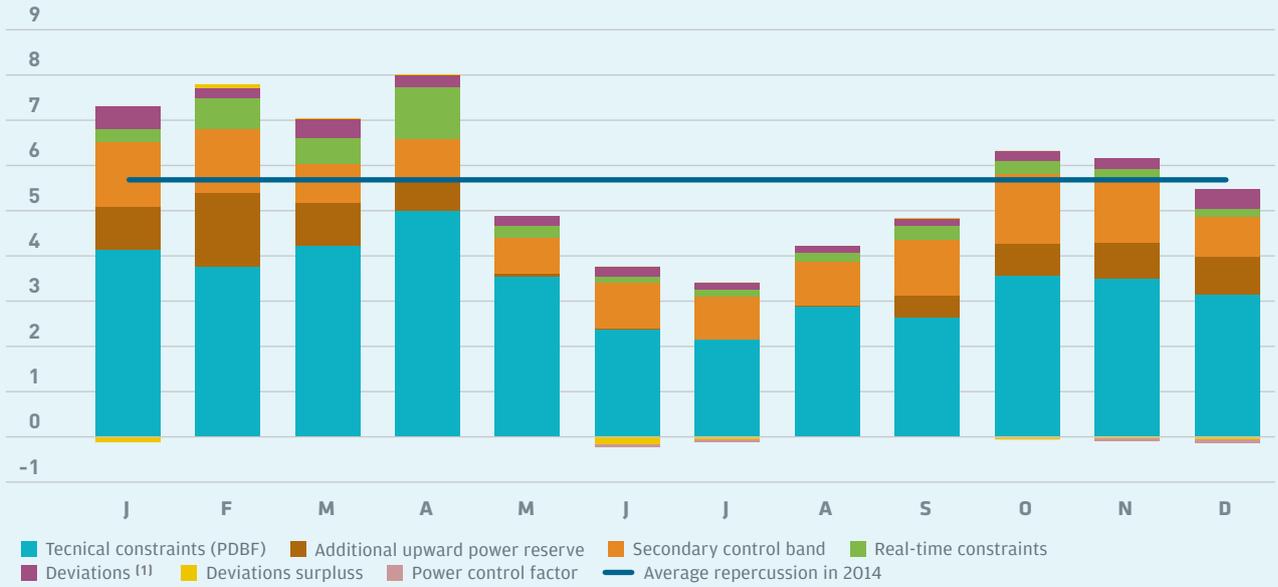
Note: The prices are calculated using the latest settlements available from the System Operator
 (1) Includes settlement of cross-border balancing services implemented since June 2014.

Final Prices and Energy. National Demand (Reference Supply + Free Contracting)



Repercussion of the Adjustment Services in the Average Final Price

€/MWh



(1) Includes cross-border balancing services since June 2014.

Evolution of the Average Price. National Demand (Reference Supply + Free Contracting)

€/MWh

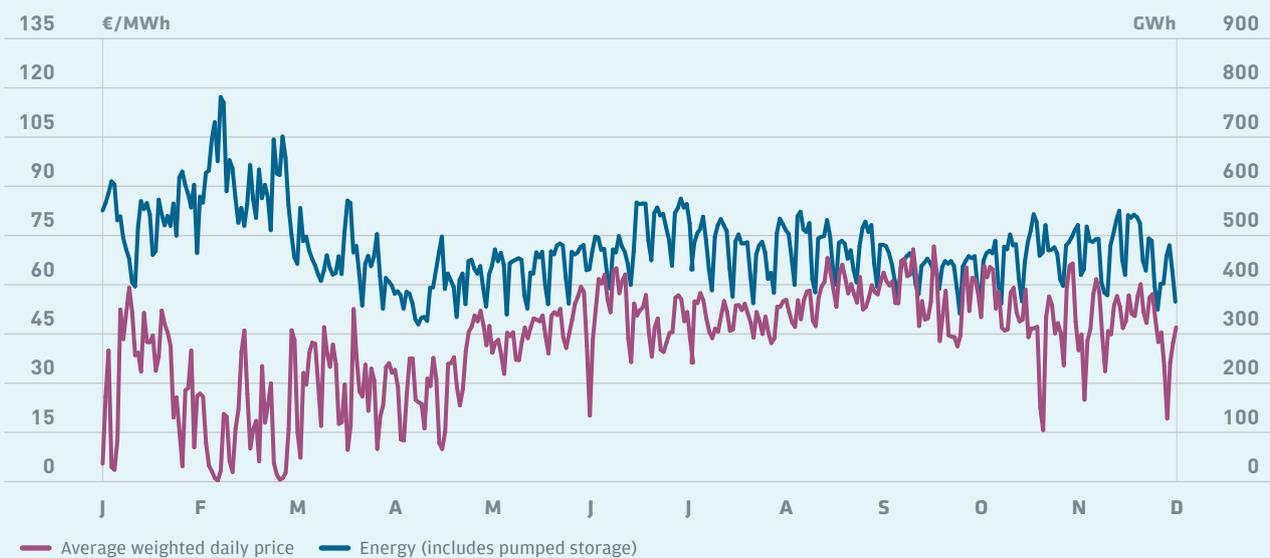


Energy and Average Weighted Prices in the Day-Ahead Market

	Energy ⁽¹⁾ (GWh)	Price (€/MWh)		
		Hourly minimum	Monthly avg.	Hourly max.
January	16,647	0.00	33.34	96.30
February	17,072	0.00	16.12	110.00
March	15,167	0.00	25.42	113.92
April	11,927	2.98	26.46	50.00
May	13,113	12.00	42.97	72.90
June	13,639	7.00	51.94	69.99
July	16,010	23.58	49.05	64.02
August	14,518	32.00	50.80	65.03
September	13,960	35.10	59.70	76.96
October	13,489	10.00	56.38	99.77
November	13,954	5.99	47.69	90.00
December	14,405	2.30	48.79	72.69
Annual	173,902	0.00	42.12	113.92

(1) Includes pumped storage.

Day-Ahead Market. Average Weighted Daily Price and Energy



Energy and Average Weighted Prices in the Intraday Market

	Energy Sales (GWh)	Energy ⁽¹⁾ (GWh)	Price (€/MWh)	
			Monthly avg.	Hourly max.
January	2,999	1,249	34.78	89.02
February	2,489	1,011	17.55	80.01
March	2,638	1,006	29.12	95.92
April	2,471	914	26.25	56.71
May	2,600	976	43.50	70.00
June	2,467	898	51.06	79.01
July	2,563	919	47.68	67.46
August	2,650	1,187	50.05	68.10
September	2,424	652	61.24	84.65
October	2,451	673	56.36	93.90
November	2,572	794	49.35	85.45
December	2,763	1,064	50.27	72.01
Annual	31,087	11,343	43.08	95.92

(1) Negotiated net result of energy of production units.

Energy Managed in the System Adjustment Services ⁽¹⁾

	GWh					
	2013		2014		% 14/13	
	Upward	Downward	Upward	Downward	Upward	Downward
Security of supply constraints (2)	4,085	-	3,260	-	-20.2	-
Technical constraints (PDBF) (3)	7,240	193	9,571	110	32.2	-42.9
Secondary control	1,806	1,070	1,746	995	-3.3	-7.1
Tertiary control	3,330	1,812	3,066	1,765	-7.9	-2.6
Deviation management	2,347	905	1,865	571	-20.5	-36.9
Real-time constraints (4)	558	1,701	556	1,274	-0.5	-25.1
Total energy managed	25.048		24.780		-1.1	

(1) Does not include additional upward energy reserve, secondary control band, nor energies associated to cross-border balancing services.

(2) Energy increased in phase 1 of the resolution of security of supply constraints (Royal Decree 134/210 modified by RD 1221/2010). (3) Energy increased or reduced in phase 1 of the resolution of technical constraints of the PDBF (P.O.3.2). (4) Includes energy redispatched through the link between the Spanish peninsular electricity system and the Balearic Islands' electricity system.

Energy Managed in the Peninsular System Adjustment Services with Regard to Demand (Reference Supply + Free Contracting)

%



Note: does not include constraints due to security of supply.

Resolution of Security of Supply Constraints ⁽¹⁾



■ Monthly energy — Monthly average weighted price ⁽²⁾

(1) Increased or reduced energy in phase 1 of the resolution of security of supply constraints (RD 134/2010 amended by RD 1221/2010)

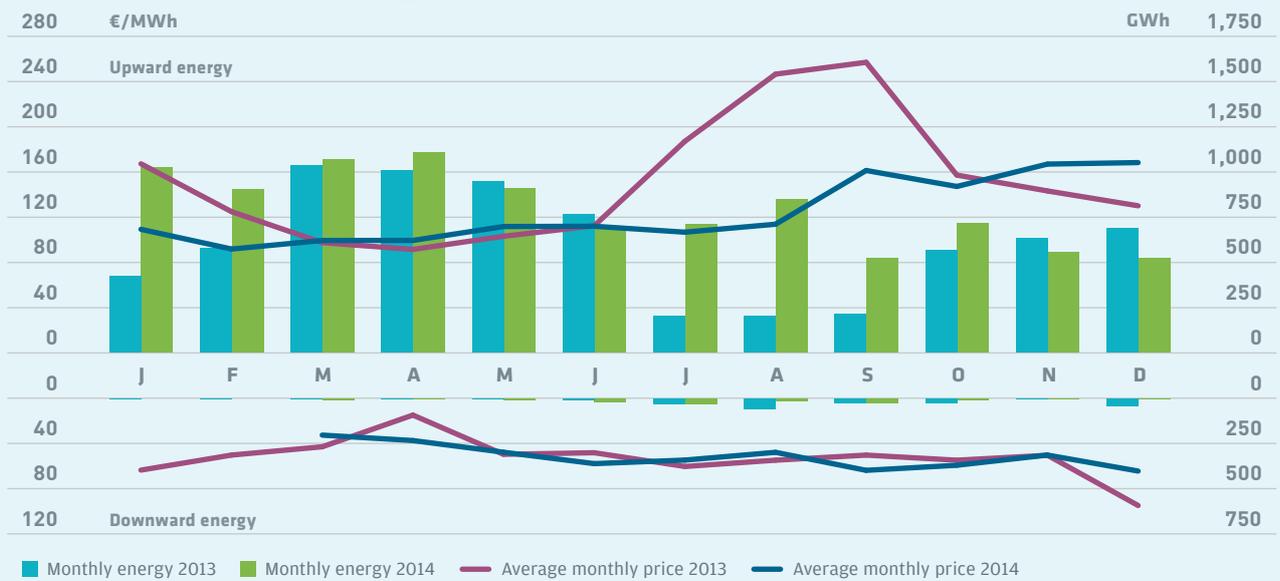
(2) Calculated on the basis of the cost of the resolution of security of supply constraints process divided by scheduled energy due to security of supply constraints.

Resolution of Technical Constraints (PDBF)

Phase I

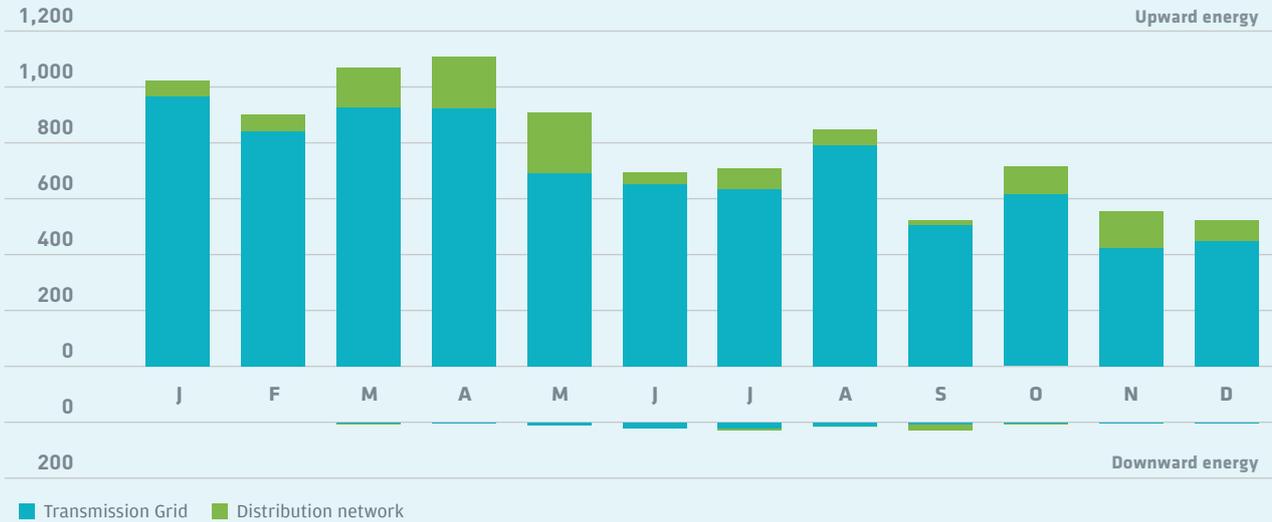
	Energy (GWh)	Upward energy Price (€/MWh)		Energy (GWh)	Downward energy Price (€/MWh)	
		Weighted average	Max.		Weighted average	Max.
January	1,022	108.58	223.04	-	0.00	-
February	900	91.06	178.19	-	0.00	-
March	1,069	98.67	231.49	8	31.98	90.00
April	1,108	98.71	239.69	0	36.81	42.01
May	908	111.08	681.03	8	47.20	56.89
June	692	111.32	1,773.35	20	57.33	69.99
July	710	106.04	4,611.89	28	54.18	64.02
August	847	113.12	4,611.89	14	47.27	65.03
September	524	160.92	4,199.73	26	63.29	73.20
October	714	146.70	4,573.92	6	58.77	85.00
November	553	166.61	1,190.22	1	49.72	64.48
December	523	167.94	1,383.31	1	63.93	72.69
Annual	9,571	117.64	4,611.89	110	54.25	90.00

Resolution of Technical Constraints (PDBF). Average Weighted Prices and Energies



Resolution of Technical Constraints (PDBF). Breakdown by Type of Constraint

GWh



Resolution of Technical Constraints (PDBF). Breakdown by Technology. Annual Total

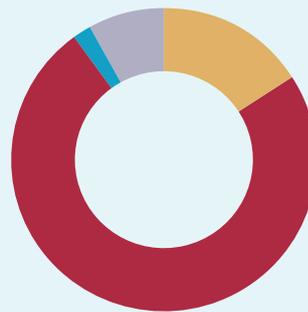
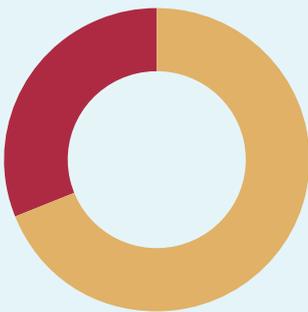
%

Phase I

Upward energy

Phase II

Upward energy

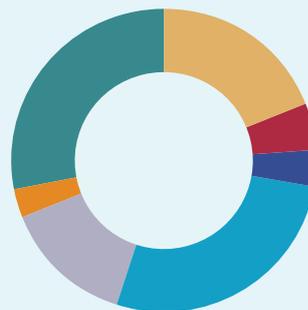
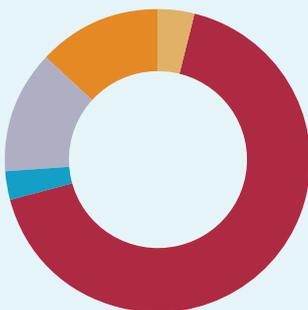


Phase I

Downward energy

Phase II

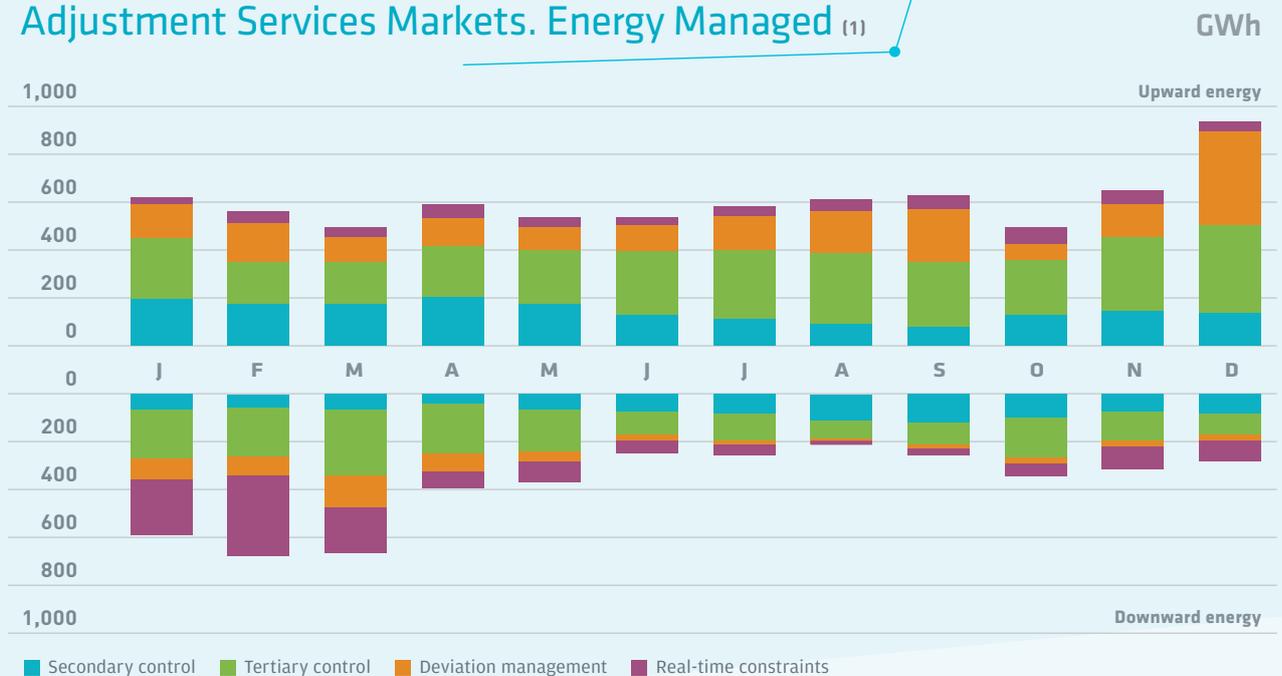
Downward energy



Additional Upward Power Reserve Allocated



Adjustment Services Markets. Energy Managed (1)



(1) Does not include constraints due to security of supply nor PDBF technical constraints..

Secondary Control

	Average power (MW)			Band Price (€/MW)		Energy (GWh)	Upward Price (€/MWh)		Energy (GWh)	Downward Price (€/MWh)	
	Upward	Downward	Total	Weighted Average	Max.		Avg. (1)	Max.		Avg. (2)	Max.
January	699	515	1,215	28.82	108.00	197	44.50	107.77	69	15.09	86.80
February	654	491	1,145	30.98	143.10	173	24.06	130.15	65	5.16	62.90
March	663	499	1,162	17.87	80.00	179	31.37	90.04	73	8.63	62.13
April	677	496	1,173	17.50	42.34	206	34.49	53.56	47	10.27	45.17
May	645	483	1,128	16.51	45.09	173	46.65	112.00	72	31.09	55.96
June	661	495	1,155	21.75	69.29	125	55.21	83.20	78	38.81	140.00
July	672	510	1,182	20.66	45.55	107	48.95	76.30	88	32.01	94.10
August	670	497	1,167	21.01	55.00	90	50.62	83.32	113	35.83	70.00
September	703	508	1,211	26.31	70.00	79	62.64	87.00	125	48.73	75.01
October	683	506	1,190	31.22	81.72	131	61.12	139.98	100	44.74	94.51
November	688	507	1,194	28.21	84.90	145	55.97	86.00	81	38.06	80.00
December	705	515	1,219	18.67	58.91	142	54.53	79.00	84	38.09	67.00
Annual	677	502	1,179	23.27	143.10	1,746	45.35	139.98	995	31.61	140.00

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

Secondary Control Band. Average Weighted Price and Average Band

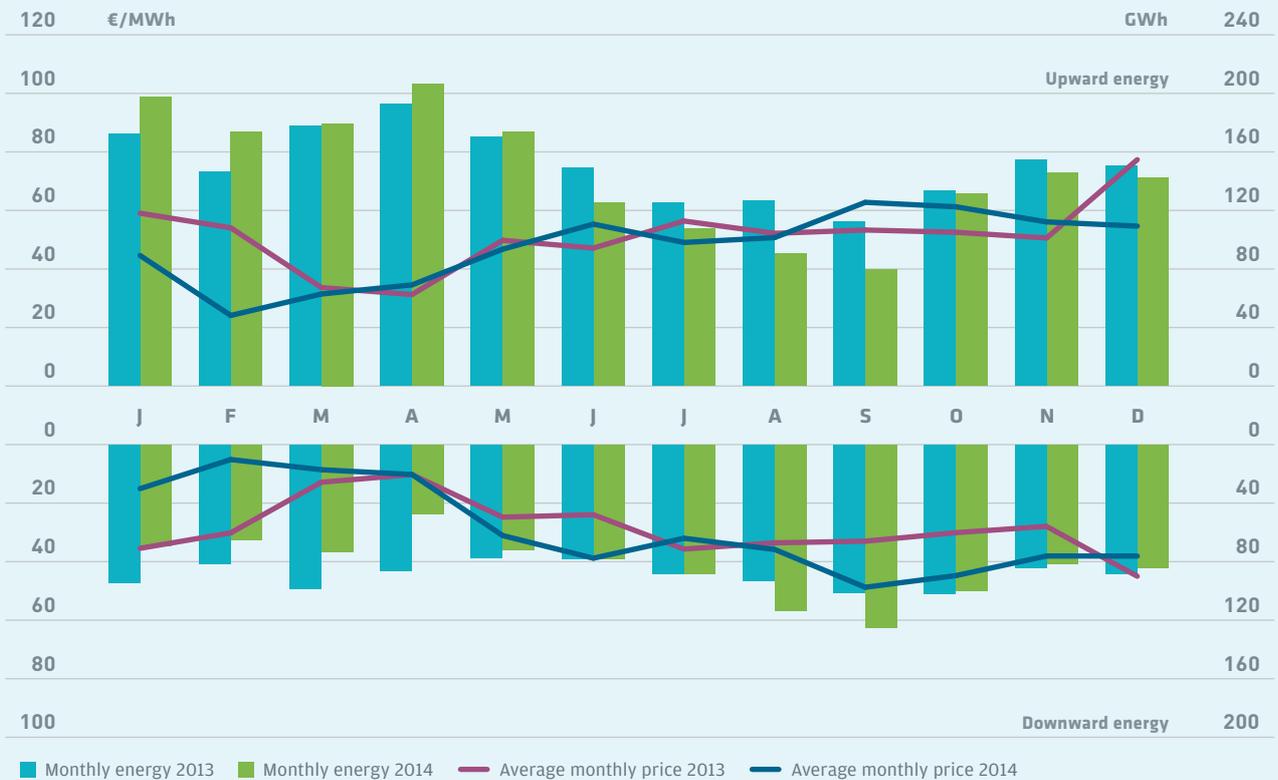


Total Monthly Secondary Control Band Allocated. Breakdown by Technology.

GW



Secondary Control. Average Weighted Prices and Energies



Tertiary Control

	Energy (1) (GWh)	Upward energy		Energy (1) (GWh)	Downward energy	
		Price (€/MWh)			Price (€/MWh)	
		Avg. (2)	Max.		Avg. (3)	Max.
January	252	53.58	105.77	205	8.97	50.00
February	180	38.31	124.00	198	0.97	35.00
March	170	40.62	79.75	267	3.89	42.00
April	216	39.11	110.16	199	2.35	43.00
May	227	55.61	110.12	167	13.58	50.00
June	272	65.34	83.20	94	24.01	60.00
July	287	58.39	76.00	106	17.28	45.00
August	296	58.61	81.64	72	18.68	46.00
September	274	71.59	90.00	92	22.91	66.00
October	228	74.44	136.74	163	22.90	69.50
November	307	63.61	84.50	117	20.07	60.36
December	358	62.11	78.00	85	18.50	53.00
Annual	3.066	58.23	136.74	1.765	11.90	69.50

(1) Includes tertiary control energy by MER (Exceptional Resolution Mechanism). (2) Average weighted sell price.
(3) Average weighted buy back.

Tertiary Control. Average Weighted Prices and Energies

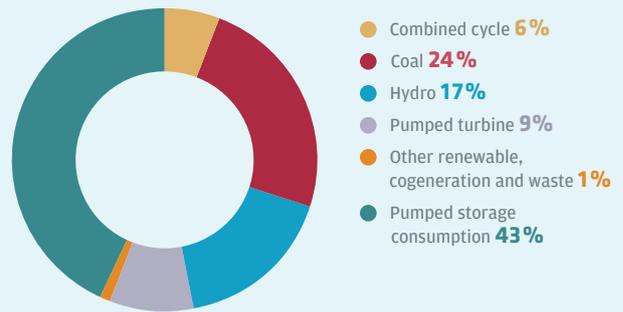
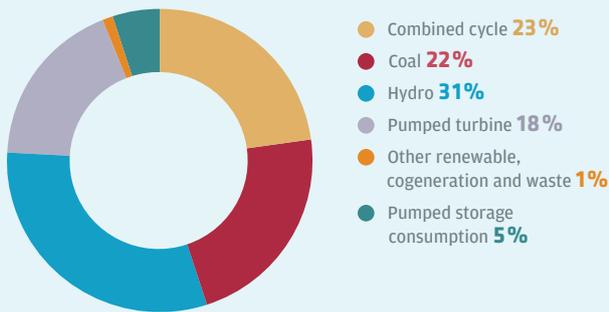


Tertiary Control. Breakdown by Technology. Annual Total

%

Upward energy

Downward energy



Deviation Management

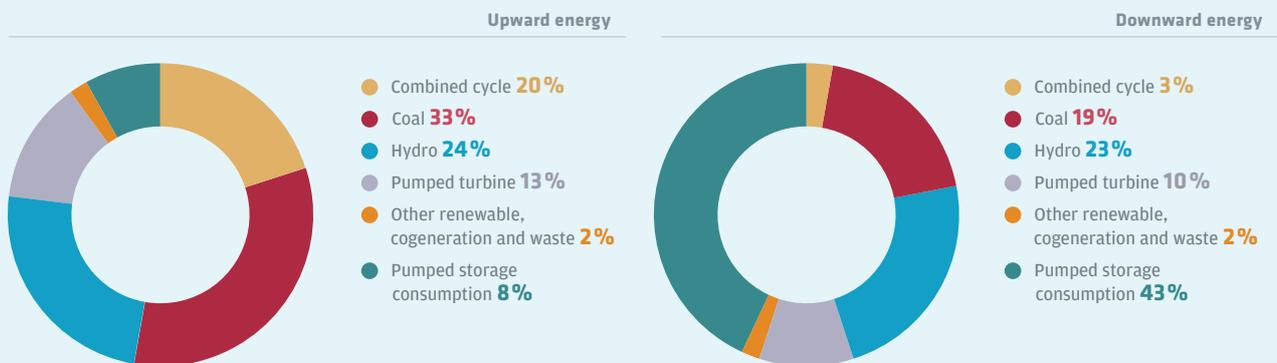
	Energy (GWh)	Upward energy Price (€/MWh)		Energy (GWh)	Downward energy Price (€/MWh)	
		Avg. (1)	Max.		Avg. (2)	Max.
January	144	49.48	86.87	82	6.50	37.83
February	160	38.23	83.55	76	1.22	34.57
March	104	39.91	53.55	136	6.35	39.20
April	110	37.84	90.00	81	2.62	25.00
May	96	50.20	71.50	47	20.00	36.00
June	109	63.12	81.50	24	33.35	55.00
July	147	54.51	71.51	18	26.61	42.10
August	174	55.37	78.76	10	33.50	46.00
September	214	68.57	84.11	14	42.12	66.90
October	67	67.18	99.70	29	28.09	56.14
November	139	60.86	81.10	29	25.35	58.00
December	401	59.69	78.00	26	23.88	48.00
Annual	1.865	54.95	99.70	571	12.23	66.90

(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

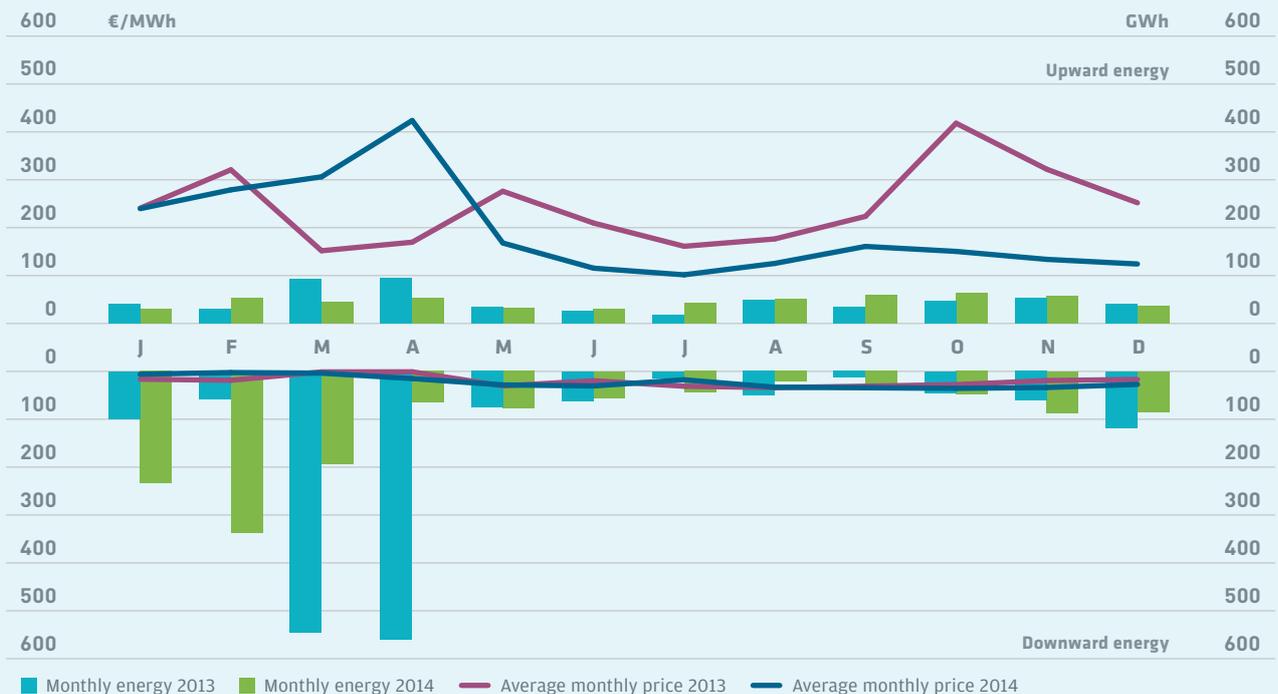


Real-Time Constraints

	Energy (1) (GWh)	Upward energy Price (€/MWh)		Energy (1) (GWh)	Downward energy Price (€/MWh)	
		Avg. (2)	Max.		Avg. (3)	Max.
January	30	238,78	1.919,60	234	6,26	65,53
February	53	277,98	2.635,25	336	2,72	46,85
March	45	305,09	2.579,85	193	3,95	50,10
April	54	422,44	7.996,94	65	15,22	39,10
May	33	167,18	2.182,05	78	28,52	56,03
June	30	114,77	200,00	56	30,61	66,48
July	43	100,92	180,30	44	17,86	52,28
August	51	124,68	191,65	21	33,30	58,00
September	59	160,03	280,00	25	34,40	67,00
October	64	149,70	1.047,40	49	35,68	84,80
November	58	133,12	1.226,11	87	33,84	59,13
December	36	123,48	1.575,00	85	27,43	60,91
Anual	556	196,50	7.996,94	1.274	13,71	84,80

(1) Includes energy redispatches of the interconnection between the Spanish Peninsular Electricity System and the Balearic Islands' Electricity System.
 (2) Average weighted sell price. (3) Average weighted buy back.

Real-Time Constraints. Average Weighted Prices and Energies



Measured Net Deviations. Average Weighted Monthly Price and Net Energy for Balancing

	Upward energy		Downward energy	
	Energy GWh	Price (€/MWh)	Energy GWh	Price (€/MWh)
January	1,120	23.84	332	42.21
February	1,180	10.79	230	24.49
March	1,028	15.14	299	31.59
April	630	18.53	387	32.06
May	421	34.71	429	47.95
June	397	45.06	525	58.15
July	270	42.33	624	52.26
August	268	44.65	652	53.94
September	267	54.13	626	65.96
October	382	45.92	516	62.31
November	296	40.89	621	56.25
December	326	43.11	975	56.07
Annual	6,584	34.92	6,214	48.60

Measured Net Deviations

GWh



(1) Except facilities within scope of regulation that are included in conventional generation.

Deviation Price in Relation to the Day-Ahead Market Price



Deviation Hours Against the System





Transmission Grid

PENINSULAR SYSTEM

[5]

72

EVOLUTION OF THE TRANSMISSION SYSTEM AND TRANSFORMER CAPACITY
400 kV TRANSMISSION LINES COMMISSIONED IN 2014

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220 kV TRANSMISSION LINES COMMISSIONED IN 2014

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TRANSFORMERS INVENTORIED IN 2014
EVOLUTION OF THE 400 kV AND \leq 220 kV TRANSMISSION GRID

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GRAPHIC OF THE EVOLUTION OF THE 400 kV AND \leq 220 kV TRANSMISSION GRID
TRANSMISSION GRID LINES WITH LOAD ABOVE 70%

Evolution of the Transmission System and Transformer Capacity

		2010	2011	2012	2013	2014
km of 400 kV circuit	Red Eléctrica	18,792	19,671	20,109	20,639	21,094
	Other companies	0	0	0	0	0
	Total	18,792	19,671	20,109	20,639	21,094
km of ≤ 220 kV circuit	Red Eléctrica	17,291	17,891	18,260	18,558	18,702
	Other companies	109	109	109	109	109
	Total	17,401	18,001	18,370	18,667	18,811
Transformer capacity (MVA)	Red Eléctrica	66,596	68,996	74,596	76,871	79,871
	Other companies	0	0	0	0	0
	Total	66,596	68,996	74,596	76,871	79,871

400 kV Transmission Lines Commissioned in 2014

Line	Company	No. of circuits	km of circuit	Transmission capacity (MVA) (1)
E/S Ludrio L/ Montearenas-Puentes	Red Eléctrica	2	0.5	1,398
L/ Bescanó-Santa Llogaia	Red Eléctrica	2	85.1	2,441
L/ Brovales-Guillena	Red Eléctrica	2	237.5	2,441
L/ Guillena-Puebla de Guzmán (modification)	Red Eléctrica	2	4.2	1,812
L/ Pinilla-Campanario	Red Eléctrica	1	40.3	2,441
L/ Puebla de Guzmán-Portuguese interconnection	Red Eléctrica	1	24.8	1,812
L/ Santa Llogaia-French interconnection (U)	Red Eléctrica	2	61.9	1,000
Total			454.3	

(1) Thermal transmission capacity according to the Commissioning document or the Execution Project. This capacity may vary depending on the operation conditions and the seasonal factors (MVA per circuit).

(U) Underground.

220 kV Transmission Lines Commissioned in 2014

Line	Company	No. of circuits	km of circuit	Transmission capacity (MVA) (1)
E/S Alcobendas L/ Fuencarral-S.S. Reyes	Red Eléctrica	2	0.7	556
E/S Alcobendas L/ Fuencarral-S.S. Reyes (U)	Red Eléctrica	2	4.1	556
E/S Algete L/ Ardoz-S.S. Reyes 1 (U)	Red Eléctrica	2	1.7	662
E/S Eiris L/ Mesón do Vento-Puerto	Red Eléctrica	1	0.2	375
E/S Eiris L/ Mesón do Vento-Puerto (U)	Red Eléctrica	2	5.8	375
E/S Novelda L/ Benejama-Saladas	Red Eléctrica	2	0.8	662
E/S Novelda L/ Benejama-Saladas (U)	Red Eléctrica	2	1.7	662
E/S Parque Central L/ Beniferri-Fuente de San Luis (U)	Red Eléctrica	2	6.7	539
E/S Polígono L/ Ventas del Batán-Aguacate (U)	Red Eléctrica	2	0.3	539
L/ Baró de Viver-Santa Coloma (U)	Red Eléctrica	1	1.9	490
L/ Cañuelo-Los Barrios	Red Eléctrica	2	5.9	894
L/ Costa De La Luz-Onuba	Red Eléctrica	2	25.7	894
L/ Gavarrot-Nudo Viario (U)	Red Eléctrica	2	6.2	500
L/ Maragall-Trinitat (U)	Red Eléctrica	1	4.4	461
L/ Mérida-San Serván	Red Eléctrica	2	46.1	850
L/ Valle del Cárcer (antes Vilanova)-Catadau (U)	Red Eléctrica	1	0.7	592
L/ Valle del Cárcer (antes Vilanova)-Valldigna-Gandía	Red Eléctrica	2	30.9	639
L/ Valle del Cárcer (antes Vilanova)-Valldigna-Gandía (U)	Red Eléctrica	2	0.4	639
Palos: conexión a posición de reactancia (U)	Red Eléctrica	1	0.1	300
Total			144.0	

(1) Thermal transmission capacity according to the Commissioning document or the Execution Project. This capacity may vary depending on the operation conditions and the seasonal factors (MVA per circuit).

(U) Underground.

Increase in Line Capacity in 2014

Line	Voltage (kV)	km of circuit	Increase in capacity (MVA) (1)
L/ Ave Zaragoza-Peñaflor	220	21.0	105
L/ Cartujos-Montetorrero	220	1.4	105
L/ Cartujos-Peñaflor	220	26.1	105
L/ Cordovilla-Orcoyen	220	21.3	105
L/ El Sequero-Logroño	220	27.4	105
L/ El Sequero-Quel	220	29.0	105
L/ Mesón do Vento-Portodemouros	220	38.6	105
L/ Mesón do Vento-Sabón	220	24.6	105
L/ Montetorrero-Ave Zaragoza	220	7.1	105
L/ San Pedro-Velle	220	15.6	105
L/ Tajo de la Encantada-Los Ramos	220	32.7	105
Total		244.7	

(1) Thermal transmission capacity according to the Commissioning document or the Execution Project. This capacity may vary depending on the operation conditions and the seasonal factors (MVA per circuit)

Substation Switchyards Commissioned in 2014

Substation	Company	Voltage kV
Campanario	Red Eléctrica	400
Santa Llogaia	Red Eléctrica	400
Benicull	Red Eléctrica	220
Murcia	Red Eléctrica	220
Valldigna	Red Eléctrica	220
Valle del Cárcer	Red Eléctrica	220

Transformers Inventoried in 2014

Substation	Company	Voltage kV	Transformer capacity	
			kV	MVA
La Farga (antes Ramis) - TR1	Red Eléctrica	400	400/220	600
La Farga (antes Ramis) - TR2	Red Eléctrica	400	400/220	600
Torrejón de Velasco - TR1	Red Eléctrica	400	400/220	600
Torrejón de Velasco - TR2	Red Eléctrica	400	400/220	600
Viladecans	Red Eléctrica	400	400/220	600
Total				3,000

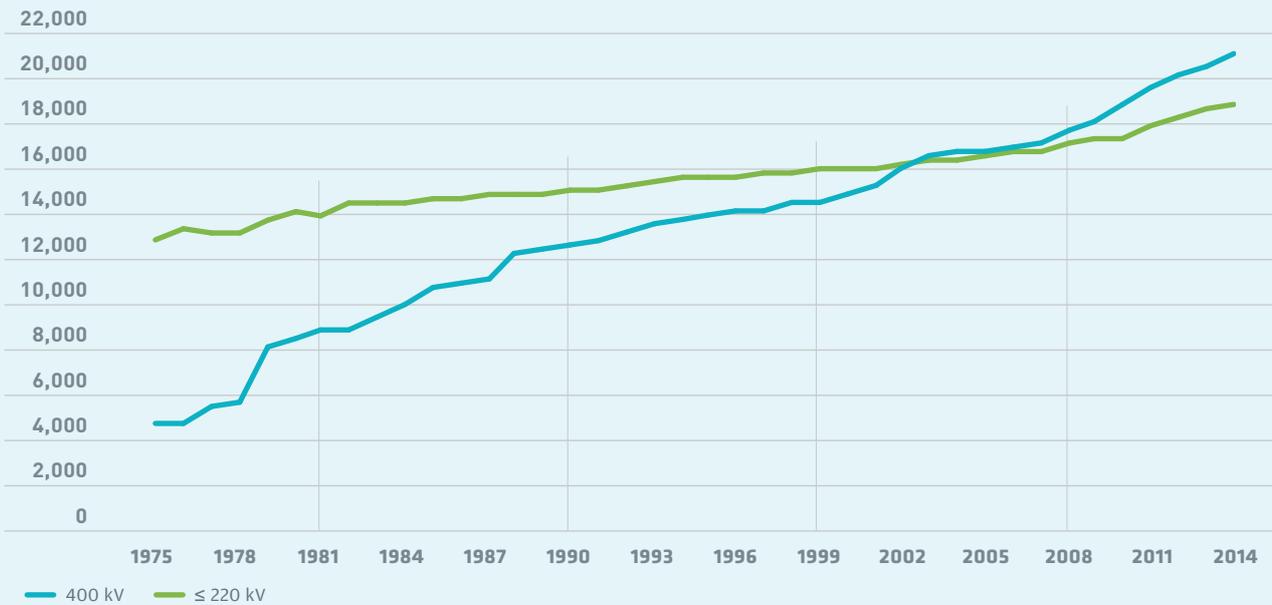
(TR) Transformer.

Evolution of the 400 and ≤ 220 kV Transmission Grid

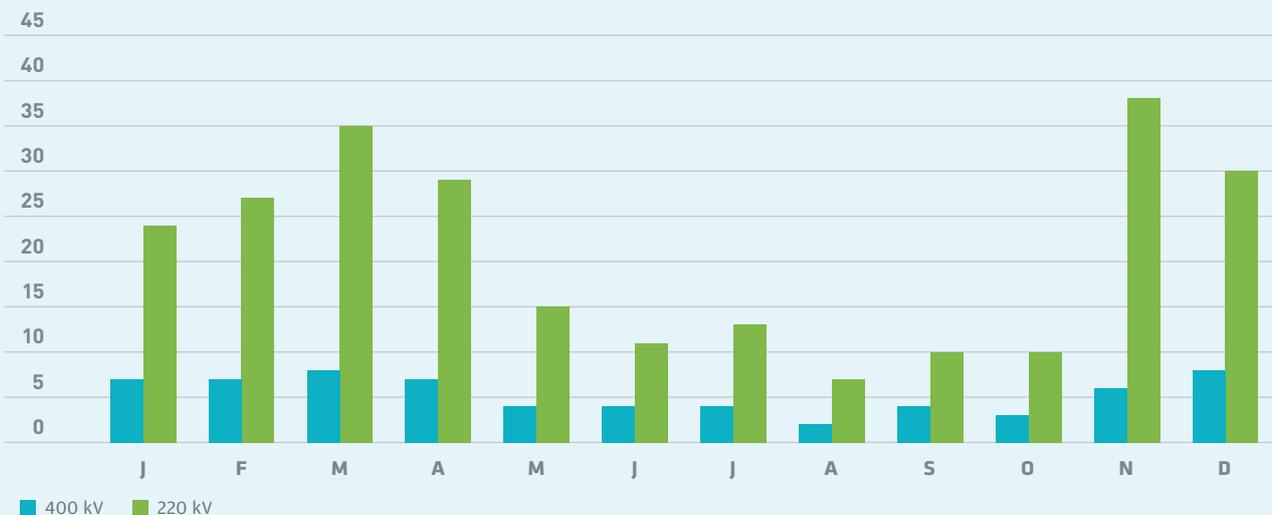
Year	km of circuit		Year	km of circuit	
	400 kV	≤ 220 kV		400 kV	≤ 220 kV
1975	4,715	12,925	1995	13,970	15,629
1976	4,715	13,501	1996	14,084	15,734
1977	5,595	13,138	1997	14,244	15,776
1978	5,732	13,258	1998	14,538	15,876
1979	8,207	13,767	1999	14,538	15,975
1980	8,518	14,139	2000	14,918	16,078
1981	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	17,052	16,753
1987	11,147	14,849	2007	17,191	16,817
1988	12,194	14,938	2008	17,765	17,175
1989	12,533	14,964	2009	18,056	17,307
1990	12,686	15,035	2010	18,792	17,401
1991	12,883	15,109	2011	19,671	18,001
1992	13,222	15,356	2012	20,109	18,370
1993	13,611	15,442	2013	20,639	18,667
1994	13,737	15,586	2014	21,094	18,811

Graphic of the Evolution of the 400 and ≤ 220 kV Transmission Grid

km of circuit



Transmission Grid Lines with Load above 70% ⁽¹⁾



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

Transmission Grid [5]

PENINSULAR SYSTEM





Service Quality

PENINSULAR SYSTEM

[6]

80 ENERGY NOT SUPPLIED (ENS)
DUE TO INCIDENCES IN THE
TRANSMISSION GRID

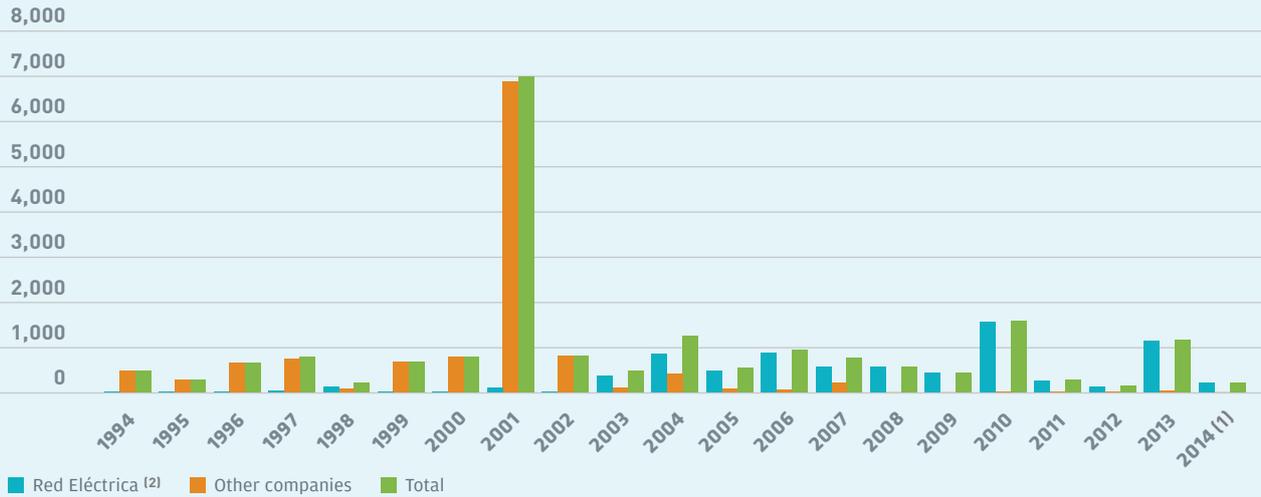
AVERAGE INTERRUPTION TIME
(AIT) DUE TO INCIDENCES

81 ANNUAL EVOLUTION OF THE
NON-AVAILABILITY RATE OF THE
TRANSMISSION GRID

MONTHLY EVOLUTION OF THE
NON-AVAILABILITY RATE OF THE
TRANSMISSION GRID

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

MWh



■ Red Eléctrica (2) ■ Other companies ■ Total

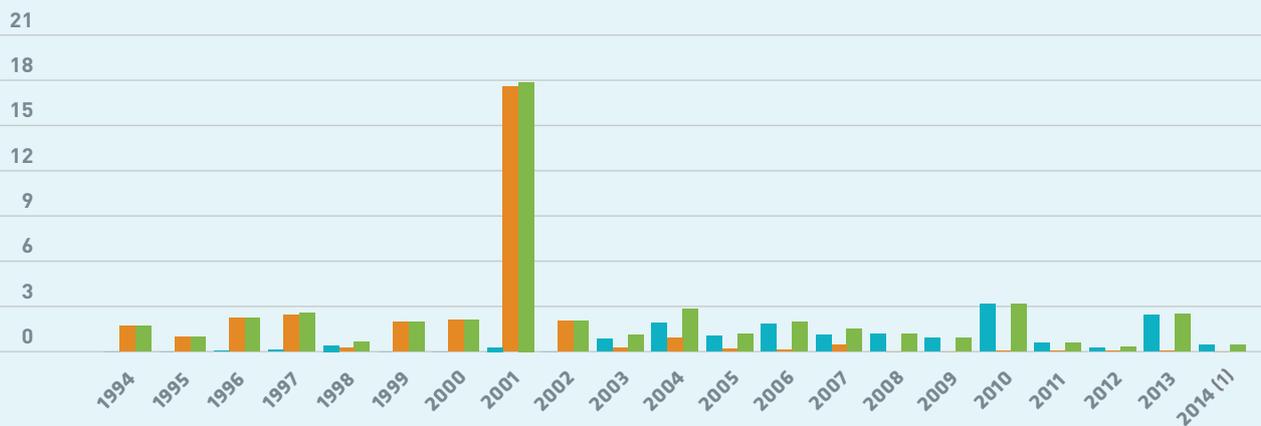
(1) Provisional data pending audit (currently underway).

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

The supply continuity indicators shown do not include the potential influence of incidents that are pending classification due to the fact that they are subject to an administrative proceeding currently underway.

Average interruption time (AIT) due to incidences

minutes



■ Red Eléctrica (2) ■ Other companies ■ Total

(1) Provisional data pending audit (currently underway).

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

The supply continuity indicators shown do not include the potential influence of incidents that are pending classification due to the fact that they are subject to an administrative proceeding currently underway.

Average interruption time (AIT) = Energy not supplied (ENS)/Average power of the system.

Annual evolution of the non-availability rate of the transmission grid

%



■ Programmed for predictive and preventative maintenance ■ Programmed for causes not due to maintenance
 ■ Non-programmed due to corrective maintenance ■ Non-programmed due to fortuitous circumstances

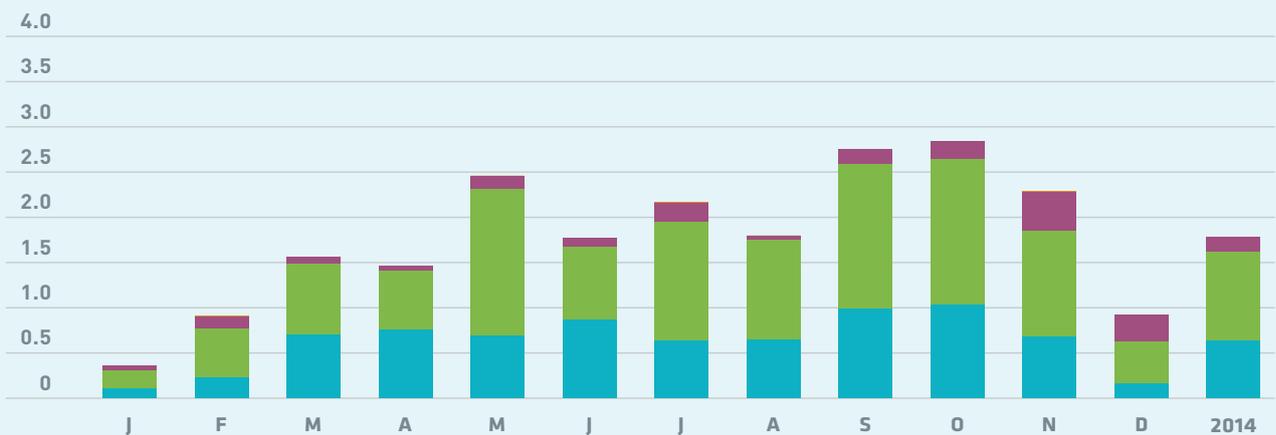
Note: Classification according to RD 1955/2000.

The total non-availability rate of the transmission grid does not include non-availabilities due to force-majeure or third party actions.

(1) Provisional data pending audit (currently underway).

Monthly evolution of the non-availability rate of the transmission grid (1)

%



■ Programmed for predictive and preventative maintenance ■ Programmed for causes not due to maintenance
 ■ Non-programmed due to corrective maintenance ■ Non-programmed due to fortuitous circumstances

Note: Classification according to RD 1955/2000.

The total non-availability rate of the transmission grid does not include non-availabilities due to force-majeure or third party actions.

(1) Provisional data pending audit (currently underway).



International Exchanges

PENINSULAR SYSTEM

[7]

- 84** EVOLUTION OF IMPORTS IN INTERNATIONAL PHYSICAL ENERGY EXCHANGES
EVOLUTION OF EXPORTS IN INTERNATIONAL PHYSICAL ENERGY EXCHANGES
- 85** EVOLUTION OF THE NET INTERNATIONAL PHYSICAL ENERGY EXCHANGES
MAP OF INTERNATIONAL PHYSICAL ENERGY EXCHANGES
- 86** INTERNATIONAL PHYSICAL ENERGY EXCHANGES
SCHEDULED INTERNATIONAL ENERGY EXCHANGES
- 87** SUMMARY OF SCHEDULED INTERNATIONAL ENERGY EXCHANGES
MONTHLY NET SCHEDULED INTERNATIONAL ENERGY EXCHANGES
- 88** SCHEDULED INTERNATIONAL TRANSACTIONS BY TYPE OF MARKET AGENT AND INTERCONNECTION
COMMERCIAL EXCHANGE CAPACITY OF THE INTERCONNECTIONS
- 89** AVERAGE USAGE OF COMMERCIAL EXCHANGE CAPACITY OF THE INTERCONNECTIONS
UTILISATION RATE OF THE COMMERCIAL EXCHANGE CAPACITY OF THE INTERCONNECTIONS
- 90** EVOLUTION OF THE CAPACITY AUCTIONS FOR THE INTERCONNECTION WITH FRANCE (IFE)
- 91** LONG TERM CAPACITY NEGOTIATED IN EXPLICIT AUCTIONS FOR THE INTERCONNECTION WITH FRANCE (IFE)
CAPACITY NEGOTIATED IN EXPLICIT INTRADAY AUCTIONS FOR THE INTERCONNECTION WITH FRANCE (IFE)
- 92** CONGESTION RENT AT THE INTERCONNECTION WITH FRANCE DERIVED FROM THE CAPACITY AUCTIONS AND THE COUPLING OF THE DAY-AHEAD MARKETS MRC (MULTI-REGIONAL COUPLING)
CONGESTION RENT AND COUPLING RATE AT THE INTERCONNECTION WITH FRANCE DERIVED FROM THE COUPLING OF THE DAY-AHEAD MARKETS MRC (MULTI-REGIONAL COUPLING)
- 93** COUNTER-TRADING MEASURES APPLIED TO THE INTERCONNECTION WITH FRANCE
CONGESTION RENT AND COUPLING RATE AT THE INTERCONNECTION WITH PORTUGAL DERIVED FROM THE COUPLING OF THE DAY-AHEAD MARKETS MRC (MULTI-REGIONAL COUPLING)
- 94** CONGESTION RENT AT THE INTERCONNECTION WITH PORTUGAL DERIVED FROM THE COUPLING OF THE DAY-AHEAD MARKETS MRC (MULTI-REGIONAL COUPLING) AND MARKET-SPLITTING IN THE INTRADAY HORIZON
COUNTER-TRADING MEASURES APPLIED TO THE INTERCONNECTION WITH PORTUGAL
- 95** ENERGY AND AVERAGE PRICE FOR CROSS-BORDER BALANCING SERVICES ACTIVATED BY EXTERNAL ELECTRICITY SYSTEMS
- 96** ENERGY AND AVERAGE PRICE FOR CROSS-BORDER BALANCING SERVICES ACTIVATED BY THE SPANISH ELECTRICITY SYSTEM THROUGH THE INTERCONNECTION WITH FRANCE
ENERGY AND AVERAGE PRICE FOR CROSS-BORDER BALANCING SERVICES ACTIVATED BY THE SPANISH ELECTRICITY SYSTEM THROUGH THE INTERCONNECTION WITH PORTUGAL

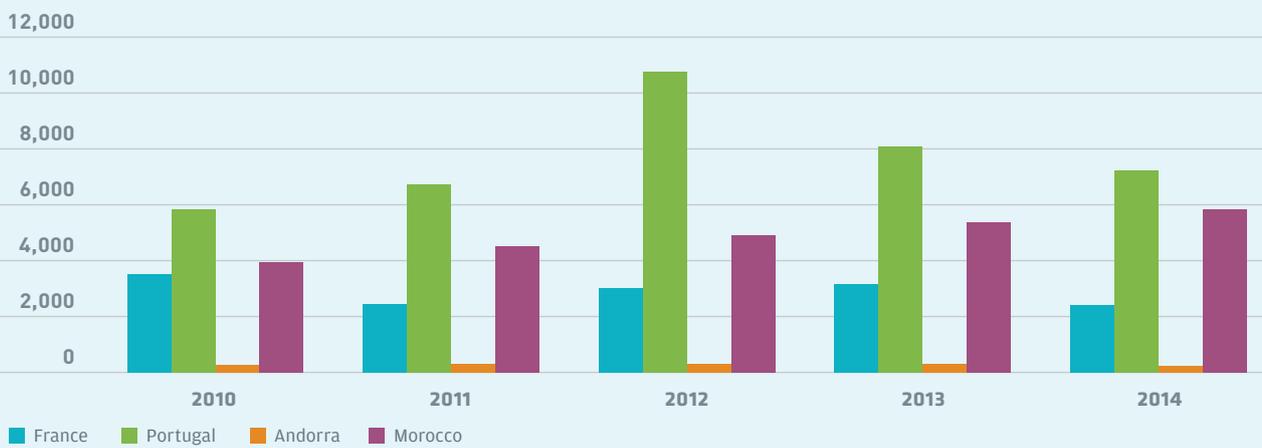
Evolution of imports in international physical energy exchanges

GWh



Evolution of exports in international physical energy exchanges

GWh



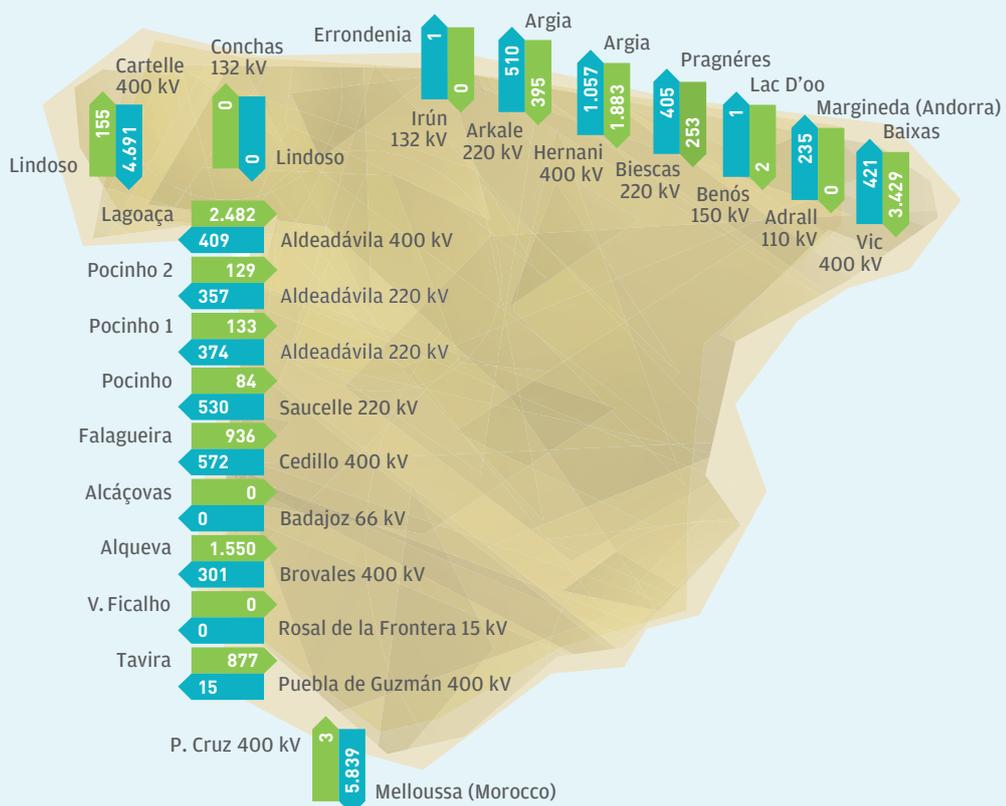
Evolution of the net international physical energy exchanges

GWh



Map of international physical energy exchanges

GWh



International physical energy exchanges

GWh

	Incoming		Outgoing		Balance (1)		Volumen	
	2013	2014	2013	2014	2013	2014	2013	2014
France	4,879	5,963	3,171	2,395	1,708	3,567	8,050	8,358
Portugal	5,323	6,345	8,100	7,247	-2,777	-903	13,424	13,592
Andorra	0	0	287	235	-287	-235	287	235
Morocco	1	3	5,377	5,839	-5,376	-5,836	5,378	5,841
Total	10,204	12,310	16,936	15,716	-6,732	-3,406	27,139	28,026

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

Scheduled international energy exchanges (1)

GWh

	Import		Export		Balance (2)	
	2013	2014	2013	2014	2013	2014
France (3)	5,759	6,467	4,052	2,903	1,707	3,564
Portugal	2,450	3,184	5,232	4,084	-2,782	-901
Andorra	0	0	287	235	-287	-235
Morocco	0	0	5,373	5,835	-5,373	-5,835
Total	8,209	9,651	14,944	13,057	-6,736	-3,406

(1) On 13 May, 2014, the MRC (Multi-Regional Coupling) day-ahead markets coupling mechanism was launched. As of that date, the exchange capacity of the Spain-France and the Spain-Portugal interconnections is implicitly allocated in the daily horizon in this process. (2) Positive value: import exchange balance. Negative values: export exchange balance.

(3) Includes exchanges with other European countries.

Summary of Scheduled International Energy Exchanges

	Import	Export	Balance
Transactions (market + physical bilateral contracts)	9,643	12,991	-3,348
France (1)	6,464	2,885	3,579
Portugal	3,179	4,036	-857
Andorra	0	235	-235
Morocco	0	5,835	-5,835
Counter-Trading France - Spain	1	2	-1
Counter-Trading Portugal - Spain	0	0	0
Support exchanges	0	0	0
Cross-border balancing services (2)	7	65	-57
Total intercambios programados	9,651	13,057	-3,406
Frequency control deviations compensated for			0
Balance of international physical energy exchanges			-3,406

(1) Includes exchanges with other European countries. (2) Since June 2014 cross-border balancing services are operating in the southwest region of Europe (SWE), said services use the vacant exchange capacity between systems after adjusting the exchange programmes in the intraday horizon.

Monthly net scheduled international energy exchanges



Scheduled international transactions by type of market agent and interconnection ⁽¹⁾

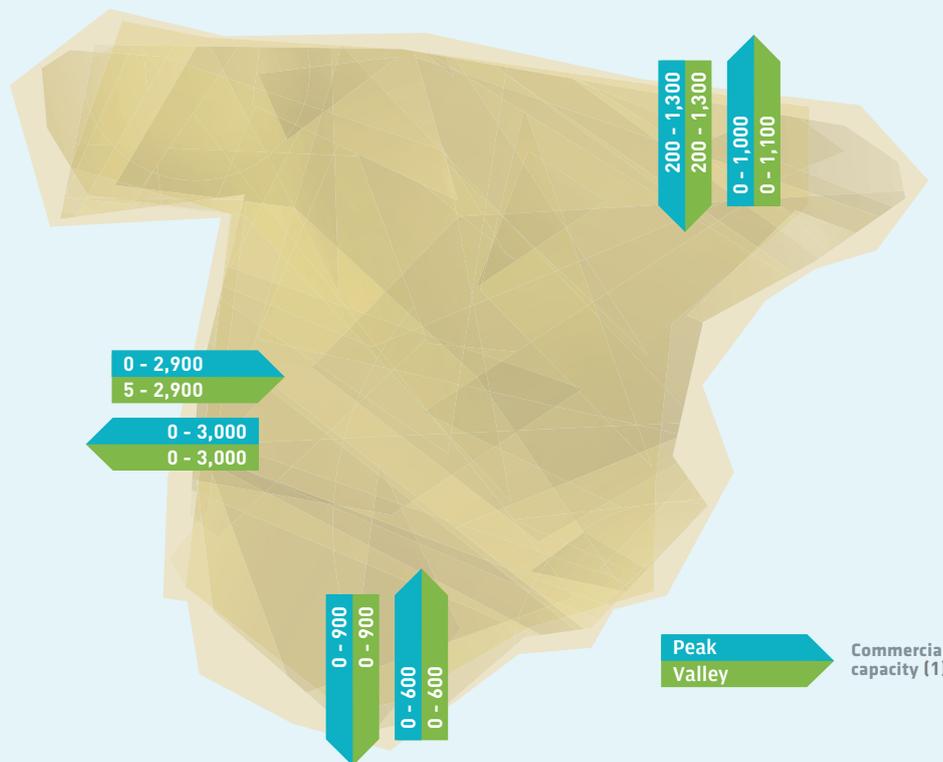
GWh

	Markets + bilateral contracts		Cross-border balancing services ⁽²⁾		Counter-trading actions		Support exchanges				Total Balance
	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export	
France ⁽³⁾	6,464	2,885	3	17	1	2	0	0	6,467	2,903	3,564
Portugal	3,179	4,036	5	48	0	0	0	0	3,184	4,084	-901
Andorra	0	235	0	0	0	0	0	0	0	235	-235
Morocco	0	5,835	0	0	0	0	0	0	0	5,835	-5,835
Total	9,643	12,991	7	65	1	2	0	0	9,651	13,057	-3,406

⁽¹⁾ On 13 May, 2014, the MRC (Multi-Regional Coupling) day-ahead markets coupling mechanism was launched. As of that date, the exchange capacity of the Spain-France and the Spain-Portugal interconnections is implicitly allocated in the daily horizon in this process. ⁽²⁾ Since June 2014 cross-border balancing services are operating in the southwest region of Europe (SWE), said services use the vacant exchange capacity between systems after adjusting the exchange programmes in the intraday horizon. ⁽³⁾ Includes exchanges with other European countries.

Commercial exchange capacity of the interconnections

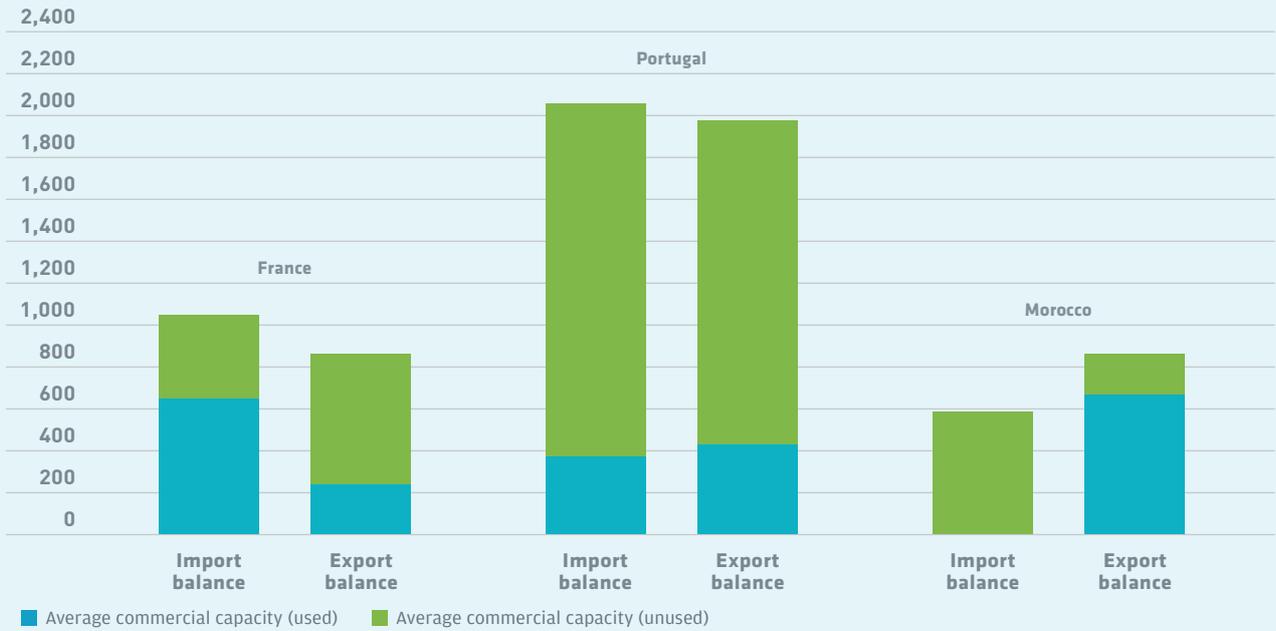
MW



⁽¹⁾ Extreme hourly values considering non-availabilities of the grid elements and generating stations.

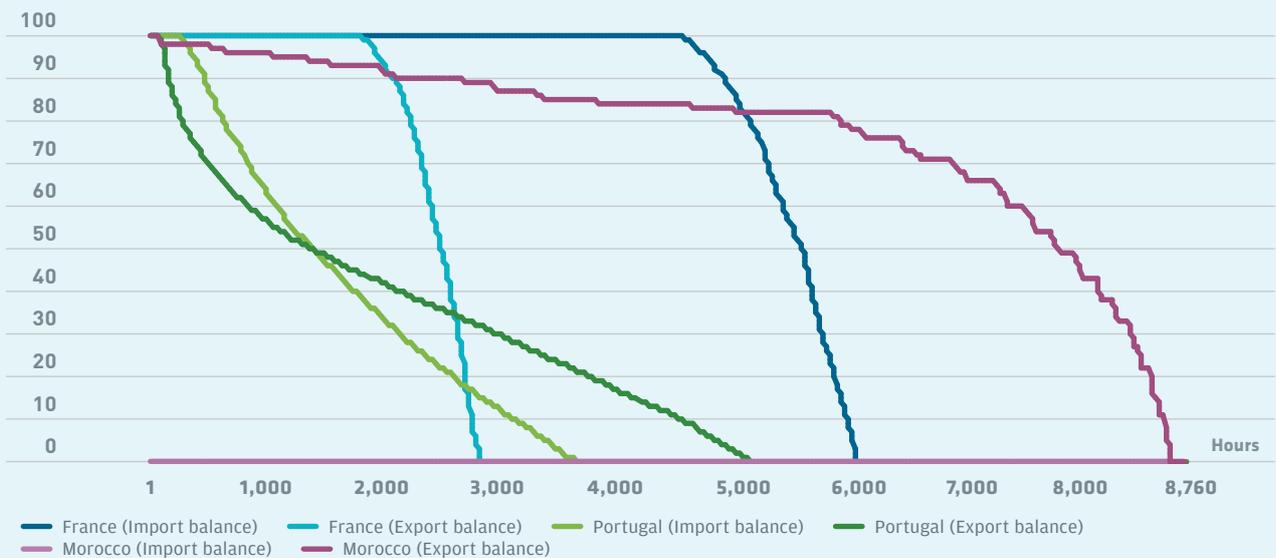
Average usage of commercial exchange capacity of the interconnections

MW



Utilisation rate of the commercial exchange capacity of the interconnections

% Usage



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

Evolution of the capacity auctions for the interconnection with France (IFE) ⁽¹⁾



(1) The outcome of the annual/monthly capacity auction applies for each hour except for the time periods reflected in the specifications published for said auction.

Long Term Capacity Negotiated in Explicit Auctions for the Interconnection with France (IFE) ⁽¹⁾

GW



Capacity Negotiated in Explicit Auctions for the Interconnection with France (IFE)

GW



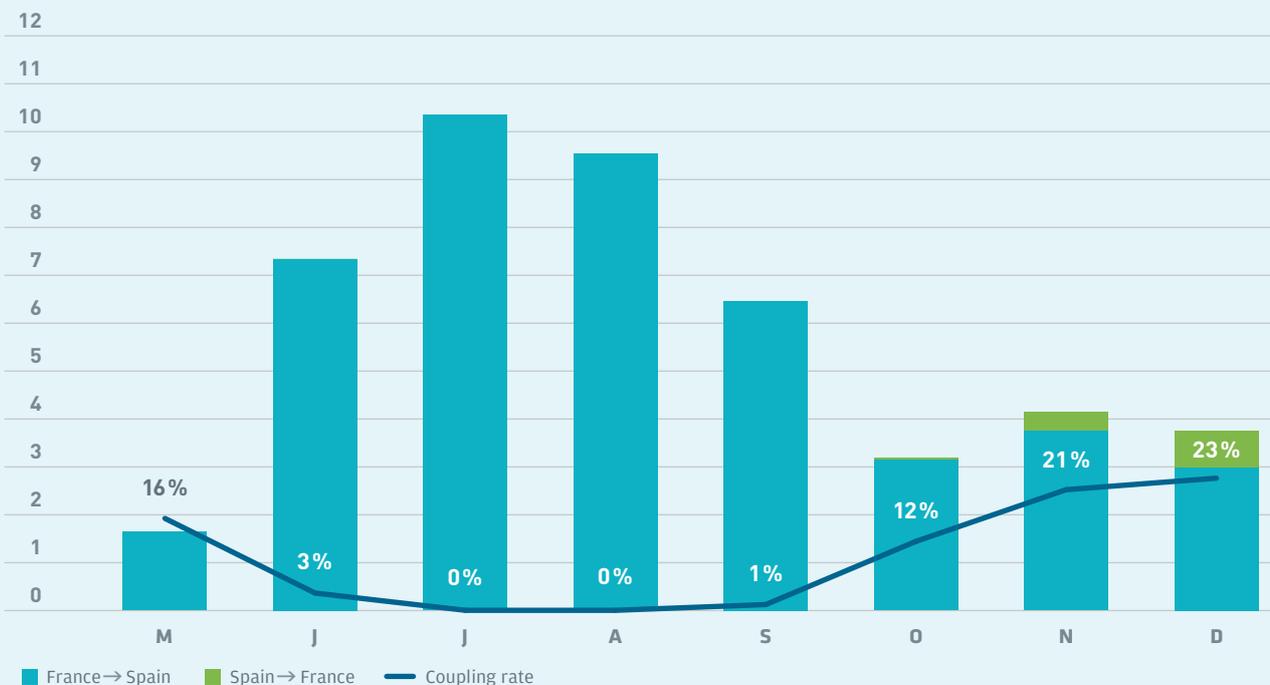
Congestion Rent at the Interconnection with France derived from the Capacity Auctions and the Coupling of the Day-ahead Markets MRC (Multi-Regional Coupling) ⁽¹⁾

	France → Spain		Spain → France		Total	
	Thousand €	%	Thousand €	%	Thousand €	%
Annual auction	23,139	18.7	7,903	6.4	31,042	25.1
Monthly auction	20,453	16.6	6,929	5.6	27,382	22.2
Day-ahead auction	3,992	3.2	10,730	8.7	14,722	11.9
Intraday auction	1,551	1.3	2,360	1.9	3,911	3.2
Market coupling	45,182	36.6	1,242	1.0	46,424	37.6
Total	94,317	76.4	29,164	23.6	123,481	100.0

(1) No incluye los costes de acciones coordinadas de balance (counter trading) ni otros costes.

Congestion Rent and Coupling Rate at the Interconnection with France derived from the Coupling of the Day-ahead Markets MRC (Multi-Regional Coupling) ^{(1) (2)}

Million €



(1) Does not include the costs of counter-trading actions nor other costs.

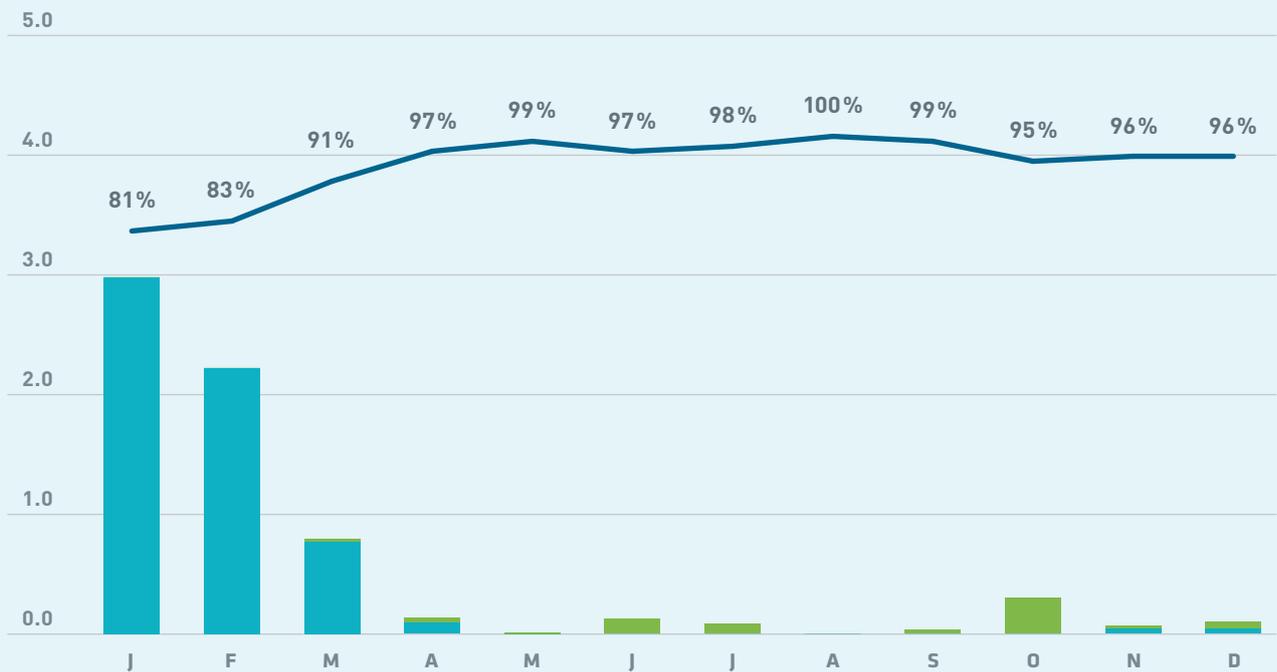
(2) Coupling rate: % hours without congestion in the daily horizon.

Counter-Trading Measures applied to the Interconnection with France

Month	Day	Direction/Flow	MWh
April	27	France → Spain	700
October	31	Spain → France	1,500
Total Spain → France			1,500
Total France → Spain			700

Congestion Rent and Coupling Rate at the Interconnection with Portugal derived from the Coupling of the Day-ahead Markets MRC (Multi-Regional Coupling) ^{(1) (2)}

Million €



■ Portugal → Spain ■ Spain → Portugal — Coupling rate

(1) Does not include the costs of counter-trading actions nor other costs.

(2) Coupling rate: % hours without congestion in the daily horizon.

Congestion Rent at the Interconnection with Portugal derived from the Coupling of the Day-ahead Markets MRC (Multi-Regional Coupling) and Market-splitting in the Intraday Horizon ⁽¹⁾

Million €

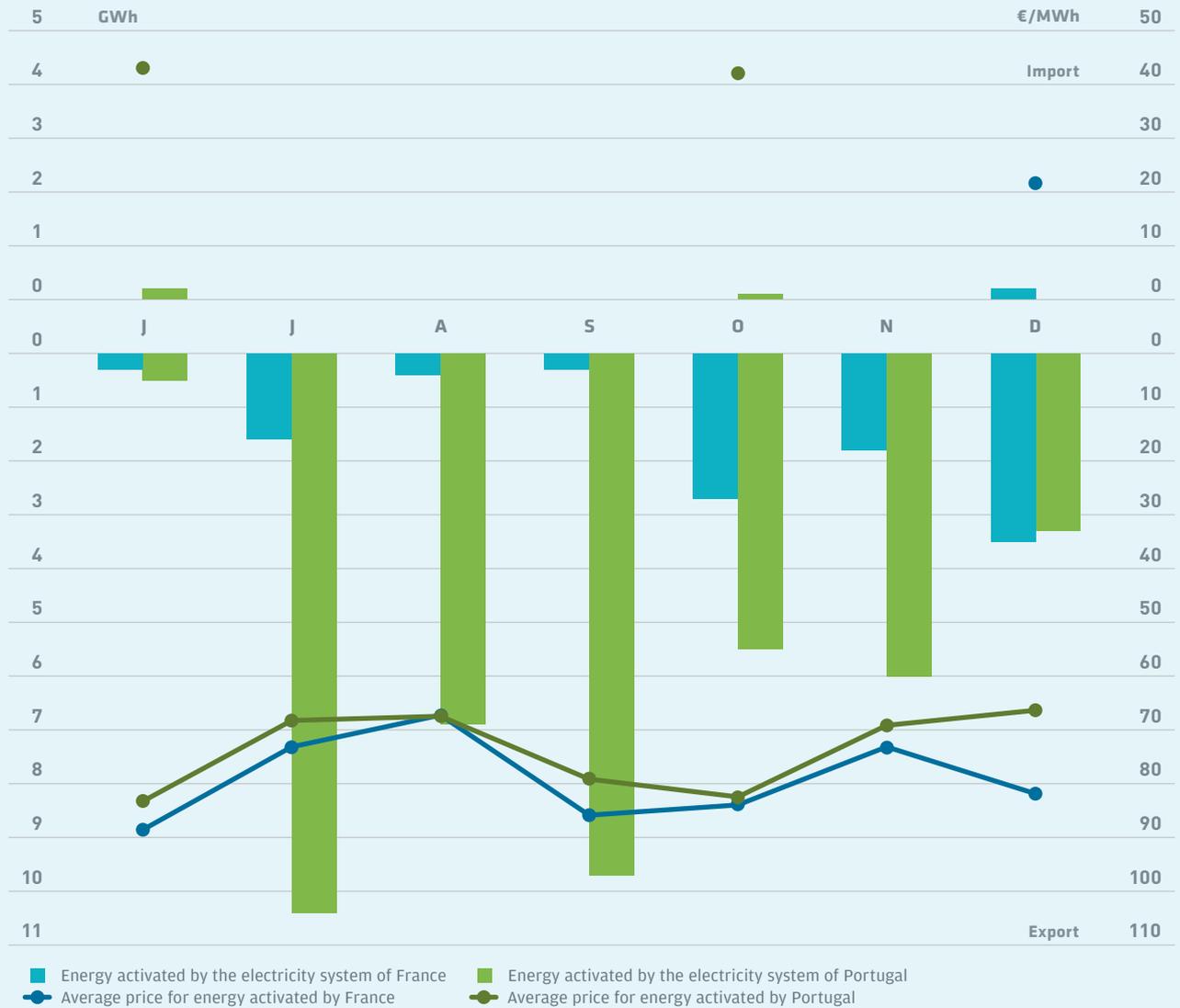
Month	Congestion rent in the day-ahead market Portugal-Spain	Congestion rent in the day-ahead market Spain-Portugal	Total congestion rent in the intraday market
January	2.98	0.00	0.09
February	2.22	0.00	0.03
March	0.77	0.02	0.01
April	0.09	0.04	0.01
May	0.00	0.01	0.02
June	0.00	0.12	0.00
July	0.00	0.08	0.01
August	0.00	0.00	0.00
September	0.00	0.03	0.00
October	0.00	0.30	0.05
November	0.04	0.03	0.01
December	0.04	0.06	0.00
Total	6.14	0.69	0.23

(1) Does not include the costs associated to counter-trading.

Counter-Trading Measures applied to the Interconnection with Portugal

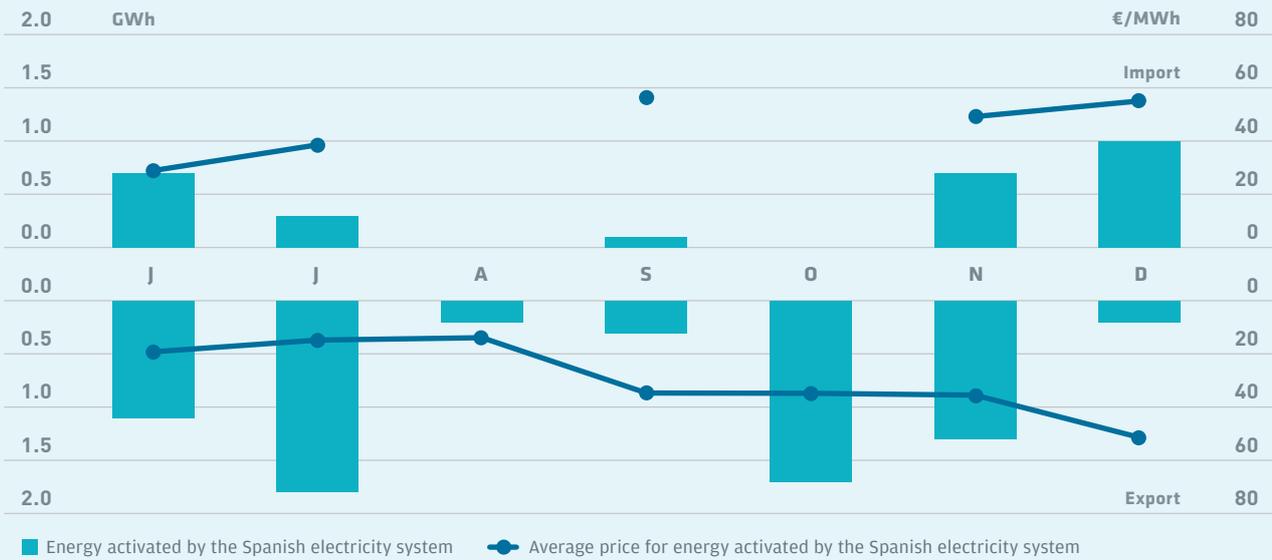
Month	Day	Direction/Flow	MWh
Total Spain → Portugal			0
Total Portugal → Spain			0

Energy and Average Price for Cross-Border Balancing Services activated by External Electricity Systems ⁽¹⁾



(1) Cross-border balancing services implemented in the interconnections with France and with Portugal since 11 and 17 June 2014, respectively.

Energy and Average Price for Cross-Border Balancing Services activated by the Spanish Electricity System through the Interconnection with France ⁽¹⁾



⁽¹⁾ Cross-border balancing services implemented in the interconnection with France since 11 June 2014.

Energy and Average Price for Cross-Border Balancing Services activated by the Spanish Electricity System through the Interconnection with Portugal ⁽¹⁾



⁽¹⁾ Cross-border balancing services implemented in the interconnection with Portugal since 17 June 2014.





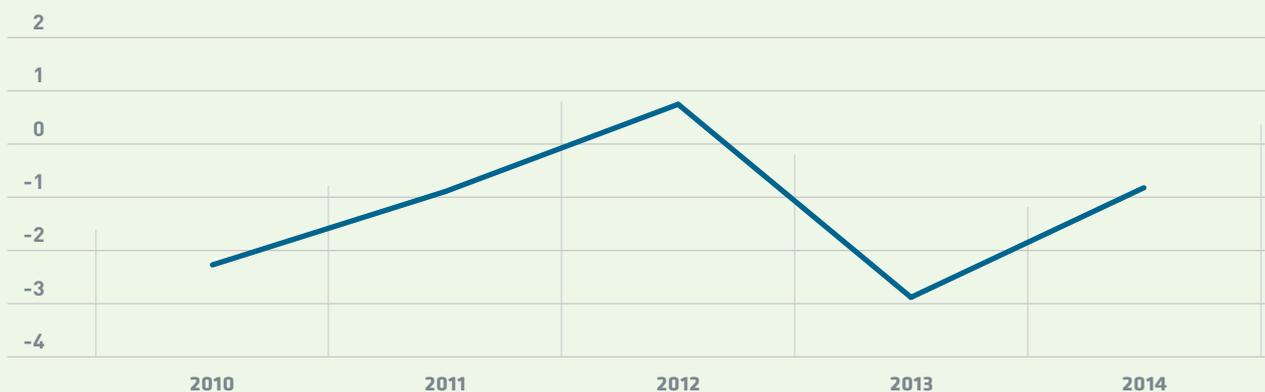
Non-Peninsular Systems

[NP]

- 100** ANNUAL GROWTH OF THE ELECTRICITY DEMAND AT POWER STATION BUSBARS
MONTHLY DISTRIBUTION OF THE ELECTRICITY DEMAND AT POWER STATION BUSBARS
- 101** EVOLUTION OF THE MONTHLY ELECTRICITY DEMAND AT POWER STATION BUSBARS
ANNUAL EVOLUTION OF ELECTRICITY DEMAND COVERAGE
- 102** ANNUAL BALANCE OF ELECTRICAL ENERGY
- 103** INSTALLED CAPACITY AS AT 31.12.2014
ANNUAL EVOLUTION OF ELECTRICAL ENERGY DEMAND
- 104** MONTHLY GROWTH OF ELECTRICAL ENERGY DEMAND AT POWER STATION BUSBARS
MAXIMUM HOURLY AND DAILY DEMAND
- 105** POWER VARIATIONS IN GENERATOR EQUIPMENT
TRANSMISSION LINES COMMISSIONED IN 2014
SUBSTATION SWITCHYARDS COMMISSIONED IN 2014
TRANSFORMERS INVENTORIED IN 2014
- 106** EVOLUTION OF THE TRANSMISSION AND TRANSFORMATION SYSTEM QUALITY OF THE TRANSMISSION GRID
- 107** ANNUAL EVOLUTION OF THE NON-AVAILABILITY RATE OF THE TRANSMISSION GRID

Annual Growth of the Electricity Demand at Power Station Busbars

%

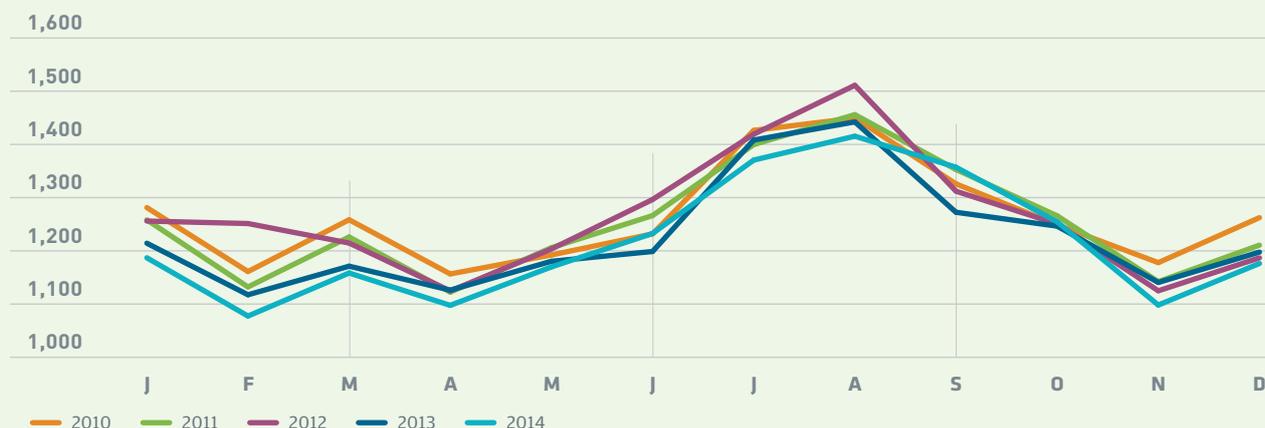


Monthly Distribution of the Electricity Demand at Power Station Busbars

	2010		2011		2012		2013		2014	
	GWh	%								
January	1,281	8.4	1,258	8.4	1,255	8.3	1,214	8.3	1,186	8.1
February	1,160	7.7	1,132	7.5	1,251	8.3	1,117	7.6	1,077	7.4
March	1,258	8.3	1,225	8.2	1,214	8.0	1,171	8.0	1,158	7.9
April	1,156	7.6	1,122	7.5	1,124	7.4	1,125	7.7	1,097	7.5
May	1,192	7.9	1,205	8.0	1,203	7.9	1,180	8.0	1,169	8.0
June	1,231	8.1	1,266	8.4	1,296	8.6	1,198	8.1	1,232	8.4
July	1,426	9.4	1,399	9.3	1,419	9.4	1,408	9.6	1,370	9.4
August	1,449	9.6	1,456	9.7	1,511	10.0	1,442	9.8	1,415	9.7
September	1,325	8.7	1,352	9.0	1,312	8.7	1,272	8.6	1,357	9.3
October	1,248	8.2	1,265	8.4	1,250	8.3	1,246	8.5	1,254	8.6
November	1,177	7.8	1,141	7.6	1,124	7.4	1,140	7.7	1,097	7.5
December	1,262	8.3	1,210	8.1	1,186	7.8	1,197	8.1	1,176	8.1
Total	15,166	100.0	15,031	100.0	15,145	100.0	14,709	100.0	14,588	100.0

Evolution of the Monthly Electricity Demand at Power Station Busbars

GWh



Annual Evolution of Electricity Demand Coverage ⁽¹⁾

GWh

	2010	2011	2012	2013	2014	%14/13
Hydro	0	0	0	0	0	-
Coal	3,381	3,031	2,941	2,591	2,416	-6.8
Internal-combustion engines	3,818	3,694	3,660	3,393	3,405	0.4
Gas turbine	662	904	949	906	969	6.9
Steam turbine	3,242	2,873	2,924	2,696	2,281	-15.4
Fuel / gas	7,721	7,471	7,533	6,995	6,656	-4.9
Combined cycle (2)	3,991	4,406	3,917	3,581	3,859	7.7
Auxiliary generation (3)	7	9	9	7	8	11.5
Consumption in generation (4)	-899	-882	-850	-784	-755	-3.7
Hydro-wind	-	-	-	-	1	-
Other hydro	0	2	2	3	3	14.1
Wind	337	360	368	369	396	7.4
Solar photovoltaic	283	333	372	409	405	-0.9
Renewable thermal	161	33	9	9	11	15.6
Cogeneration and others	184	268	274	260	290	11.8
Net generation	15,166	15,031	14,574	13,440	13,289	-1.1
Balearic Islands' link (5)	-	0,5	570	1,269	1,298	2.3
Demanda at power station busbars	15,166	15,031	15,145	14,709	14,588	-0.8

(1) Allocation of production units according to primary fuel. (2) Includes operation in open cycle mode. The Canary Islands uses fuel and gasoil as primary fuel. (3) Emergency generator units installed temporarily in specific zones to cover a deficit in generation. (4) Consumption in generation corresponding to hydro, coal, fuel/gas, combined cycle and auxiliary generation. (5) Positive value: incoming energy; negative value: outgoing energy. Peninsula-Balearic Islands' link working at minimum technical level until 13 August 2012.

Annual Balance of Electrical Energy ⁽¹⁾

	Balearic islands		Canary islands		Ceuta		Melilla		Total	
	GWh	%14/13	GWh	%14/13	GWh	%14/13	GWh	%14/13	GWh	%14/13
Hydro	-	-	0	-	-	-	-	-	0	-
Coal	2,416	-6.8	-	-	-	-	-	-	2,416	-6.8
Internal-combustion engines	694	-9.5	2,266	3.5	231	4.8	214	-0.6	3,405	0.4
Gas turbine	596	13.4	372	-2.2	0	-64.6	1	713.8	969	6.9
Steam turbine	-	-	2,281	-15.4	-	-	-	-	2,281	-15.4
Fuel / gas	1,291	-0.2	4,919	-6.6	231	4.7	215	-0.3	6,656	-4.9
Combined cycle (2)	458	2.5	3,401	8.5	-	-	-	-	3,859	7.7
Auxiliary generation (3)	8	11.5	0	-	-	-	-	-	8	11.5
Consumption in generation (4)	-297	-5.1	-425	-2.9	-19	0.7	-14	0.4	-755	-3.7
Hydro-wind	-	-	1	-	-	-	-	-	1	-
Other hydro	-	-	3	14.1	-	-	-	-	3	14.1
Wind	6	-4.8	391	7.7	-	-	-	-	396	7.4
Solar photovoltaic	123	0.5	282	-1.6	-	-	0	4.9	405	-0.9
Renewable thermal	2	161.6	9	2.7	-	-	-	-	11	15.6
Cogeneration and others	281	11.8	0	-	-	-	9	10.7	290	11.8
Net generation	4,287	-2.7	8,580	-0.5	212	5.1	210	0.1	13,289	-1.1
Balearic Islands' link (5)	1,298	2.3	-	-	-	-	-	-	1,298	2.3
Demanda at power station busbars	5,585	-1.6	8,580	-0.5	212	5.1	210	0.1	14,588	-0.8

(1) Allocation of production units according to primary fuel. (2) Includes operation in open cycle mode. The Canary Islands uses fuel and gasoil as primary fuel. (3) Emergency generator units installed temporarily in specific zones to cover a deficit in generation. (4) Consumption in generation corresponding to hydro, coal, fuel/gas, combined cycle and auxiliary generation. (5) Positive value: incoming energy; negative value: outgoing energy.

Installed Capacity as at 31.12.2014

	Balearic islands		Canary islands		Ceuta		Melilla		Total	
	MW	%14/13	MW	%14/13	MW	%14/13	MW	%14/13	MW	%14/13
Hydro	-	-	1	0.0	-	-	-	-	1	0.0
Coal	510	0.0	-	-	-	-	-	-	510	0.0
Internal-combustion engines	199	0.0	566	0.0	83	0.0	70	0.0	918	0.0
Gas turbine	678	0.0	643	0.0	16	0.0	15	0.0	1,351	0.0
Steam turbine	-	-	520	0.0	-	-	-	-	520	0.0
Fuel / gas	877	0.0	1,729	0.0	99	0.0	85	0.0	2,789	0.0
Combined cycle (1)	934	0.0	918	0.0	-	-	-	-	1,851	0.0
Auxiliary generation (2)	-	-	-	-	-	-	-	-	-	-
Hydro-wind	-	-	12	-	-	-	-	-	12	-
Other hydro	-	-	0.5	0.0	-	-	-	-	0.5	0.0
Wind	4	0.0	154	0.0	-	-	-	-	158	0.0
Solar photovoltaic	78	0.1	166	0.6	-	-	0.1	0.0	244	0.4
Renewable thermal	2	0.0	3	0.0	-	-	-	-	5	0.0
Cogeneration and others	86	0.0	33	0.0	-	-	2	0.0	121	0.0
Total	2,490	0.0	3,016	0.4	99	0.0	87	0.0	5,692	0.2

(1) Includes operation in open cycle mode. The Canary Islands uses fuel and gasoil as primary fuel. (2) Emergency generator units installed temporarily in specific zones to cover a deficit in generation.

Source: National Commission for Markets and Competition (CNMC) regarding; other hydro, wind, solar photovoltaic, solar thermal, renewable thermal, and cogeneration and others.

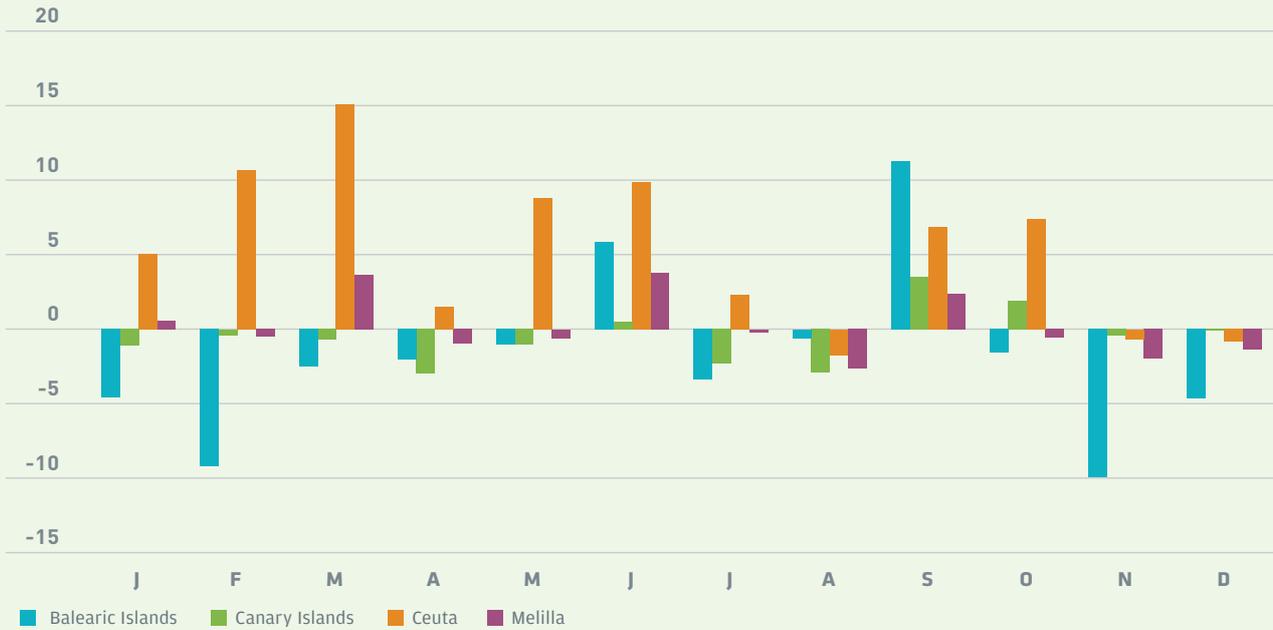
Annual Evolution of Electrical Energy Demand

	Balearic islands		Canary islands		Ceuta		Melilla	
	GWh	Δ Annual (%)	GWh	Δ Annual (%)	GWh	Δ Annual (%)	GWh	Δ Annual (%)
2010	5,840	-2.5	8,895	-2.3	218	2.8	213	3.6
2011	5,743	-1.7	8,870	-0.3	203	-6.7	215	0.7
2012	5,823	1.4	8,893	0.3	212	4.5	217	1.1
2013	5,674	-2.6	8,624	-3.0	202	-4.8	210	-3.5
2014	5,585	-1.6	8,580	-0.5	212	5.1	210	0.1

(Δ) Variation with respect to the previous year.

Monthly Growth of Electrical Energy Demand at Power Station Busbars

%



Maximum Hourly and Daily Demand

Region	Hourly demand (MWh)		Daily demand (MWh)	
	Value	Date and Time	Date	Value
Balearics	906	31 December (7-8 pm)	1 October	16,477
	1,150	11 August (9-10 pm)	11 August	23,145
Canaries	1,377	31 December (7-8 pm)	28 October	26,417
	1,322	16 September (8-9 pm)	16 September	26,090
Ceuta	37	21 January (9-10 pm)	12 February	671
	37	1 September (1-2 pm)	1 September	671
Melilla	35	29 January (8-9 pm)	29 January	631
	38	29 August (1-2 pm)	29 August	728

■ Winter (January-May / October-December) ■ Summer (June-September)

Power Variations in Generator Equipment

	Commissioned			Decommissioned		
	Type	Date	MW	Type	Date	MW
Balearic Islands						
Formentera AUX	Emergency generators	June -14	10	Emergency generators	September -14	10
Canary Islands						
El Palmar (mobile-diesel fuel) 3				Diesel engines	September -14	0.23
Gorona del Viento	Hydro-wind	July -14	12			
Llanos Blancos 18 diesel fuel 16				Diesel engines	April-14	0.03
Total			22			10

Transmission Line Commissioned in 2014

Line	Company	Voltage (kV)	N° of circuits	km of circuit
Balearic Islands				
L/ Murterar - Sant Martí (U)	Red Eléctrica	220	1	0.7
E/S Sant Martí - L/ Alcudia-Sa Pobla	Red Eléctrica	66	2	0.3
E/S Sant Martí - L/ Alcudia-Sa Pobla (U)	Red Eléctrica	66	2	0.3
San Martí 220-San Martí 66 (U)	Red Eléctrica	66	2	0.2
Canary Islands				
San Mateo (U)	Red Eléctrica	66	1	0.1
Total				1.5

(U) Underground.

Substation Switchyards Commissioned in 2014

Switchyard	Company	Voltage (kV)
Balearic Islands		
Sant Martí	Red Eléctrica	220
Falca	Red Eléctrica	66
Sant Martí	Red Eléctrica	66
Canary Islands		
Los Realejos	Red Eléctrica	66

Transformers Inventoried in 2014

	Company	Voltage (kV)	Transformer capacity	
			kV	MVA
Balearic Islands				
Sabinal (Nueva Jínámar)	Red Eléctrica	220	220/66	250
Total				250

Evolution of the Transmission and Transformation system

		2010	2011	2012	2013	2014
km of 220 kV circuit	Balearic Islands	185	430	430	430	431
	Canary Islands	163	163	163	163	163
	Total	348	594	594	594	594
km of ≤ 132 kV circuit	Balearic Islands	1,095	1,110	1,113	1,113	1,114
	Canary Islands	1,126	1,126	1,126	1,126	1,126
	Total	2,221	2,236	2,239	2,239	2,240
Transformer capacity (MVA)	Balearic Islands	1,998	2,248	2,408	2,793	2,793
	Canary Islands	1,625	1,625	1,625	1,625	1,875
	Total	3,623	3,873	4,033	4,418	4,668

Includes submarine links.

Quality of the Transmission Grid

	ENS (MWh)		TIM (minutos)	
	Balearic Islands	Canary Islands	Balearic Islands	Canary Islands
2010	8.5	4,089.6	0.77	241.68
2011	38.7	17.3	3.54	1.02
2012	7.5	10.3	0.68	0.61
2013	81.0	2.9	7.50	0.18
2014 (1)	12.8	64.3	1.21	3.94

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

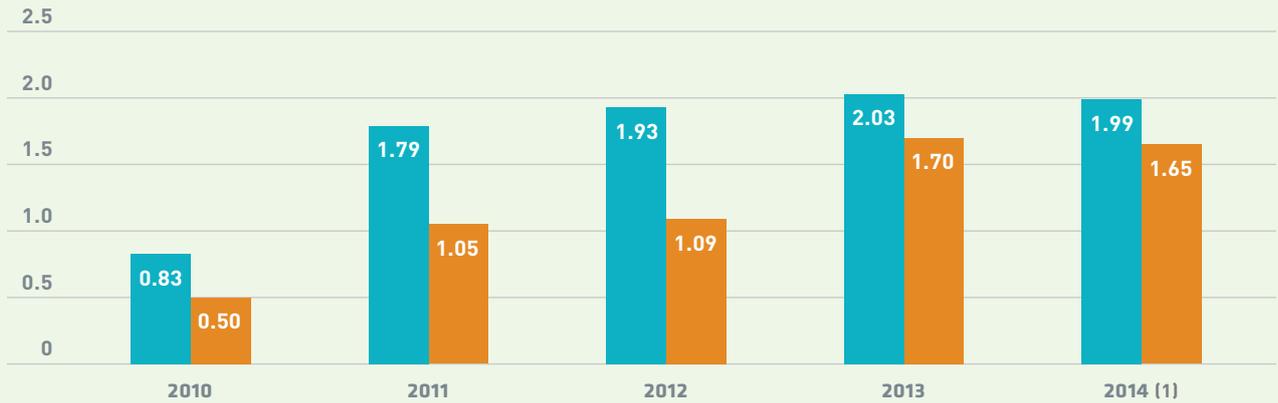
Average interruption time (AIT) = Energy not supplied (ENS) / Average power of the system.

The supply continuity indicators shown do not include the potential influence of incidents that are pending classification due to the fact that they are subject to an administrative proceeding currently underway.

(1) Provisional data pending audit (currently underway).

Annual Evolution of the Non-Availability Rate of the Transmission Grid

%



■ Balearic Islands ■ Canary Islands

Note: Classification according to Royal Decree 1955/2000.

The total non-availability rate of the transmission grid does not include the non-availability due to force majeure or third party actions.

(1) Provisional data pending audit (currently underway).



The Electrical System by Autonomous Communities



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Electrical Energy Balance ⁽¹⁾

GWh

	Andalucía	Aragón	Asturias	Baleares	C. Valenciana	Canarias	Cantabria	Castilla-La Mancha	Castilla y León	Cataluña
Hydro	1,001	3,408	1,688	-	1,760	0	681	531	10,233	4,392
Nuclear	-	-	-	-	9,470	-	-	8,320	0	23,769
Coal	10,070	5,002	9,244	2,416	-	-	-	1,035	8,645	-
Fuel / gas (2)	-	-	-	1,298	-	4,919	-	-	-	0
Combined cycle (3)	4,539	232	311	458	4,136	3,401	-	1,087	-	5,216
Consumption in generation (4)	-713	-450	-721	-297	-500	-425	-10	-737	-751	-1,228
Hydro-wind	-	-	-	-	-	1	-	-	-	-
Other hydro (5)	287	998	281	-	38	3	205	541	742	1,176
Wind	6,450	4,314	1,141	6	2,577	391	76	8,388	12,274	2,867
Solar photovoltaic	1,574	297	1	123	549	282	2	1,681	839	413
Solar thermal	2,124	-	-	-	94	-	-	734	-	66
Renewable thermal	1,420	349	644	2	41	9	86	183	249	150
Cogeneration and others	5,244	2,383	652	281	1,801	0	832	764	1,682	4,806
Net generation	31,996	16,534	13,240	4,287	19,966	8,580	1,873	22,528	33,912	41,626
Pumped storage consumption	-481	-441	-79	-	-1,576	-	-851	-101	-1,107	-361
Energy exchange bal. (6)	6,488	-6,239	-2,820	1,298	7,817	-	3,272	-11,247	-19,883	5,010
Demand at power station busbars 2014	38,003	9,854	10,341	5,585	26,206	8,580	4,294	11,179	12,923	46,275
Demand at power station busbars 2013	38,303	9,943	10,439	5,674	26,129	8,624	4,370	11,251	13,083	46,752
% 14/13	-0.8	-0.9	-0.9	-1.6	0.3	-0.5	-1.8	-0.6	-1.2	-1.0

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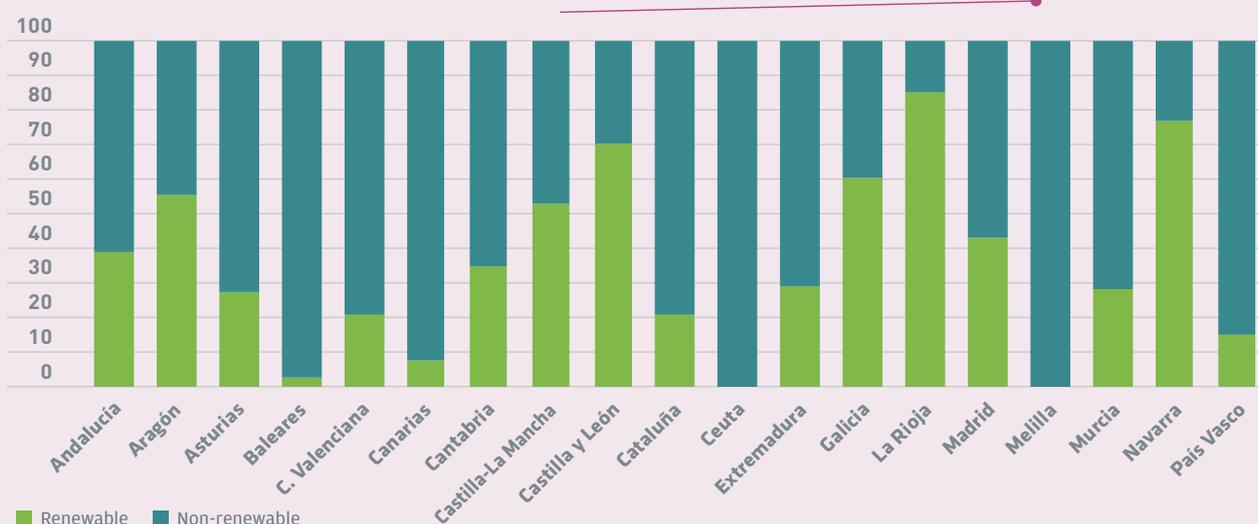
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Electrical Energy Balance ⁽¹⁾

	Ceuta	Extremadura	Galicia	La Rioja	Madrid	Melilla	Murcia	Navarra	País Vasco	TOTAL	GWh
Hydro	-	3,106	8,382	96	114	-	77	127	264	35,860	
Nuclear	-	15,817	-	-	-	-	-	-	-	57,376	
Coal	-	-	10,069	-	-	-	-	-	-	46,480	
Fuel / gas ⁽²⁾	231	-	-	-	-	215	-	-	-	6,663	
Combined cycle ⁽³⁾	-	-	546	166	-	-	2,419	390	3,018	25,919	
Consumption in generation ⁽⁴⁾	-19	-649	-629	-5	-2	-14	-83	-22	-60	-7,317	
Hydro-wind	-	-	-	-	-	-	-	-	-	1	
Other hydro ⁽⁵⁾	-	49	1,863	64	93	-	51	537	141	7,071	
Wind	-	-	8,314	948	-	-	511	2,425	344	51,026	
Solar photovoltaic	-	1,071	19	129	93	0	800	298	29	8,199	
Solar thermal	-	1,899	-	-	-	-	41	-	-	4,959	
Renewable thermal	-	215	575	7	270	-	54	306	169	4,729	
Cogeneration and others	-	14	2,147	57	736	9	1,494	710	2,273	25,887	
Net generation	212	21,522	31,287	1,463	1,304	210	5,363	4,772	6,177	266,853	
Pumped storage consumption	-	-71	-262	-	-	-	-	-	-	-5,330	
Energy exchange bal. ⁽⁶⁾	-	-17,160	-11,575	187	27,541	-	3,205	-23	10,722	-3,406	
Demand at power station busbars 2014	212	4,292	19,451	1,650	28,845	210	8,568	4,748	16,899	258,117	
Demand at power station busbars 2013	202	4,567	19,720	1,663	30,359	210	8,391	4,750	16,649	261,077	
% 14/13	5.1	-6.0	-1.4	-0.8	-5.0	0.1	2.1	0.0	1.5	-1.1	

(1) Allocation of generation units based on primary fuel. (2) Generation from auxiliary generation units is included in the Balearic Islands' electricity system. (3) Includes operation in open cycle mode. Fuel and gasoil are the primary fuels used in the electricity system of the Canary Islands (4) Consumption in generation corresponding to hydro, nuclear, coal, fuel/gas and combined cycle production. (5) Includes all those units less than 50 MW that do not belong to a Hydro Management Unit (UGH). (6) Positive value: incoming energy; negative value: outgoing energy. Positive value: importer balance; negative value: exporter balance.

Percentage of Renewable and Non-renewable Production

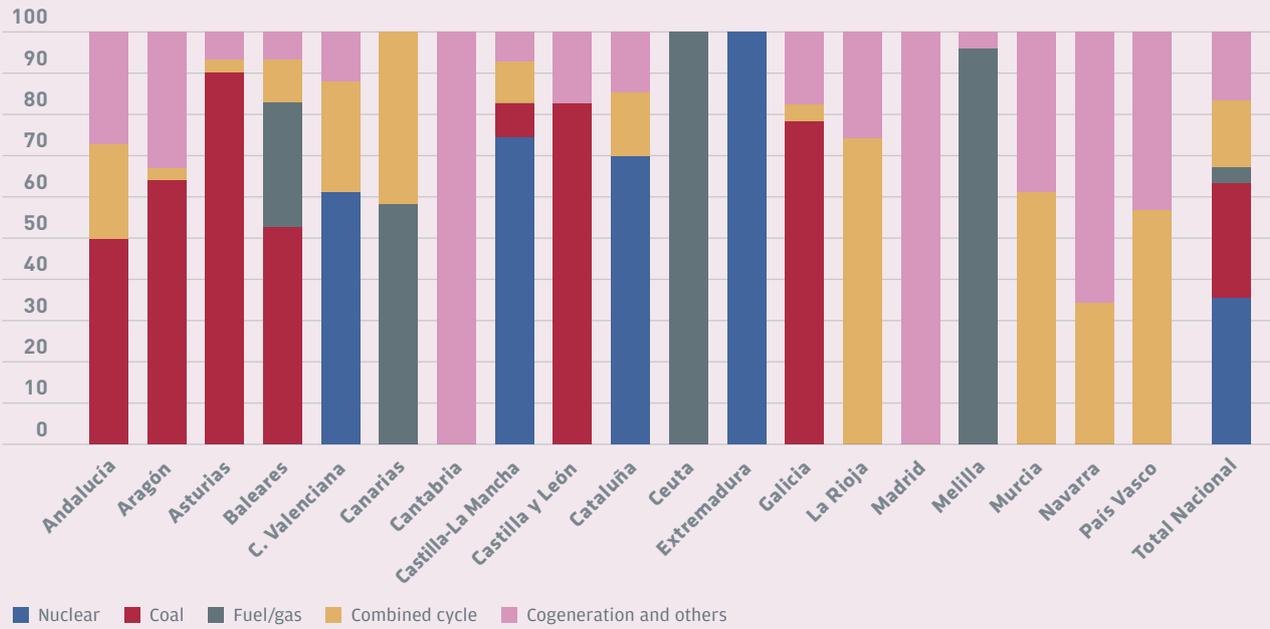


Renewable: hydro ⁽¹⁾, hydro-wind, solar and renewable thermal. Non-renewable: nuclear, coal, fuel/gas, combined cycle, and Cogeneration and others.

(1) Does not include pumped storage generation.

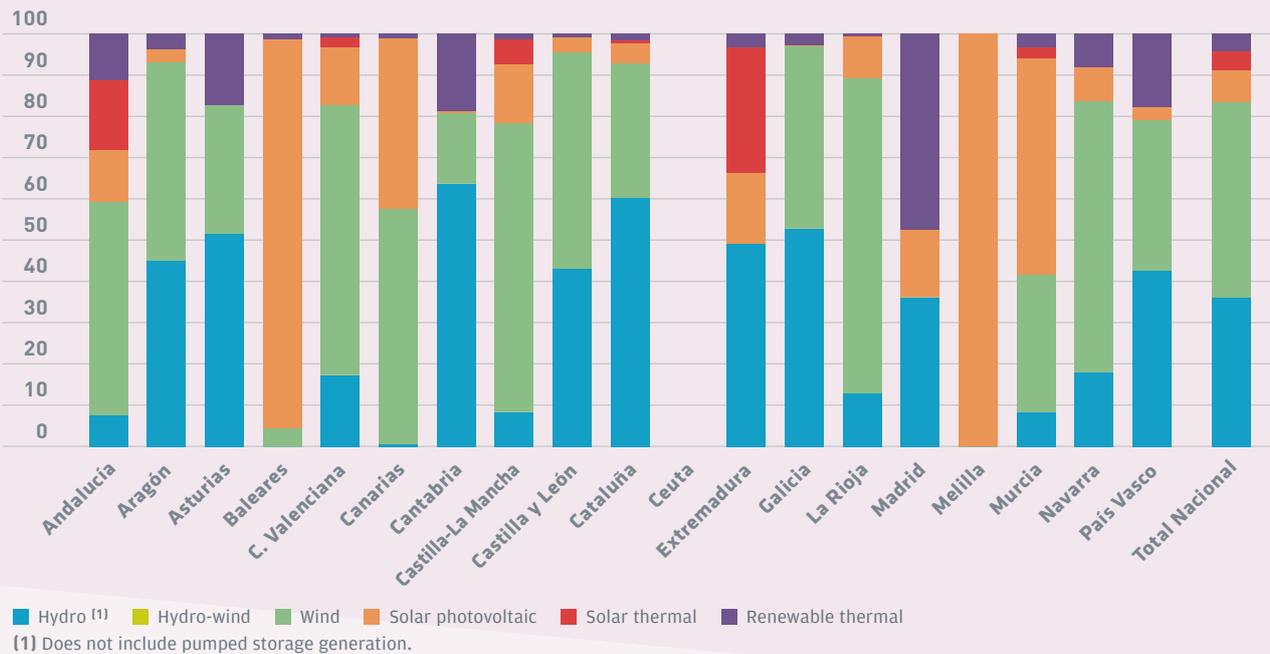
Non-renewable Production Structure by Type of Power Station

%



Renewable Production Structure by Type of Power Station

%



(1) Does not include pumped storage generation.

Installed Power

	Andalucía	Aragón	Asturias	Baleares	C. Valenciana	Canarias	Cantabria	Castilla-La Mancha	Castilla y León	Cataluña	MW
Hydro	1,051	1,310	748	-	1,279	1	389	781	4,253	2,104	
Nuclear	-	-	-	-	1,092	-	-	1,067	466	3,147	
Coal	2,071	1,101	2,474	510	-	-	-	541	2,735	-	
Fuel / gas	-	-	-	877	-	1,729	-	-	-	520	
Combined cycle (1)	6,035	1,898	865	934	2,902	918	-	771	-	4,256	
Hydro-wind	-	-	-	-	-	12	-	-	-	-	
Other hydro (2)	147	257	77	-	31	0,5	72	126	256	286	
Wind	3,324	1,797	476	4	1,193	154	35	3,800	5,652	1,284	
Solar photovoltaic	869	167	1	78	349	166	2	923	495	265	
Solar thermal	997	-	-	-	50	-	-	349	-	23	
Renewable thermal	291	87	87	2	26	3	13	58	45	75	
Cogeneration and others	932	599	156	86	654	33	312	466	642	1,335	
Total 2014	15,719	7,217	4,885	2,490	7,577	3,016	822	8,884	14,543	13,293	
Total 2013	15,719	7,379	4,885	2,490	7,576	3,004	822	8,890	14,518	13,292	
% 14/13	0.0	-2.2	0.0	0.0	0.0	0.4	0.0	-0.1	0.2	0.0	

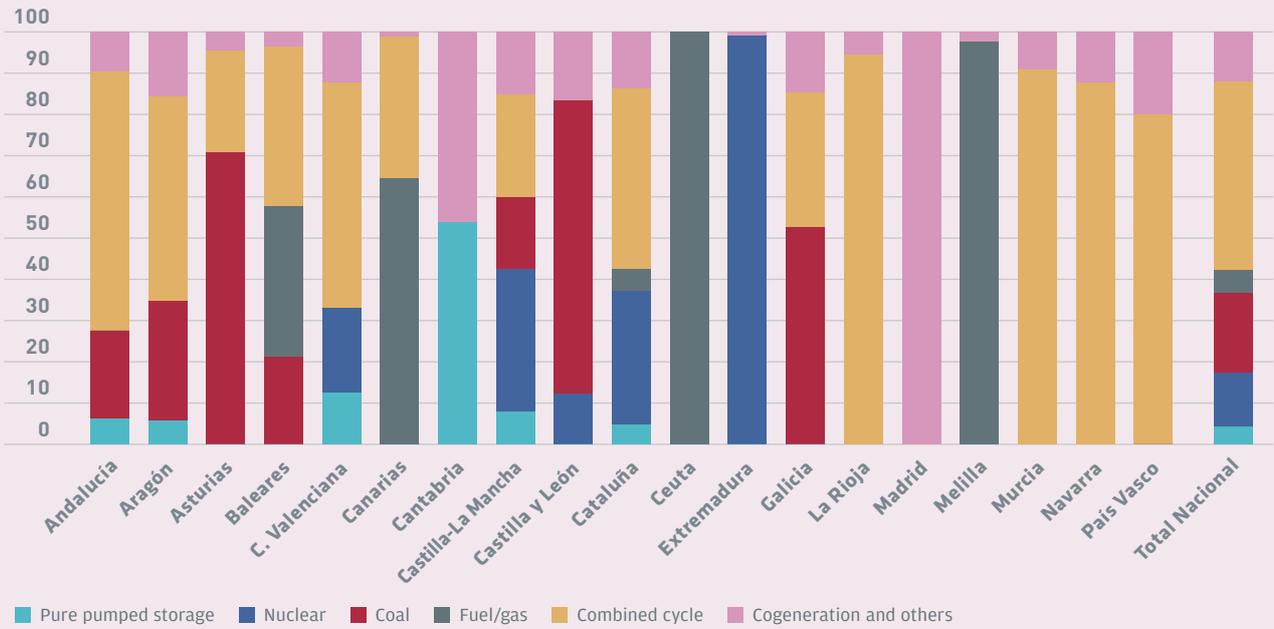
	Ceuta	Extremadura	Galicia	La Rioja	Madrid	Melilla	Murcia	Navarra	País Vasco	TOTAL
Hydro	-	2,292	3,269	30	66	-	24	77	120	17,792
Nuclear	-	2,094	-	-	-	-	-	-	-	7,866
Coal	-	-	2,049	-	-	-	-	-	-	11,482
Fuel / gas	99	-	-	-	-	85	-	-	-	3,309
Combined cycle (1)	-	-	1,268	799	-	-	3,318	1,236	1,998	27,199
Hydro-wind	-	-	-	-	-	-	-	-	-	12
Other hydro (2)	-	20	522	27	44	-	14	171	55	2,106
Wind	-	-	3,362	448	-	-	263	1,016	194	23,002
Solar photovoltaic	-	561	16	86	67	0,1	440	161	26	4,672
Solar thermal	-	849	-	-	-	-	31	-	-	2,300
Renewable thermal	-	37	95	4	43	-	21	47	83	1,018
Cogeneration and others	-	19	574	46	328	2	338	175	500	7,196
Total 2014	99	5,873	11,154	1,440	547	87	4,450	2,884	2,975	107,954
Total 2013	99	5,853	11,153	1,440	542	87	4,433	2,884	2,993	108,057
% 14/13	0.0	0.3	0.0	0.0	1.1	0.0	0.4	0.0	-0.6	-0.1

(1) Includes operation in open cycle mode. Fuel and gasoil are the primary fuels used in the electricity system of the Canary Islands

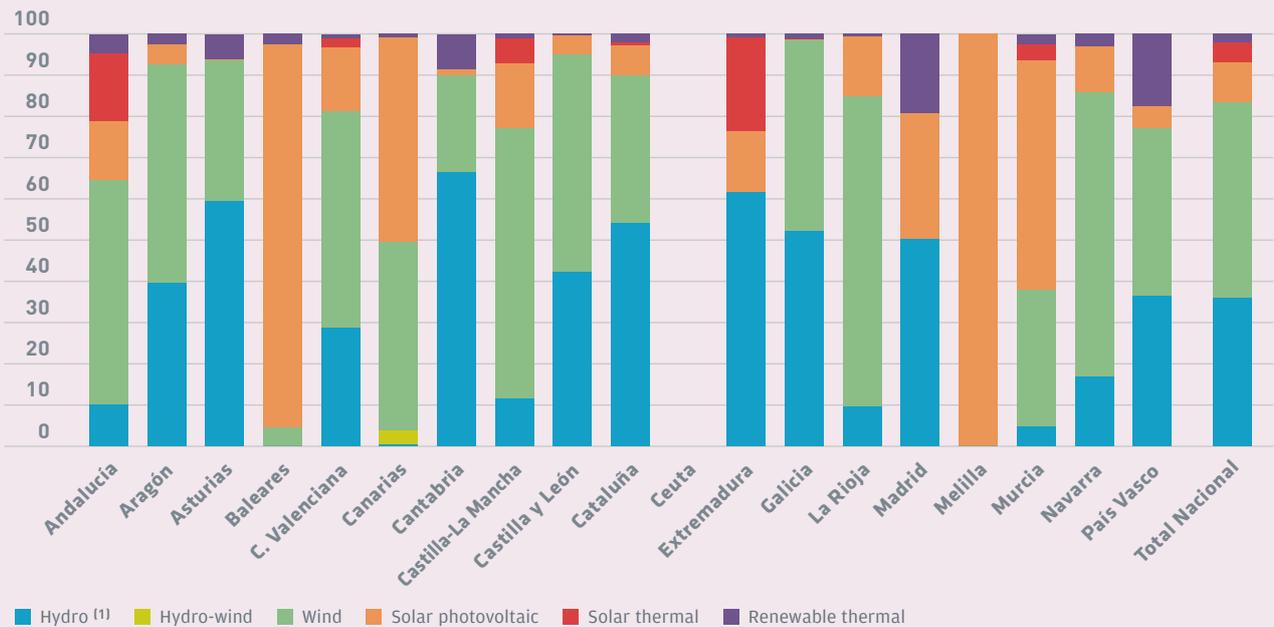
(2) Includes all those units less than 50 MW that do not belong to a Hydro Management Unit (UGH).

Source: National Commission for Markets and Competition (CNMC) regarding; other hydro, wind, solar photovoltaic, solar thermal, renewable thermal, and cogeneration and others.

Structure of Installed Non-renewable Power by Type of Power Station



Structure of Installed Renewable Power by Type of Power Station



(1) Includes conventional hydro, mixed pumped storage and other hydro.
 Provisional Data. Source: National Commission for Markets and Competition (CNMC).

Location of the Main Electricity Power Stations



Production at Power Station Busbars of Thermal Power Stations on the Peninsula

Power stations	Type of Station	Power MW	Energy (GWh)		
			2013	2014	%14/13
Puentenuevo 3	Coal	324	703	1,153	64.1
Litoral de Almería	Coal	1,159	6,148	5,912	-3.8
Los Barrios	Coal	589	2,924	3,005	2.8
San Roque 1	Combined-cycle	397	1,858	2,022	8.8
San Roque 2	Combined-cycle	402	223	375	68.2
Arcos 1	Combined-cycle	396	0	1	-
Arcos 2	Combined-cycle	379	15	7	-
Arcos 3	Combined-cycle	844	102	76	-25.5
Palos 1	Combined-cycle	394	335	133	-60.2
Palos 2	Combined-cycle	396	440	396	-10.1
Palos 3	Combined-cycle	398	723	69	-90.5
Campo de Gibraltar 1	Combined-cycle	393	209	0	-100.0
Campo de Gibraltar 2	Combined-cycle	388	207	0	-100.0
Colón 4	Combined-cycle	398	165	181	9.4
Algeciras 3 CC	Combined-cycle	831	0	32.4	-
Málaga 1 CC	Combined-cycle	421	1,713	1,248	-27.2
Andalucía		8,107	15,766	14,609	-7.3
Escucha (1)	Coal	0	0	0	-
Teruel	Coal	1,101	3,777	5,002	32.4
Castelnou	Combined-cycle	798	90	157	75.1
Escatrón 3	Combined-cycle	818	3	32	974.8
Escatrón Peaker	Combined-cycle	282	8	43	458.5
Aragón		2,999	3,878	5,234	35.0
Aboño	Coal	916	5,748	5,455	-5.1
Lada 4	Coal	358	1,432	1,410	-1.6
Narcea	Coal	596	899	916	2.0
Soto de la Ribera	Coal	604	1,145	1,463	27.8
Soto de la Ribera 4	Combined-cycle	432	236	232	-1.7
Soto de la Ribera 5	Combined-cycle	434	81	79	-2.4
Asturias		3,340	9,541	9,555	0.1
Trillo I	Nuclear	1,067	8,003	8,320	4.0
Puertollano (2)	Coal	221	30	0	-100.0
Aceca 3	Combined-cycle	392	189	179	-5.4
Aceca 4	Combined-cycle	379	954	908	-4.8
GICC-PL ELCOGAS	Coal	320	899	1,035	15.1
Castilla-La Mancha		2,379	10,076	10,442	3.6
Garoña (3)	Nuclear	466	0	0	-
Anllares	Coal	365	863	1,182	37.1
Compostilla	Coal	1,200	2,560	4,537	77.3
Guardo	Coal	516	1,105	1,250	13.1
La Robla	Coal	655	1,689	1,675	-0.8
Castilla y León		3,202	6,216	8,645	39.1
Ascó I	Nuclear	1,033	9,055	7,394	-18.3
Ascó II	Nuclear	1,027	7,638	7,175	-6.1
Vandellós II	Nuclear	1,087	8,083	9,201	13.8
Foix	Fuel/gas	520	0	0	-
Besós 3	Combined-cycle	419	162	272	68.4

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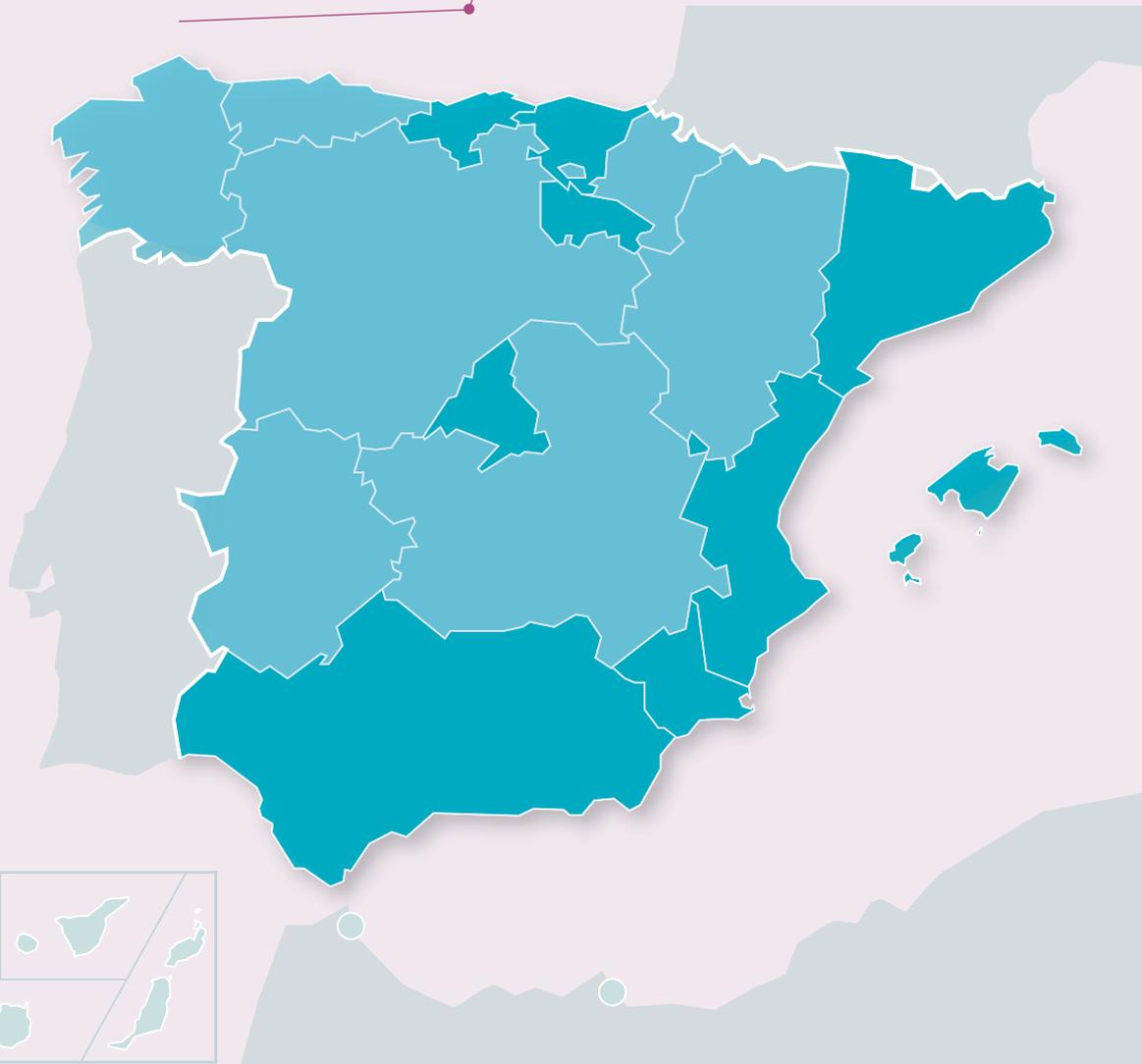
Production at Power Station Busbars of Thermal Power Stations on the Peninsula

Power stations	Type of Station	Power MW	Energy (GWh)		
			2013	2014	%14/13
Besós 4	Combined-cycle	407	2,186	2,247	2.8
Besós 5	Combined-cycle	873	702	668	-4.8
Tarragona	Combined-cycle	395	0	0	-
Tarragona Power	Combined-cycle	424	138	31	-77.5
Plana del Vent 1	Combined-cycle	426	258	302	17.3
Plana del Vent 2	Combined-cycle	421	426	16	-96.2
Puerto de Barcelona 1	Combined-cycle	447	1,244	1,171	-5.8
Puerto de Barcelona 2	Combined-cycle	445	760	507	-33.3
Cataluña		7,922	30,652	28,985	-5.4
Cofrentes	Nuclear	1,092	8,327	9,470	13.7
Castellón 3	Combined-cycle	793	50	9	-82.6
Castellón 4	Combined-cycle	854	479	344	-28.1
Sagunto 1	Combined-cycle	417	1,547	894	-42.2
Sagunto 2	Combined-cycle	420	946	1,388	46.6
Sagunto 3	Combined-cycle	419	1,028	1,501	46.0
C. Valenciana		3,994	12,378	13,606	9.9
Almaraz I	Nuclear	1,049	8,001	7,518	-6.0
Almaraz II	Nuclear	1,044	7,720	8,299	7.5
Extremadura		2,094	15,721	15,817	0.6
Meirama	Coal	580	2,529	2,443	-3.4
Puentes García Rodríguez	Coal	1,469	7,356	7,626	3.7
Puentes García Rodríguez 5	Combined-cycle	870	258	336	30.0
Sabón 3	Combined-cycle	397	950	211	-77.8
Galicia		3,317	11,093	10,615	-4.3
Arrúbal 1	Combined-cycle	402	228	17	-92.5
Arrúbal 2	Combined-cycle	397	177	149	-15.9
La Rioja		799	406	166	-59.0
Cartagena 1	Combined-cycle	425	794	1,007	26.9
Cartagena 2	Combined-cycle	425	582	718	23.4
Cartagena 3	Combined-cycle	419	945	528	-44.2
El Fangal 1	Combined-cycle	409	34	22	-36.4
El Fangal 2	Combined-cycle	408	19	26	34.4
El Fangal 3	Combined-cycle	402	40	118	193.0
Escombreras 6	Combined-cycle	831	0	0	-
Murcia		3,318	2,415	2,419	0.2
Castejón 1	Combined-cycle	429	243	192	-21.2
Castejón 2	Combined-cycle	381	0	0	-
Castejón 3	Combined-cycle	426	138	198	43.4
Navarra		1,236	381	390	2.2
Amorebieta	Combined-cycle	795	169	176	4.1
Bahía de Bizkaia	Combined-cycle	800	3,032	2,835	-6.5
Santurce 4	Combined-cycle	403	1	6	483.9
País Vasco		1,998	3,203	3,018	-5.8
Total		44,706	121,725	123,500	1.5

(1) Decommissioned in May 2014. (2) Inactive since November 2013. (3) Inactive since December 2013.

Energy Exchange Balance
in Autonomous Communities

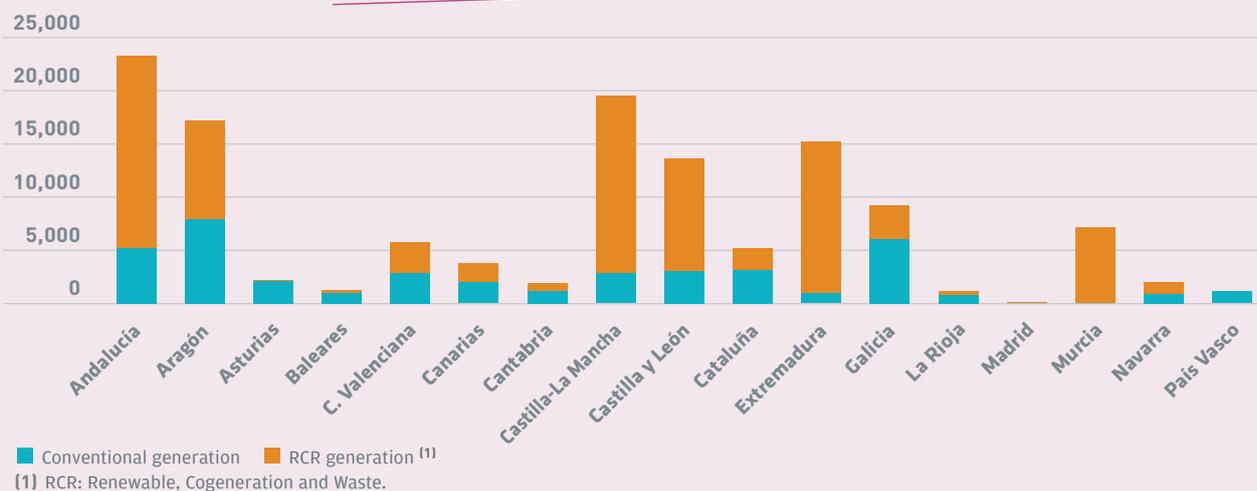
GWh



■ Import balance ■ Export balance

Transmission Grid Access Requests from New Generation 2000-2015

MW



Access to Transmission Grid of New Conventional Generation 2000-2015 (1)(2)

	Number of requests received	Requests received (MW)	Requests managed (MW)
Andalucía	12	5,157	5,157
Aragón	12	7,884	7,884
Asturias	4	2,114	2,114
C. Valenciana	4	2,860	3,642
Cantabria	3	1,169	1,169
Castilla-La Mancha	6	2,787	2,787
Castilla y León	5	3,053	2,000
Cataluña	6	3,137	3,137
Extremadura	2	916	916
Galicia	14	6,013	4,513
La Rioja	1	785	785
Madrid	0	0	0
Murcia	0	0	0
Navarra	3	878	878
País Vasco	1	1,100	1,100
Peninsular total	73	37,853	36,083
Baleares	19	980	980
Canarias	18	1,954	1,645
Non-peninsular total	37	2,934	2,626
National Total	110	40,788	38,708

(1) Data as at 30 April 2015. Current magnitudes that show for each of the indicated facilities the available updated values that take into account power cancellations and variations. (2) According to the new law in force (Law 24/2013, of 26 December), the classification of the generation referred to in Law 54/1997 as ordinary regime and special regime generation shall now be considered as that generation coming from the following: conventional generation and renewable generation, cogeneration and waste.

Access to Transmission Grid of New Renewable Generation, Cogeneration and Waste (RCR) 2000-2015 ⁽¹⁾⁽²⁾

	Number of requests received	Requests received (MW)	Requests managed (MW)
Andalucía	136	18,064	16,814
Aragón	97	9,226	8,696
Asturias	1	7	7
C. Valenciana	13	2,837	2,837
Cantabria	7	702	600
Castilla-La Mancha	72	16,743	12,025
Castilla y León	113	10,526	7,299
Cataluña	22	2,007	1,890
Extremadura	91	14,277	13,407
Galicia	55	3,152	3,152
La Rioja	10	374	374
Madrid	2	77	77
Murcia	26	7,104	5,452
Navarra	23	1,093	987
País Vasco	0	0	0
Peninsular total	668	86,190	73,618
Baleares	13	267	237
Canarias	88	1,793	1,049
Non-peninsular total	101	2,060	1,287
National Total	769	88,249	74,904

(1) Data as at 30 April 2015. Current magnitudes that show for each of the indicated facilities the available updated values that take into account power cancellations and variations. (2) According to the new law in force (Law 24/2013, of 26 December), the classification of the generation referred to in Law 54/1997 as ordinary regime and special regime generation shall now be considered as that generation coming from the following: conventional generation and renewable generation, cogeneration and waste.

Access to the Transmission Grid. Demand and Distribution 2000-2015 ⁽¹⁾

	Number of requests received	Requests received (MW)	Requests managed (MW)
Andalucía	102	12,846	12,846
Aragón	36	5,465	5,465
Asturias	12	2,455	2,455
C, Valenciana	87	10,355	10,355
Cantabria	12	976	976
Castilla-La Mancha	37	4,260	4,260
Castilla y León	35	2,878	2,878
Cataluña	140	15,413	15,413
Extremadura	25	3,218	3,218
Galicia	42	4,283	4,203
La Rioja	6	505	505
Madrid	94	11,580	11,480
Murcia	12	2,595	2,595
Navarra	13	1,130	1,130
País Vasco	25	2,245	2,245
Peninsular total	678	80,204	80,024
Baleares	49	1,845	1,805
Canarias	48	1,940	1,796
Non-peninsular total	97	3,784	3,600
National Total	775	83,988	83,624

(1) Data as at 30 April 2015. Current magnitudes that show for each of the indicated facilities the available updated values that take into account power curtailment 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	1.0	1.0	0.05	0.05
Asturias	12.0	12.0	0.61	0.61
Baleares	12.8	12.8	1.21	1.21
C. Valenciana	2.9	2.9	0.06	0.06
Canarias	64.3	64.3	3.94	3.94
Cantabria	0.0	0.0	0.00	0.00
Castilla-La Mancha	96.2	96.2	4.52	4.52
Castilla y León	32.2	32.2	1.31	1.31
Cataluña	18.4	18.4	0.21	0.21
Extremadura	0.0	0.0	0.00	0.00
Galicia	2.6	2.6	0.07	0.07
La Rioja	0.0	0.0	0.00	0.00
Madrid	0.0	0.0	0.00	0.00
Murcia	0.2	0.2	0.01	0.01
Navarra	0.0	0.0	0.00	0.00
País Vasco	38.9	38.9	1.21	1.21

Average interruption time (AIT) = Energy not supplied (ENS) / Average power of the system.

Data corresponding to 2014.

Note 1. The supply continuity indicators shown do not include the potential influence of incidents that are pending classification due to the fact that they are subject to an administrative proceeding currently underway.

Note 2. Provisional data pending audit (currently underway).

The Electrical System by Autonomous Communities [CA]





International Comparison



126 TOTAL NET ELECTRICITY GENERATION OF EUROPEAN UNION COUNTRIES WHICH ARE MEMBERS OF THE CONTINENTAL EUROPE (ENTSO-E)
INCREASE IN TOTAL NET ELECTRICITY GENERATION 2014 COMPARED TO 2013

127 ELECTRICITY DEMAND OF EUROPEAN UNION COUNTRIES WHICH ARE MEMBERS OF THE CONTINENTAL EUROPE (ENTSO-E)
INCREASE IN ELECTRICAL ENERGY DEMAND 2014 COMPARED TO 2013

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DEMAND COVERAGE OF ELECTRICITY OF EUROPEAN UNION COUNTRIES WHICH ARE MEMBERS OF THE CONTINENTAL EUROPE (ENTSO-E)

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132 INTERNATIONAL PHYSICAL ENERGY EXCHANGES IN ENTSO-E MEMBER COUNTRIES AND NEIGHBOURING COUNTRIES

133 MAP OF INTERNATIONAL PHYSICAL ENERGY EXCHANGES IN ENTSO-E MEMBER COUNTRIES AND NEIGHBOURING COUNTRIES (MAP)

134 TRANSMISSION TARIFFS IN ENTSO-E MEMBER COUNTRIES

Total Net Generation of European Union Countries which are Members of the Continental Europe (ENTSO-E)

TWh

	2013	2014	% 14/13
Germany	571.8	548.5	-4.1
Austria	67.7	65.5	-3.3
Belgium	78.3	67.7	-13.6
Bulgaria	39.5	41.7	5.5
Croatia	12.8	12.0	-6.3
Slovakia	27.0	25.4	-6.0
Slovenia	13.9	16.3	17.2
Spain	273.8	266.9	-2.5
France	550.8	541.2	-1.7
Greece	47.5	40.8	-14.1
Netherlands	92.3	96.2	4.3
Hungary	27.2	26.1	-3.8
Italy	276.0	266.9	-3.3
Luxembourg	2.8	2.8	3.2
Poland	150.9	145.6	-3.5
Portugal	47.8	49.0	2.4
Czech Republic	80.8	80.0	-0.9
Romania	54.5	60.7	11.3
Total	2,415.3	2,353.2	-2.6

Source: ENTSO-E, Spain REE.

Increase in Total Net Electricity Generation 2014 Compared to 2013

%



Electricity Demand of European Union Countries which are Members of the Continental Europe (ENTSO-E)

TWh

	2013	2014	% 14/13
Germany	530.6	504.9	-4.8
Austria	69.6	69.3	-0.5
Belgium	86.2	83.7	-2.9
Bulgaria	32.2	31.2	-3.0
Croatia	17.1	16.4	-3.9
Slovakia	26.6	26.1	-1.9
Slovenia	12.7	13.2	4.0
Spain	261.1	258.1	-1.1
France	495.1	465.7	-6.0
Greece	49.6	49.3	-0.6
Netherlands	110.5	110.9	0.4
Hungary	39.0	37.6	-3.7
Italy	315.9	308.4	-2.4
Luxembourg	6.2	6.3	1.0
Poland	145.5	146.9	1.0
Portugal	49.1	48.8	-0.7
Czech Republic	62.7	62.0	-1.1
Romania	52.3	53.3	1.9
Total	2,362.1	2,292.1	-3.0

Source: ENTSO-E, Spain REE.

Increase in Electrical Energy Demand 2014 Compared to 2013

%



Increase in Electrical Energy Demand 2014 Compared to 2010 %



Consumption per Capita of European Union Countries which are Members of the Continental Europe (ENTSO-E)

kWh/hab.

	2013	2014	% 14/13
Germany	6,589	6,251	-5.1
Austria	8,236	8,146	-1.1
Belgium	7,726	7,473	-3.3
Bulgaria	4,420	4,309	-2.5
Croatia	4,004	3,863	-3.5
Slovakia	4,925	4,827	-2.0
Slovenia	6,154	6,395	3.9
Spain	5,587	5,549	-0.7
France	7,779	7,284	-6.4
Greece	4,510	4,518	0.2
Netherlands	6,587	6,592	0.1
Hungary	3,939	3,805	-3.4
Italy	5,293	5,074	-4.1
Luxembourg	11,530	11,378	-1.3
Poland	3,822	3,864	1.1
Portugal	4,686	4,680	-0.1
Czech Republic	5,963	5,898	-1.1
Romania	2,613	2,672	2.3
Total	5,810	5,621	-3.3

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 which are Members of the Continental Europe (ENTSO-E)

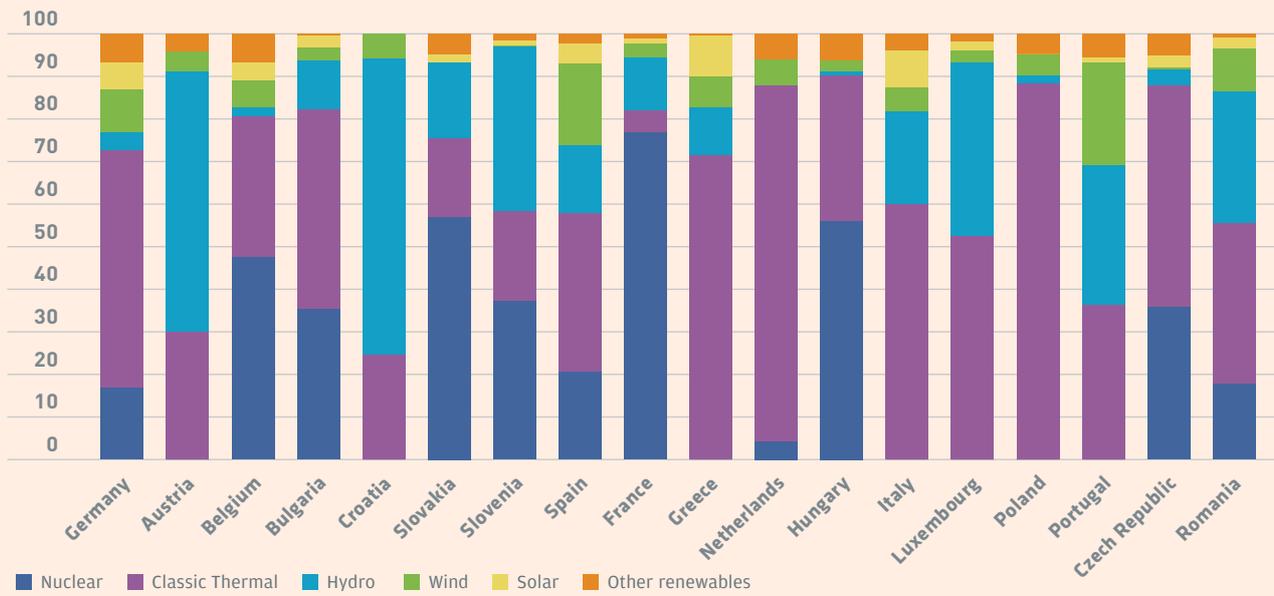
TWh

	Nuclear	Classic thermal	Hydro	Wind	Solar	Other renewables	Total
Germany	91.8	306.0	23.9	55.2	34.8	36.9	548.5
Austria	0.0	19.5	40.2	3.0	0.0	2.8	65.5
Belgium	32.1	22.4	1.4	4.4	2.8	4.5	67.7
Bulgaria	14.7	19.6	4.7	1.3	1.2	0.1	41.7
Croatia	0.0	2.9	8.3	0.7	0.0	0.0	12.0
Slovakia	14.5	4.7	4.5	0.0	0.5	1.2	25.4
Slovenia	6.1	3.4	6.3	0.0	0.2	0.2	16.3
Spain	54.8	99.9	42.4	51.0	13.1	5.7	266.9
France	415.9	27.4	68.4	17.0	6.0	6.6	541.2
Greece	0.0	29.1	4.6	3.0	3.9	0.2	40.8
Netherlands	4.1	80.4	0.1	5.8	0.1	5.8	96.2
Hungary	14.6	8.9	0.3	0.6	0.0	1.7	26.1
Italy	0.0	160.0	58.0	15.1	23.3	10.5	266.9
Luxembourg	0.0	1.5	1.2	0.1	0.1	0.1	2.8
Poland	0.0	128.6	2.7	7.3	0.0	7.0	145.6
Portugal	0.0	17.7	16.2	11.8	0.6	2.7	49.0
Czech Republic	28.6	41.7	3.0	0.5	2.1	4.2	80.0
Romania	10.7	23.0	18.6	6.1	1.6	0.5	60.7
Total	687.9	996.7	304.8	182.9	90.2	90.7	2,353.2

Source: ENTSO-E, Spain REE.

Structure of Total Net Generation of European Union Countries which are Members of the Continental Europe (ENTSO-E)

%



Source: ENTSO-E, Spain REE.

Demand Coverage of Electricity of European Union Countries which are Members of the Continental Europe (ENTSO-E)

TWh

	Hydro and other	Nuclear	Classic thermal	Total Net generation	Pumped Storage consumption	Exchange balance	Demand
Germany	150.7	91.8	306.0	548.5	8.0	-35.7	504.9
Austria	46.0	0.0	19.5	65.5	5.5	9.3	69.3
Belgium	13.2	32.1	22.4	67.7	1.6	17.6	83.7
Bulgaria	7.4	14.7	19.6	41.7	0.8	-9.6	31.2
Croatia	9.0	0.0	2.9	12.0	0.2	4.6	16.4
Slovakia	6.2	14.5	4.7	25.4	0.3	1.1	26.1
Slovenia	6.8	6.1	3.4	16.3	0.4	-2.7	13.2
Spain	112.2	54.8	99.9	266.9	5.3	-3.4	258.1
France	97.9	415.9	27.4	541.2	7.9	-67.6	465.7
Greece	11.6	0.0	29.1	40.8	0.2	8.6	49.3
Netherlands	11.7	4.1	80.4	96.2	0.0	14.7	110.9
Hungary	2.6	14.6	8.9	26.1	0.0	11.5	37.6
Italy	106.9	0.0	160.0	266.9	2.3	43.7	308.4
Luxembourg	1.4	0.0	1.5	2.8	1.5	4.9	6.3
Poland	17.0	0.0	128.6	145.6	0.8	2.2	146.9
Portugal	31.2	0.0	17.7	49.0	1.1	0.9	48.8
Czech Republic	9.8	28.6	41.7	80.0	1.4	-16.7	62.0
Romania	26.9	10.7	23.0	60.7	0.3	-7.1	53.3

Source: ENTSO-E, Spain REE.

Net Installed Power in European Union Countries which are Members of the Continental Europe (ENTSO-E)

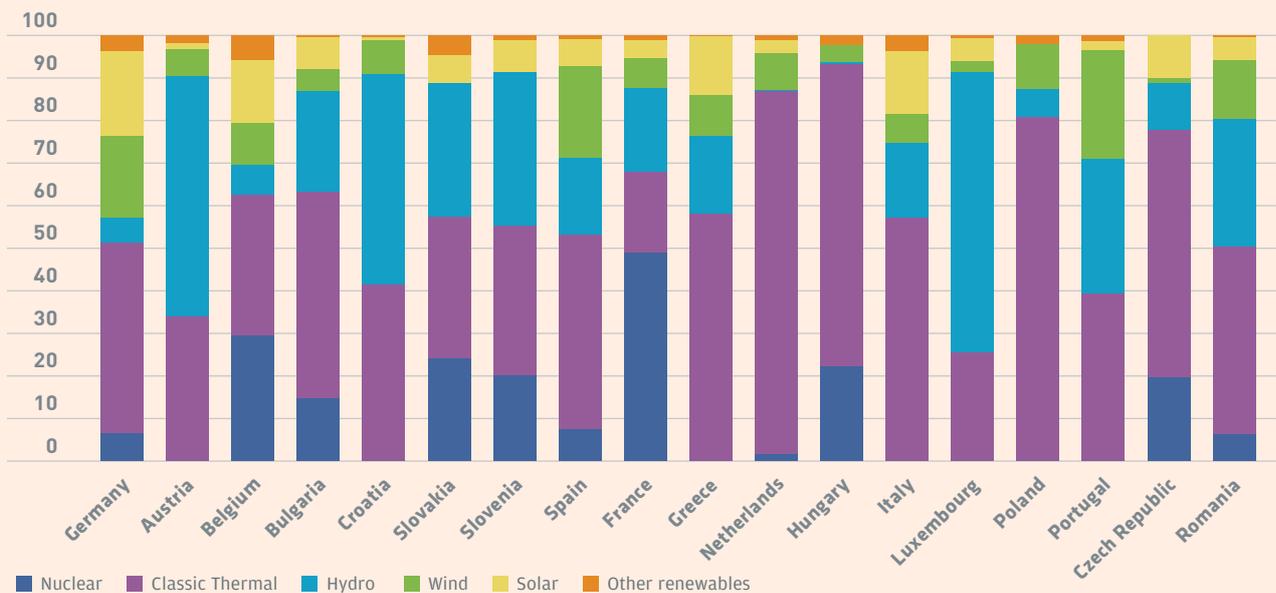
GW

	Nuclear	Classic thermal	Hydro	Wind	Solar	Other renewables	Total
Germany	12.1	85.3	10.7	36.6	38.0	6.9	189.5
Austria	0.0	8.1	13.4	1.6	0.3	0.4	23.8
Belgium	5.9	6.6	1.4	1.9	3.0	1.2	20.1
Bulgaria	2.0	6.6	3.2	0.7	1.0	0.1	13.6
Croatia	0.0	1.8	2.1	0.3	0.0	0.0	4.3
Slovakia	1.9	2.7	2.5	0.0	0.5	0.4	8.1
Slovenia	0.7	1.2	1.2	0.0	0.3	0.0	3.5
Spain	7.9	48.5	19.4	22.8	6.9	0.8	106.3
France	63.1	24.4	25.4	9.1	5.3	1.6	128.9
Greece	0.0	10.2	3.2	1.7	2.4	0.0	17.5
Netherlands	0.5	28.4	0.0	2.9	1.0	0.4	33.2
Hungary	1.9	6.1	0.1	0.3	0.0	0.2	8.6
Italy	0.0	71.3	22.0	8.5	18.6	4.5	125.0
Luxembourg	0.0	0.5	1.3	0.1	0.1	0.0	2.0
Poland	0.0	29.1	2.4	3.8	0.0	0.8	36.0
Portugal	0.0	7.0	5.7	4.5	0.4	0.2	17.9
Czech Republic	4.0	12.1	2.3	0.3	2.1	0.0	20.7
Romania	1.3	9.4	6.3	2.9	1.2	0.1	21.1
Total	101.3	359.2	122.7	97.9	81.2	17.8	780.1

Source: ENTSO-E, Spain REE.

Structure of Net Installed Power in European Union Countries which are Members of the Continental Europe (ENTSO-E)

%



Source: ENTSO-E, Spain REE.

International Physical Energy Exchanges in ENTSO-E Member Countries and Neighbouring Countries ⁽¹⁾

GWh

	Imports	Exports	Balance
Albania (AL)	3,407	414	2,993
Germany (DE)	38,894	74,588	-35,694
Austria (AT)	28,044	18,791	9,253
Belgium (BE)	21,698	4,190	17,508
Belarus (BY)	535	3,356	-2,821
Bosnia-Herzegovina (BA)	3,163	5,998	-2,835
Bulgaria (BG)	4,323	13,746	-9,423
Croatia (HR)	10,905	6,228	4,677
Denmark (DK)	12,785	9,801	2,984
Slovakia (SK)	12,964	11,861	1,103
Slovenia (SI)	7,249	9,962	-2,713
Spain (ES)	12,308	15,481	-3,173
Estonia (EE)	3,712	6,530	-2,818
Finland (FI)	21,966	3,858	18,108
France (FR)	7,799	73,575	-65,776
FYROM (MK)	5,598	2,637	2,961
Great Britain (GB)	23,169	3,704	19,465
Greece (GR)	9,537	684	8,853
Netherlands (NL)	32,853	17,899	14,954
Hungary (HU)	10,905	5,695	5,210
Ireland (IE)	2,813	672	2,141
Northern Ireland (NI)	1,613	314	1,299
Italy (IT)	46,756	3,008	43,748
Latvia (LV)	5,338	3,023	2,315
Lithuania (LT)	8,520	897	7,623
Luxembourg (LU)	6,971	2,052	4,919
Morocco (MA)	5,839	2	5,837
Moldova (MD)	0	0	0
Montenegro (ME)	4,027	3,640	387
Norway (NO)	6,148	20,879	-14,731
Poland (PL)	13,509	11,341	2,168
Portugal (PT)	7,247	6,343	904
Czech Republic (CZ)	11,832	28,138	-16,306
Romania (RO)	1,363	8,493	-7,130
Russia (RU)	2,801	6,986	-4,185
Serbia (RS)	7,330	5,049	2,281
Sweden (SE)	16,148	32,513	-16,365
Switzerland (CH)	28,116	32,439	-4,323
Turkey (TR)	5,300	1,977	3,323
Ukraine (UA)	2,589	685	1,904

(1) Exchanges between blocks in interconnections of no less than 100 kV.

Source: ENTSO-E, Spain REE.

Map of International Physical Energy Exchanges in ENTSO-E Member Countries and Neighbouring Countries (1)

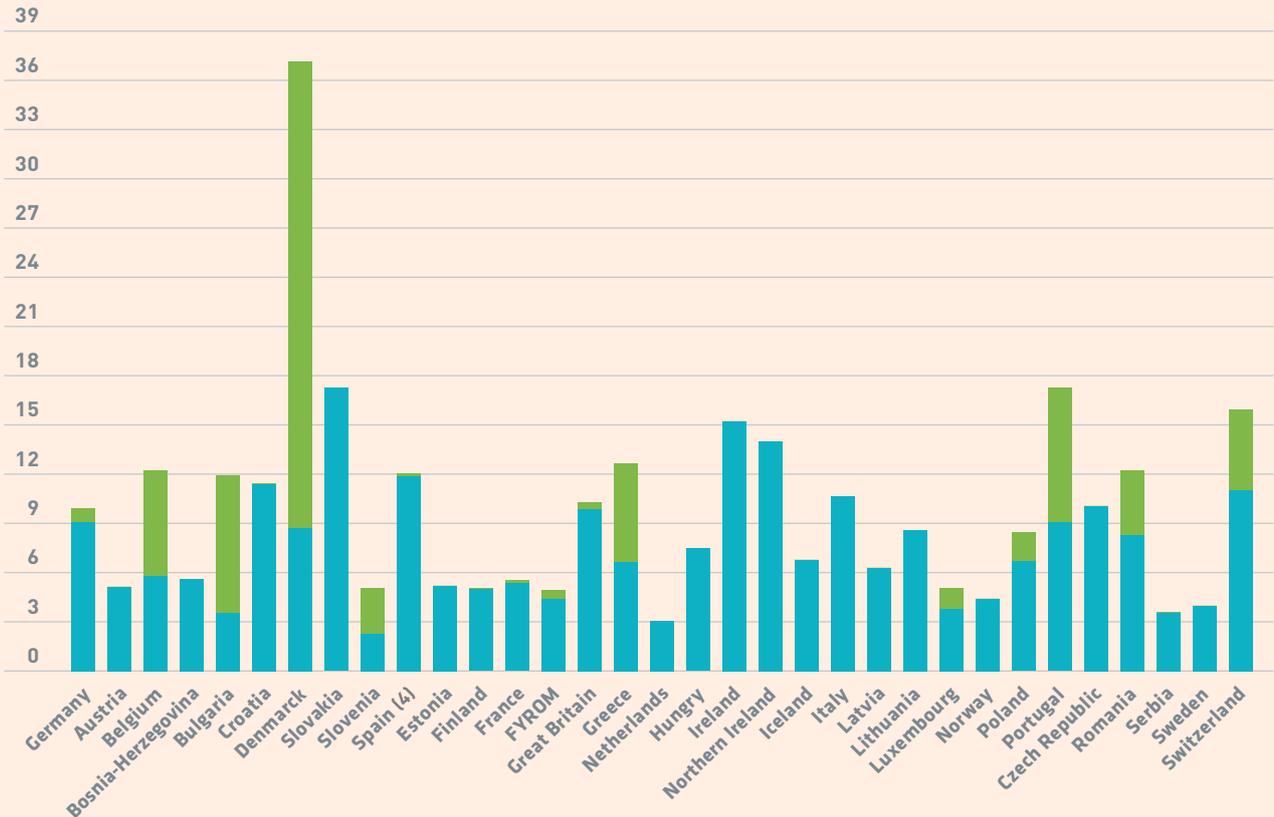
GWh



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

Transmission Tariffs in ENTSO-E Member Countries ⁽¹⁾

€/MWh



■ Transmission tariff (2) ■ Other costs (3)

(1) Tariffs applied to Consumers connected to the 400-380 kV transmission grid, with a maximum power demand of 40 MW and 5,000 hours of utilisation. (2) Costs related to activities pertinent to the TSO: infrastructure (capital and operation costs), losses and system services. (3) Other charges not directly related to TSO costs (e.g.: fostering of renewable energy). (4) In the case of Spain the figure corresponds to a fictitious transmission tariff calculated only for comparison purposes and that includes the access tariff 6.4 as well as the the other costs contemplated in the study (losses and system services) that are not included in the access tariff.

Source: ENTSO-E. Overview of transmission tariffs in Europe: Synthesis 2014.





Additional Upward Reserve Power

Is the upward power reserve value that may be required with respect to that available in the Provisional Daily Viable Schedule (PDVP) in order to guarantee the security of the electricity system on the Spanish peninsula. The contracting and management of the additional upward power reserve is performed by the system operator, if and when the system conditions require it, through a specific market mechanism.

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: Additional upward reserve power, primary control, secondary control, tertiary control and voltage control of the transmission grid.

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 Auction

Process used to allocate interconnection capacity with France based on market mechanisms, through explicit auctions on different time horizons.

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.

Cogeneration

The process through which electricity and useful thermal and/or mechanical energy is obtained simultaneously.

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 for the electricity system derived from the management of the interconnection capacity.

Congestion

A situation in which the link which interconnects two neighbouring electricity systems is not able to accept all the resulting physical flows of the international due to an insufficient interconnection capacity of the interconnection elements and/or of the national transmission grids involved.

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

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.

Cross Border Balancing Services

Hourly scheduled energy balancing between two interconnected electricity systems through the coordinated action of the operators of the electricity systems, using vacant capacity after the intraday exchange markets.

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 electricity for the following day are carried out.

Demand (Measured at Power Station Busbars)

Energy injected in to the transmission grid from the 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 Reference Supply Market

Electricity demand of the consumers on the Spanish 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 Constraints

Are those technical constraints, 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 companies (or co-operative societies of consumers and users) have the function of distributing electricity, as well as to construct, maintain and operate the distribution facilities required to transfer and distribute the energy to the consumption points.

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.

Hydro Management Unit (UGH)

Each set of hydropower stations belonging to the same hydroelectric basin and the same individual agent.

Installed Capacity

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-side management tool used to provide rapid and efficient response to the needs of the electricity system according to technical criteria (system security) and economic (least cost for the system), that consist on the reduction of the demanded active power in response to an order issued by Red Eléctrica as System Operator. According to the regulation on the competitive allocation mechanism for the demand-side interruptibility service (Order IET/2013/2013 and subsequent amendments) the interruptible resource is allocated through an

auction procedure; it is the System Operator who is responsible for organizing and managing said auction system.

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.

Market Coupling

Mechanism for managing the exchange capacity which allows the prices and net positions of the coupled day-ahead markets to be obtained simultaneously and allowing the resulting energy flows to be determined implicitly while respecting the available exchange capacity.

Market Operator

A mercantile company 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 intra-day 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. This mechanism was also used in the daily horizon at the interconnection with Portugal until the 13th of May 2014.

Measured Deviations

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 less 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 or reducing pumped storage consumption 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 or increasing pumped storage consumption through the adjustment markets in real-time.

National Demand in the Free Market

Electricity demand of the consumers on the Spanish 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.

Power Factor Control

Article 7, paragraph e), of Royal Decree 413/2014, of June 6, by which the electricity production activity from renewable energy sources, cogeneration and waste is regulated, establishes measures to control the power factor applicable for facilities within the scope of this Royal Decree.

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 (Measured at Generator Terminals)

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

Production (Measured 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 Constraints Solution

The process carried out by the System Operator consisting of the resolution of the technical constraints identified during real-time operation of the system by means of the limitation, or if deemed necessary, the modification of the schedules of the Programming Units.

Reference Supply

Electricity supply scheme established for low-voltage consumers connected to the system, and whose contracted power is not greater than 10 kW.

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.

Security of Supply Constraints Solution

Process managed by the System Operator that aims to introduce into the base daily operating schedule, modifications of schedules that may be necessary to guarantee supply of the Spanish electricity system, subsequently proceeding to make the corresponding generation-demand rebalancing.

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, and frequency deviations. Its temporary action horizon ranges 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 Thermal

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

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 managed by the System Operator that are 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. Solving of constraints due to guarantee of supply, solving technical constraints of the system, ancillary services and deviation management are all considered adjustment services.

System Operator

A mercantile company 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 participants of the Iberian Electricity Market under the principles of transparency, objectivity, independence and economic efficiency. The system operator shall be the manager of the transmission grid.

Technical Constraints PDBF Solution

A mechanism managed by the System Operator for the resolution of the technical constraints identified in the Daily Base Operating Schedule by means of the limitation, or if deemed necessary, 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 (for active units) 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 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 companies or co-operative societies of consumers and users 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 24/2013, of 26 December.

Transmission Grid

The complete set of lines, facilities, transformers and other electrical elements with voltages 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 non-peninsular electricity systems.

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 Constraints

Are those technical constraints 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.

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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