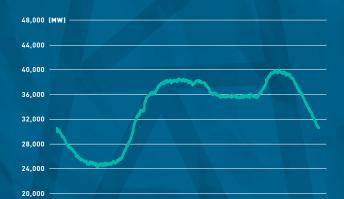
THE SPANISH ELECTRICITY SYSTEM



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THE SPANISH ELECTRICITY SYSTEM



RED ELÉCTRICA DE ESPAÑA

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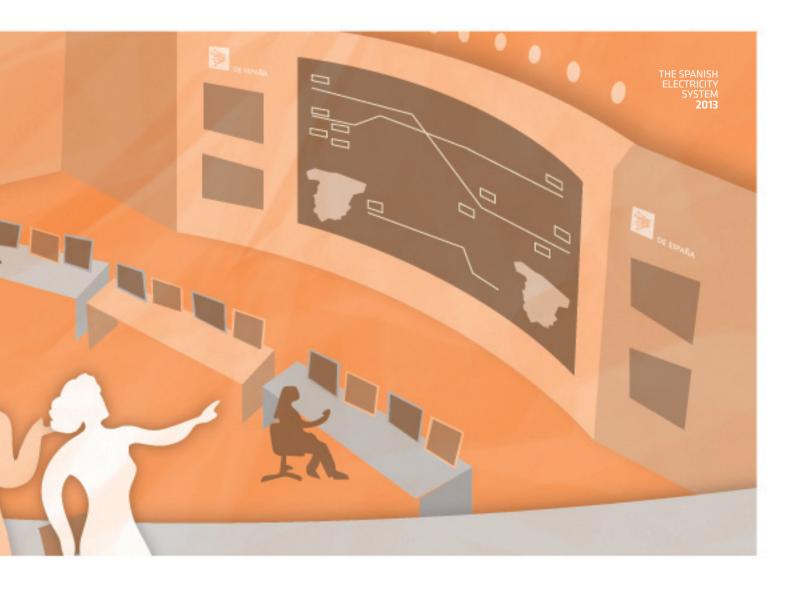


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THE SPANISH ELECTRICITY SYSTEM 2013

4 RED ELÉCTRICA DE ESPAÑA

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The demand for electricity in 2013 fell again for the third consecutive year reaching a level similar to that registered in 2005. Ever since the economic crisis began in 2008, demand has experienced a continued decline consistent with the negative behaviour of the Spanish economy and, despite following a path of gradual improvement in 2013 with a small increase in the third and fourth quarters (0.1% and 0.2% respectively quarter on quarter), in general 2013 saw a drop in GDP of 1.2% year on year.

In line with the aforementioned, the annual domestic demand for electricity, after experiencing a slight improvement in the last quarter, closed 2013 at 261,023 GWh, 2.3% lower than in 2012. In all those EU countries belonging to the Continental Europe group of ENTSO-E (European Network of Transmission System Operators for Electricity), electricity consumption has followed a similar trend, but with a more moderate decline, 1.2% in 2013 compared to the previous year.

Domestic production fell by 3.4% compared to 2012, exceeding by just over one percentage point the rate of decline in demand, mainly due to decreased export balance of international exchange compared to the previous year. Regarding the generation structure, a different behaviour is observed for the various technologies. On the one hand, renewable energies increased significantly due to high hydroelectric energy generation and good



performance of wind energy generation, whilst combined cycle and coal recorded significant declines with respect to the previous year.

Regarding regulation, during 2013 numerous provisions were adopted relevant to the operation of the Spanish electricity sector amongst which noteworthy was the opening up of the process of structural reform of the regulation of the sector, which continues its course in 2014.

REGULATORY FRAMEWORK

Within the important electricity sector regulations approved during 2013, the following are noteworthy:

The structural reform of the electricity sector began with the approval of *Royal Decree-Law* 9/2013 of 12 July 2013, adopting urgent measures to ensure the financial stability of the electricity system. This legislation contains a number of far-reaching urgent measures aimed at guaranteeing the financial stability of the electricity sector, having an impact on all electricity industry activities across the board.

Law 24/2013 of 26 December 2013, of the Electricity Sector consolidates the general principles laid down in Royal Decree-Law 9/2013 and is configured as the central provision of the new regulatory framework for the electricity sector. The Law has a two-fold objective; on the one hand, it aims to compile into a single piece of legislation all the legal provisions published across the various facets of the Regulation to adapt to the fundamental changes occurring in the electricity sector since Law 54/1997 came into force. On the other, it intends to provide measures to guarantee the long-term financial sustainability of the electricity sector, with a view to preventing the recurrence of the structural imbalance seen in recent years between revenues and costs.

Furthermore, Law 24/2013 reviews the set of provisions that made up Law 54/1997, in particular those concerning the remit of the General State Administration, the regulation of access and connection to the grids, the penalty system, and the nomenclature used for the tariffs applied to vulnerable consumers and those still availing of the regulated tariff, and maintains the functional and business model defined in Law 54/1997 for the exercise of the transmission and system operator activities, as well as the allocation of the transmission grid manager role.

Besides the two aforementioned provisions, in 2013 other provisions of singular relevance for the electricity sector were published, amongst which the following are noteworthy:

• Royal Decree Law 2/2013, of 1 February, on urgent measures in the electricity system and in the financial sector, in which, amongst other measures, determines a further reduction in regulated costs initially planned for 2013, articulated through the substitution of the general Consumer Price Index (CPI), in the methodologies for calculating the remuneration of electricity activities set by electricity sector regulation, for another index resulting from applying said CPI Index to constant taxes, excluding unprocessed food and energy products, and whose value is generally lower than that of the CPI.



• Law 3/2013, of 4 June, on the creation of the National Commission for Markets and Competition, establishing a new body which encompasses the regulatory supervisory functions of the existing National Energy Commission (CNE), the Telecommunications Market Commission, the Telecommunications Market Commission, the National Competition Commission, the Rail Regulation Committee, the National Postal Industry Commission, the Airport Economic Regulation Commission and the State Council for Audiovisual Media.

Regarding the field of energy, the new Law transfers to the Ministry of Industry, Energy and Tourism some competencies that previously were carried out by the CNE, such as inspection, initiation of proceedings, sanctions, claims by consumers as well as that related to control over the shareholding acquisition in the energy sector (formerly "Function 14" of the CNE). Other significant changes in this new Law are the transfer to the Ministry of the function of calculating the settlement of regulated activities, the disappearance of the Electricity Advisory Committee and that of Hydrocarbons as advisory bodies and the creation instead of the Energy Council, which has been attributed the role of the participatory and consultative body of the Ministry.

• Law 17/2013, of 29 October, on security of supply and increased competition in insular and extra-peninsular systems, that lays the foundations for the development of new remuneration systems in these insular and extra-peninsular territories in order to increase competition and reduce generation costs, as well as strengthen the tools for action by the Government in situations that pose a risk to the security of supply in said territories. • Royal Decree-Law 17/2013, of 27 December, determining the price of electricity in contracts subject to the Small Consumer Voluntary Price tariff in the first guarter of 2014. This provision, approved within the setting of the controversy raised when the National Commission for Markets and Competition issued a ruling declaring the 25th CESUR auction invalid, alleging atypical circumstances which distorted the result, establishing the price of energy applicable for the calculation of the voluntary price for the small consumer during the first quarter of 2014. This situation is provisional until the publication of the provision defining a new method for calculating this voluntary price.

Although of lesser regulatory scope than those previously mentioned, another provision worth noting amongst those published in 2013 is the *IET/18/2013 Order, of 17 January,* which publishes the Agreement of the Council of Ministers of 28 December 2012, which empowers the Directorate General for Energy Policy and Mines for the authorisation or issuance of favourable reports referred to in Article 36.3 of Law 54/1997, of 27 November, on the Electricity Sector, for certain electricity transmission grid facilities in accordance with the provisions of Article 10.5 of Royal Decree Law 13/2012, of 30 March.

The annex to this Order includes the list of planned transmission grid facilities considered critical which the Directorate General for Energy Policy and Mines is empowered, in accordance with Article 10.5 of Royal Decree-Law 13/2012, to issue administrative authorisation or, in the event that this be the remit of the Autonomous Communities, the required favourable report.

ELECTRICITY DEMAND

The peninsular electricity demand in 2013 again fell for the third consecutive year reaching similar levels to eight years ago. After experiencing a slight improvement in the last quarter, demand ended the year at 246,313 GWh, 2.3% lower than in 2012. After having factored in the seasonal and working patterns, demand attributable mainly to economic activity decreased by 2.2% (1.8% in 2012).

ANNUAL EVOLUTION OF THE **%** SPANISH GDP AND THE DEMAND FOR ELECTRICAL ENERGY ON THE PENINSULA

			A DEMAND
	GDP (*)	PER ECONOMIC ACTIVITY	∆ DEMAND
2009	-3.8	-4.7	-4.7
2010	-0.2	2.7	3.1
2011	0.1	-1.0	-1.9
2012	-1.6	-1.8	-1.4
2013	-1.2	-2.2	-2.3

(*) Source: INE

COMPONENTS OF THE % PENINSULAR DEMAND VARIATION AT POWER STATION BUSBARS

	%12/11	%13/12
Demand at power station busbars	-1.4	-2.3
Components (1)		
Temperature effect (2)	0.7	-0.3
Working pattern effect	-0.3	0.2
Economic activity effect and others	-1.8	-2.2

(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.

This decrease is consistent with the behaviour of the Spanish economy that registered a fall of 1.2% in GDP in 2013 compared to 2012, although GDP did show a slight improvement in the third and fourth quarter (0.1% and 0.2% respectively on a quarter on quarter basis).

In the set of non-peninsular systems - the Balearic Islands, the Canary Islands, Ceuta and Melilla - the demand for electricity in 2013, following a recovery in 2012, has resumed the downward trend of the previous three years, closing the year at 14,710 GWh, 2.9% lower than 2012. Broken down by system, the Balearic Islands fell 2.6%, the Canary Islands by 3.0%, Ceuta by 4.8% and Melilla by 3.5%.

As a result, domestic demand registered a rate of decrease of 2.3% compared to 2012, with a registered electricity demand of 261,023 GWh.

The maximum annual demand for instantaneous, hourly and daily power on the peninsular system stood, for yet another year, below the all-time highs registered in 2007. Maximum instantaneous power reached 40,277 MW on 27 February at 8:42 pm (the all-time high was registered in 2007 at 45,450 MW). That same day, between 8:00 and 9:00 pm, the maximum hourly demand was reached at 39,963 MWh, 10.9% below the all-time record level registered in 2007 and 7.1% lower than the value recorded in 2012. Meanwhile, the annual maximum daily energy was registered on 23 January at 808 GWh, 10.8% below the all-time record also reached in 2007.

With respect to the summer period, on 10 July at 1:32 pm the maximum instantaneous power was recorded at 37,570 MW, a value below the all-time summer record reached in July 2010 at 41,319 MW.



In 2013, noteworthy were the special circumstances that occurred regarding the operation of the peninsular electricity system during the Easter period, during which extremely low demand values, high hydroelectric energy production (with dumping in some basins), and high wind energy production were registered. Under these operating circumstances, and to ensure the safety of the peninsular electricity system, it was necessary for the System Operator to issue orders to step-down production due to the excess of generation that could not be integrated into the system. These reductions affected, amongst other generating technologies, nuclear production, an exceptional event that had not occurred since 1997.

In the non-peninsular systems, the maximum hourly demand in 2013 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 36 MWh (the all-time high is 41 MWh recorded in 2008) and Melilla 37 MWh (the all-time high is 40 MWh recorded in 2012).

MAXIMUM INSTANTANEOUS -MW POWER ON THE PENINSULA 50,000 44,496 44,486 43,969 43,527 40,277 40,000 30.000



	PI	ENINSULAR SYSTEM	NON-PENINSULAR SYSTEMS			NATIONAL TOTAL	
	MW	%13/12	MW	%13/12	MW	% 13/12	
Hydro	17,785	0.0	1	0.0	17,786	0.0	
Nuclear	7,866	0.0	-	-	7,866	0.0	
Coal	11,131	0.2	510	0.0	11,641	0.2	
Fuel/gas	520	0.0	2,979	2.4	3,498	2.0	
Combined Cycle	25,353	0.0	1,854	0.0	27,206	0.0	
Total ordinary regime	62,655	0.0	5,343	1.3	67,998	0.1	
Hydro	2,102	2.9	0.5	0.0	2,102	2.9	
Wind	22,854	1.0	157	5.0	23,010	1.1	
Solar photovoltaic	4,422	2.4	243	1.3	4,665	2.3	
Solar thermoelectric	2,300	17.9	-	-	2,300	17.9	
Renewable thermal	975	0.5	5	0.0	980	0.5	
Non-renewable thermal	7,089	-1.0	121	0.0	7,210	-1.0	
Total special regime (1)	39,741	1.7	527	2.1	40,267	1.8	
Total	102,395	0.7	5,870	1.4	108,265	0.7	

INSTALLED CAPACITY AS AT 31.12.2013. NATIONAL ELECTRICITY SYSTEM

(1) Provisional data. Source: National Commission for Markets and Competition (CNMC).

NATIONAL ELECTRICAL ENERGY BALANCE

	P	ENINSULAR SYSTEM	NON-PI	ENINSULAR SYSTEMS		NATIONAL TOTAL
	GWh	%13/12	GWh	%13/12	GWh	%13/12
Hydro	33,970	74.6	0	-	33,970	74.6
Nuclear	56,827	-7.6	-	-	56,827	-7.6
Coal	39,807	-27.3	2,591	-11.9	42,398	-26.5
Fuel/gas (1)	0	-	7,002	-7.2	7,002	-7.2
Combined Cycle	25,091	-35.0	3,581	-8.6	28,672	-32.6
Ordinary regime	155,695	-10.6	13,175	-8.5	168,870	-10.5
Generation consumption	-6,270	-18.2	-784	-7.8	-7,054	-17.1
Hydro	7,099	52.8	3	70.2	7,102	52.8
Wind	54,338	12.9	370	0.4	54,708	12.8
Solar photovoltaic	7,915	1.1	409	9.8	8,324	1.5
Solar thermoelectric	4,442	29.0	-	-	4,442	29.0
Renewable thermal	5,064	6.7	9	5.9	5,073	6.7
Non-renewable thermal	31,989	-4.5	260	-5.4	32,248	-4.5
Special regime	110,846	8.4	1,050	2.5	111,897	8.3
Net generation	260,271	-3.2	13,441	-7.8	273,713	-3.4
Pumped storage consumption	-5,958	18.6	-	-	-5,958	18.6
Peninsula-Balearic Islands' link (2) (3)	-1,269	-	1,269	-	0	-
International exchanges (3)	-6,732	-39.9	-	-	-6,732	-39.9
Demand (at power station busbars)	246,313	-2.3	14,710	-2.9	261,023	-2.3

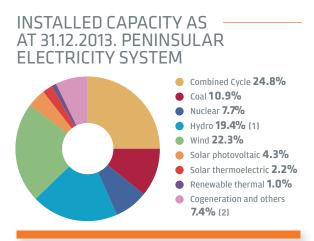
Generation from auxiliary generating units is included In the Balearic Islands' electricity system.
 Peninsula-Balearic Islands' link working at minimum technical level until 13 August 2012.
 Positive values indicate an import exchange balance and negative values show an export exchange balance.

DEMAND COVERAGE

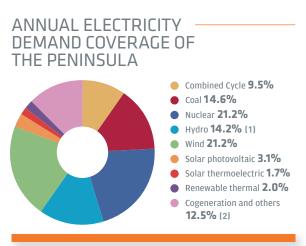
The installed power capacity in the Spanish peninsular system stood at 102,395 MW at year-end, 699 MW (0.7%) more than in December 2012. This increase in capacity is significantly lower than in recent years and is mainly due to new facilities: solar (350 MW thermoelectric and 103 MW photovoltaic) and wind power (237 MW). Power variations in the rest of the technologies that comprise the power generation pool were either nil or insignificant.

In the non-peninsular systems, the installed power capacity stood at 5,870 MW at the end of 2013 (80 MW more than in 2012). This increase is divided between the Balearic Islands (50 MW) and the Canary Islands (30 MW), the majority fuel-gas fired stations, whilst the installed capacity of Ceuta and Melilla remained constant with respect to the previous year.

Peninsular demand coverage was mainly determined by the increased hydro energy resources and due to the good performance of wind energy. It is worth noting that wind energy, with a share of 21.2% (18.1% in 2012) stood for the first time at the forefront together with nuclear (which reduced its share by about one percentage point compared to the previous year) jointly covering 42.4% of the peninsular demand. Hydroelectric energy doubled its contribution (14.2% in 2013, compared to 7.7% in 2012), whilst the weight of the coal-fired stations and combined cycle fell to 14.6% and 9.5% respectively (19.3% and 14.1% in 2012). The rest of the technologies, together covering about 19.3% of the remaining demand, have maintained values that are either similar or with a very slight variation compared to the previous year.

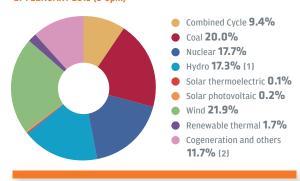


Includes power obtained from pure pumped storage. (2,747 MW).
 Includes non-renewable thermal and fuel/gas.



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

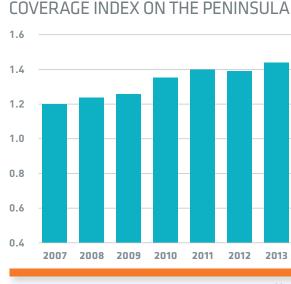




Does not include pumped storage generation.
 Includes non-renewable thermal and fuel/gas.

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EVOLUTION OF THE MINIMUM

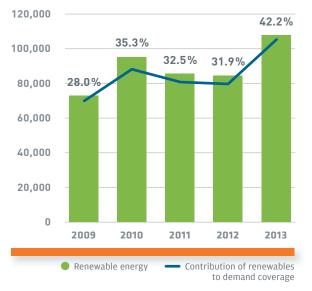
IC = Pd/Ps IC: Coverage index Pd: Available power in the system Ps: Peak level of power demanded from the system

For yet another year, the pool of energy sources considered as renewable has strengthened its leading role in meeting demand in spite of the slowdown in the development of new wind and solar farms. In 2013, these energies, boosted by the important hydro levels registered throughout the year, set a record regarding peninsular demand coverage registering a share of 42.2% in the generation mix, which is 10 percent up on 2012, and almost 7 percentage points higher than 2010, a year of high hydroelectric generation.

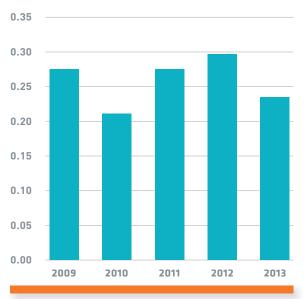
This increase in renewables, combined with a fall in coal-fired generation, has led to a decrease in CO₂ emissions of the peninsular electricity sector. For 2013, this figure is estimated at 60 million tonnes. 24.8% less than in 2012.

In line with recent years, in 2013 the peninsular electricity system was a net exporter of electricity to other electricity systems. A net balance of 1,269 GWh (0.5% of peninsular

EVOLUTION OF RENEWABLE -----GWh ENERGY ON THE PENINSULA

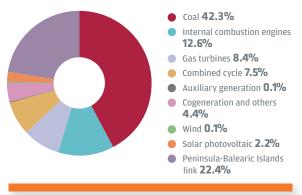


EVOLUTION OF THE ------ tCO₂/MWh EMISSIONS FACTOR ASSOCIATED TO ELECTRICITY GENERATION ON THE PENINSULA





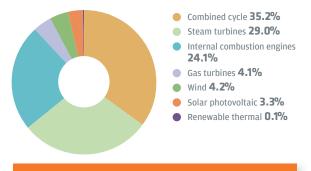
ANNUAL ELECTRICITY DEMAND -COVERAGE OF THE BALEARIC ISLANDS



to be covered, whilst coal and combined cycles reduced their contributions to 42.3% and 7.5%, respectively (46.9% and 15.4% in 2012). Regarding the Canary Islands' electricity system, noteworthy - compared to 2012 - was the growth in the contribution made by combined cycle which covered 35.2% of demand (32.4% in 2012), mainly at the expense of fuel-gas technologies, which together contributed 57.1% (60.5% in 2012).

ORDINARY REGIME

ANNUAL ELECTRICITY DEMAND – COVERAGE OF THE CANARY ISLANDS

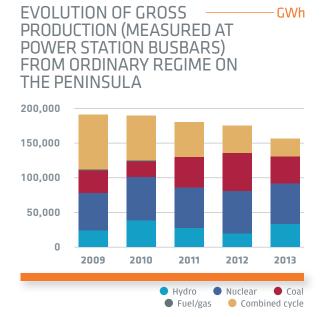


generation) was transferred from the Spanish peninsula to the Balearic Islands through the submarine interconnection that links the two systems and which began operation in August 2012. As for international exchanges with neighbouring countries, a net export balance of 6,732 GWh was covered with 2.6% of the net peninsular generation (4.2% in 2012).

In the non-peninsular systems, demand coverage in 2013 for the Balearic Islands' system was characterised by the large volume of energy received through the Spanish peninsula-Balearic Islands' link, which enabled 22.4% of demand The power stations belonging to ordinary regime generation accentuated the downward trend which began in 2008. In 2013, a gross production of 155,695 GWh was recorded, a decrease of 10.6% over the previous year (almost eight percentage points higher than the rate of decline recorded in 2012). Regarding the total peninsular generation in 2013, these power stations have reduced their contribution to 57.4% (five percentage points less than in 2012). Meanwhile, the installed capacity remained virtually unchanged compared to the previous year.

By technologies, all power stations registered falls in production except for hydroelectric power stations. Combined cycle stations showed a significant reduction of 35% compared to that of 2012, confirming its clear downward trend that began in 2009. Similarly, coal-fired power stations reduced their generation by 27.3% compared to 2012, and nuclear which fell 7.6% mainly due to the withdrawal from production of the Garoña nuclear power station for being in a situation of temporary shutdown (currently pending approval to reopen).





Conversely hydroelectricity, after two consecutive years of low production, has increased its generation to 33,970 GWh, representing an increase of 74.6% over 2012. This high level of growth is mainly due to the fact that 2013 was much wetter than 2012, which was extremely dry.

From a rainfall point of view, overall 2013 was a wet year. The high rainfall registered in much of the year increased producible hydroelectric energy to 32,631 GWh. This value is 18% higher than the average historical value and 2.6 times higher than that recorded in 2012.

At the close of the year hydroelectric reserves throughout the whole set of peninsular reservoirs stood at 57.5% of its total capacity, compared to 38.2% of the existing reserves at the end of 2012.

SPECIAL REGIME

In the peninsular system, electricity from the facilities included under the special regime maintained its upward trend in 2013, reaching a volume of 110,846 GWh. This volume of energy exceeds by 8.4% the one recorded a year ago and represents 42.6% of total electricity generation on the Spanish peninsula in 2013, almost five percentage points above the value of the previous year. This growth in energy was accompanied by an increase in installed capacity of 682 MW, bringing the total power capacity of special regime to 39,741 MW, 38.8% of the total capacity on the Spanish peninsula.

The continued growth of special regime is mainly due to the progressive development of the renewable energies integrated within the special regime, which generated 78,857 GWh in 2013,





an increase of 14.6% over the previous year. Within the renewables category, particularly noteworthy were wind energy and hydroelectric energy which together represent more than 86% of this growth. The installed capacity maintains its upward trend, but with significantly lower growth than that seen in previous years, with an addition of 753 MW in 2013, bringing its total capacity at year end to 32,652 MW, up 2.4% from the previous year and about eight percentage points less than the growth experienced in 2012.

By technologies, wind recorded an increase in power of 237 MW, representing a significant reduction in the growth rate observed over the last decade, a period in which an average annual growth was registered of about 1,800 MW (5,816 MW in 2003 compared to 22,854 MW in 2013). In line with this growth, wind energy generation has also maintained an upward trend during that period, going from a generation of 11,720 GWh in 2003 to 54,338 GWh in 2013. This volume of energy was 12.9% higher than in the previous year and represented 21.2% of the total peninsular generation in 2013.

Throughout 2013, the maximum values of wind power production achieved in previous years were exceeded. On 25 December at 2:56 am wind energy covered 68.5% of demand and on 6 February at 3:49 pm instantaneous wind energy production reached 17,056 MW (2.5% above the previous all-time high recorded in April 2012). That same day a new all-time record for hourly energy was registered at 16,918 MWh. In addition, in the months of January, February, March, November and December wind energy generation technology was the largest contributor to the total energy production of the system.

The number of solar farms continued to grow but at a slower pace than in previous years. Photovoltaic power closed the year at 4,422 MW (103 MW or 2.4% more than at the end of the previous year), and production reached 7,915 GWh (1.1% more than in 2012). Meanwhile, thermoelectric ended the year with an installed capacity of 2,300 MW (350 MW or 17.9% more than in December 2012) and a generation of 4,442 GWh (29% higher than 2012). The share of these technologies in the generation mix has jointly represented 4.8% of the peninsular generation in 2013.

Special regime hydroelectric generation registered a significant increase in production of 52.8% due to the abundant rainfall recorded throughout the year. Additionally generation from technologies included in the category of renewable thermal grew 6.7%.

In the Canary Islands' electricity system, generation from renewable sources - wind and solar - represented 7.5% of the total generation in 2013 reaching highs of 30% in Tenerife and 32% in Palma throughout 2013, values especially challenging in small isolated electricity systems. Meanwhile, in the Balearic Islands' system renewable energies represented 2.9% of the total production.



SYSTEM OPERATION

During 2013, energy contracted in the electricity market (domestic demand - energy supply at tariff plus freely negotiated - and international exchange balances) was 1.9% lower than the previous year. Of this total, 82.2% corresponded to contracted supply on the open market and the remaining 17.8% to supply at tariff.

The final average purchase price of energy in the electricity market was 57.69 €/MWh, a value 3.2% lower than in 2012.

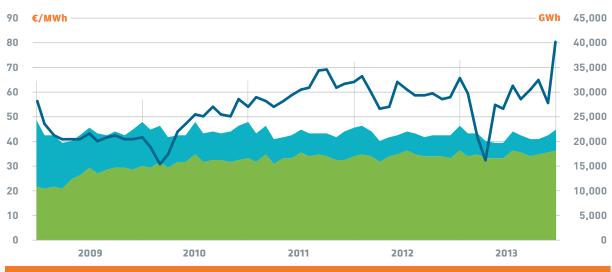
The combined price of the day-ahead and intraday markets accounted for 80% of the final price, whilst the cost resulting from the management of system adjustment services accounted for 9.6% and the cost derived from capacity payments accounted for the remaining 10.4%.

In the day-ahead market a total of 185,148 GWh was managed, with an average weighted price

of 44.33 €/MWh. Compared to the previous year, the price decreased 8.4%, whilst the energy acquired in the day-ahead market grew by 3.8%.

In the intraday market, energy sales reached 34,577 GWh, 36.6% 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 45.51 €/MWh, a value 2.7% higher than the day-ahead market.

The energy managed in the system adjustment services markets in 2013 was 25,048 GWh, a value 20.1% less than the previous year. The impact of the cost of these services (not including security of supply constraints) in the final price of energy was 5.54 €/MWh, a value 19.1% higher than in 2012.



EVOLUTION OF MONTHLY ENERGY AND PRICES IN THE ELECTRICITY MARKET (1)

Energy supplied at tariff (2)
 Freely contracted energy Average final price
 (1) National demand data.
 (2) Royal Decree 485/2009 of 3 April determines the suspension of integral tariffs

as of 1 July 2009 and the introduction, as of that date, of the Last Resort Tariff.



EVOLUTION OF THE _____€/MWh COMPONENTS OF THE AVERAGE FINAL PRICE IN THE ELECTRICITY MARKET



During 2013, the energy scheduled for resolving security of supply constraints totalled 4,085 GWh, representing 20.3% of the maximum authorised production volume in 2013 for power stations signed up to this procedure. The total amount of energy produced by these power stations amounted to 11,523 GWh, representing 57% of the maximum volume of production established in 2013 by the Resolution of the Secretary of State for Energy.

The energy scheduled for resolving technical constraints of the Daily Base Operating Schedule (PDBF) was 7,240 GWh upward and 193 GWh downward, with an impact on the final average price of 2.80 €/MWh compared to 2.11 €/MWh the previous year.

In 2013, the annual volume of additional upward power reserve which had to be allocated was

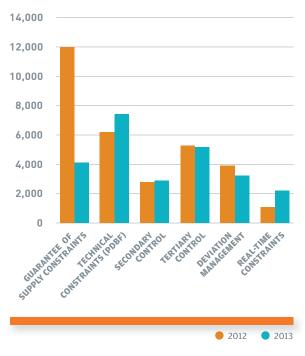
3,010 GW, with an impact of 0.44 €/MWh on the final average price of energy.

The average hourly power band for secondary control assigned in 2013 was 1,203 MW, with an impact of 1.44 €/MWh on the final average price of energy, a value 4.8% higher than the previous year.

The management of ancillary services and deviation management, plus the resolution of real-time constraints, had an impact of 0.86 €/MWh on the final average price of energy, a value slightly lower than the 0.90 €/MWh recorded in 2012.

In 2013, energy managed in the markets for secondary control, tertiary control, deviation management and resolution of real-time

ENERGY MANAGED IN THE GWh SYSTEM ADJUSTMENT SERVICES



technical constraints, was 2,876 GWh, 5,142 GWh, 3,252 GWh and 2,260 GWh, respectively. In this energy group, upward energy scheduled represented 59.4% of the total, compared to 40.6% of downward energy managed.

THE SPANISH ELECTRICITY

SYSTEM 2013

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 7,861 GWh upward and 7,908 GWh downward, with an average price for deviations of 36.28 €/MWh upward and 51.95 €/MWh downward.

INTERNATIONAL EXCHANGES

The volume of energy traded through the exchange programmes with other countries stood at 23,153 GWh, 2.4% less than 2012. Exports fell to 14,944 GWh (14.4% less than the previous year), whilst imports increased to 8,209 GWh (30.9% higher than in 2012).

NET SCHEDULED GWh INTERNATIONAL EXCHANGES

	2013
Transactions (market + physical bilateral contracts)	-6,739
Traders/retailers	-3,957
Interconnection balance with Portugal	-2,782
Counter-Trading France - Spain	4
Counter-Trading Portugal - Spain	0
Support exchanges	0
Total	-6,736

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

EVOLUTION OF SCHEDULED ____ GWh INTERNATIONAL EXCHANGES



As a result, the annual balance of scheduled electricity exchanges through Spanish interconnections remained as an exporter for the tenth consecutive year, although a decrease of 39.8% was registered compared to the value recorded in 2012 (6,736 GWh in 2013, compared to 11,187 GWh in 2012).

The monthly net balance of scheduled electricity exchanges has maintained an exporter balance in every month of the year, registering a peak in July of 1,056 GWh and a minimum of 122 GWh in May.

By interconnections, Spain has been a net exporter with all neighbouring countries except for the interconnection with France that ended the year with an import balance of 1,707 GWh. This balance is 9.8% lower than in 2012 because during some months (February, March, April and November), Spain registered a net export balance with France.

Regarding the interconnection with Portugal, the export balance was reduced by 64.8% over the previous year as in the first months of the year Spain was a net importer of electricity with this country. By contrast, with Morocco the net export balance increased 9.7% compared to 2012 and remained similar in the interconnection with Andorra.

During 2013, in the interconnection with France the average utilisation of commercial capacity as an importer increased to 51% (48% in 2012), and as an exporter, the average utilisation stood at 34% (33% in 2012). In the interconnection with Portugal there was a marked rise in the average utilisation capacity as an importer, which increased to 20% from 2% in 2012, whilst the average utilisation as an exporter decreased to 31% from 58% in 2012. The international connection with Morocco was only used for exports.

EXCHANGE CAPACITY MANAGEMENT SYSTEM OF THE SPAIN-FRANCE INTERCONNECTION

At the end of 2013, a total of 26 agents were authorised to participate in the explicit cross-border capacity auction system in this interconnection.

Congestion rents collected during 2013 represented €110 million with 50% of this amount corresponding to the Spanish electricity system.

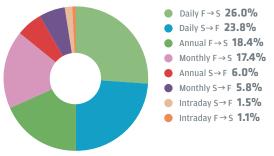
The marginal price of the annual capacity auction for 2013 in the direction Spain to

France recorded a value of 2.88 €/MW, representing a reduction of 36% from the price registered in the annual auction for 2012 (4.47 €/MW). The marginal price resulting from the capacity auction in the direction France to Spain was 7.81 €/MW, a value 42% higher than in the same direction of flow in the annual auction for 2012 (5.52 €/MW).

The maximum price of the capacity allocated in monthly auctions in the direction France to Spain, was registered in June at 17.55 €/MW, a value representing an absolute maximum in this direction of flow. In the direction Spain to France, the highest price recorded was 7.89 €/MW (April 2013).

In 2013, 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 operators of Spain and France for a total of 8,472 MWh.







EXCHANGE CAPACITY MANAGEMENT SYSTEM OF THE SPAIN-PORTUGAL INTERCONNECTION

In 88% of the hours in 2013, 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 8% of the hours, congestion was detected in the direction Portugal to Spain (higher price in Spain), and in 4% of the remaining hours congestion occurred in the direction Spain to Portugal (higher price in Portugal).

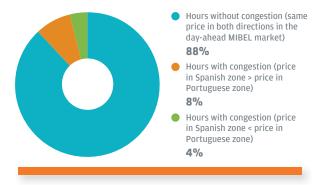
The maximum price difference reached a value 61.6 €/MWh, registering a higher price in the area corresponding to the Spanish system.

Congestion rents arising from the management of this interconnection in 2013 accounted for € 11.3 million, 50% of this amount corresponding to the Spanish electricity system. This value represented an increase of 30% compared to the value of 2012 (€ 8.7 million).

INTERRUPTIBLE POWER IN _____ MW PERIODS OF MAXIMUM DEMAND



HOURS WITH/WITHOUT CONGESTION IN THE INTERCONNECTION WITH PORTUGAL



CONGESTION RENTS FROM MARKET – SPLITTING IN THE INTERCONNECTION WITH PORTUGAL

	THOUSANDS OF €	%
Day-ahead market	10,773	95.37
Intraday market	523	4.63
Total	11,296	100.00

In 2013, it was necessary to apply countertrading actions in this interconnection, in a coordinated manner, between the electricity operators of Spain and Portugal, for a total of 2,344 MWh.

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, amended by Order ITC/1857/2008, Order ITC/3801/2008, Order ITC/1732/2010, Order IET/3586/2011 and Order IET/2804/2012. In November 2013, Order IET/2013/2013 came into force to regulate the demand-side management interruptibility service by consumers that purchase their energy in



the electricity generation market, the requirements to participate as a supplier thereof and the competitive mechanism for its allocation and execution, in addition to its remuneration system. This rule will be applicable once the regulation required to this effect is approved.

At 1 January 2014, 145 interruptibility contracts were in force of which 130 correspond to the Spanish peninsular system, 14 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 2,214 MW, of which 2,164 MW corresponded to the peninsular system, 46.8 MW to the Canary Islands' system and 3.4 MW to the Balearic Islands' system.

TRANSMISSION GRID

The development of electricity transmission facilities during 2013 has experienced a new boost with the commissioning of facilities that enhance the reliability and strengthen the degree of grid meshing and can incorporate new renewable power. During 2013, 776 km of new circuit was put in service, meaning that at the end of the year the national transmission grid totalled 42,140 km of circuit. Additionally, transformer capacity grew by 2,524 MVA, bringing the total national installed transformer capacity to 80,944 MVA.

Amongst the 400 kV projects completed in 2013, noteworthy was the Almaraz-San Serván line (285 km) and the San Serván-Brovales



TRANSMISSION GRID FACILITIES IN SPAIN

	400 kV			≤ 220 kV	
	PENINSULA	PENINSULA	BALEARIC ISLANDS	CANARY ISLANDS	TOTAL
Total lines (km)	20,641	18,667	1,544	1,289	42,140
Overhead lines (km)	20,586	17,986	1,089	1,023	40,683
Submarine lines (km)	29	236	306	30	601
Underground lines (km)	26	445	149	237	856
Transformer capacity (MVA)	76,508	63	2,748	1,625	80,944

Cummulative data regarding km of circuit and transformer capacity as at 31 December 2013.

THE SPANISH ELECTRICITY SYSTEM 2013

line (132 km). These lines are part of the construction of the Almaraz-Guillena axis which will be fully operational in 2014 and whose principal objective is to guarantee the quality of supply of the forecasted demand in the regions of Andalusia and Extremadura and serve as support for the expansion of the interconnection with Portugal.

Regarding the 220 kV projects, the most relevant is the completion of the Aljarafe-Rocio axis (118 km) whose main objective is to strengthen the distribution grid in Almonte (Huelva) and incorporate into the grid a greater amount of renewable energy generated in the area.

SERVICE QUALITY

The results of the service quality indicators for 2013 show for yet another year the good performance of the transmission grid, evaluated according to the availability of the facilities comprising the grid and the supply disruptions caused by incidents in the grid.

The transmission grid availability rates reflect the average service availability of the elements in each system. In 2013, this rate was 98.13% for the peninsular system, improving upon the availability of 2012 which was 97.79%. In the Balearic Islands' and Canary Islands' electricity systems, the availability rate was 97.97% and 98.32% respectively (98.07% and 98.83% in 2012).

The continuity of supply indicators reflect the actual disruptions to final consumers resulting from incidents in the transmission grid. During 2013, there were18 supply disruptions in the peninsular transmission grid, 25% less than in 2012, resulting in a total energy not supplied of 1156.18 MWh and an average interruption time of 2.467 minutes recorded, well below the reference value of 15 minutes established in Article 26.2 of Royal Decree 1955/2000 of 1 December. (1)

In the Canary Islands' and Balearic Islands' electricity systems, the continuity of supply indicators recorded were well below the maximum reference values despite the slight increase recorded in the Balearic system. The values of energy not supplied and the average interruption time were registered at 80.96 MWh and 7.5 minutes for the Balearic Islands and 2.9 MWh and 0.177 minutes in the Canary Islands. (1)

(1) The continuity of supply indicators presented do not include the potential impact of incidents that are pending classification owing to them being subject to ongoing administrative procedures; in this respect, indicators reflected for the Canary Islands are incomplete and subject to revision.

TRANSMISSION GRID QUALITY

			ENS (MWh)			AIT (MINUTES)
	PENINSULA	BALEARIC ISLANDS	CANARY ISLANDS	PENINSULA	BALEARIC ISLANDS	CANARY ISLANDS
2009	437	39	1,679	0.91	3.41	96.89
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

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

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



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ELECTRICITY DEMAND peninsular system

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01



Evolution of the annual growth of the electricity demand at power station busbars

Components of the monthly growth in demand

27

Monthly distribution of the electricity demand at power station busbars Monthly evolution of the electricity

demand at power station busbars

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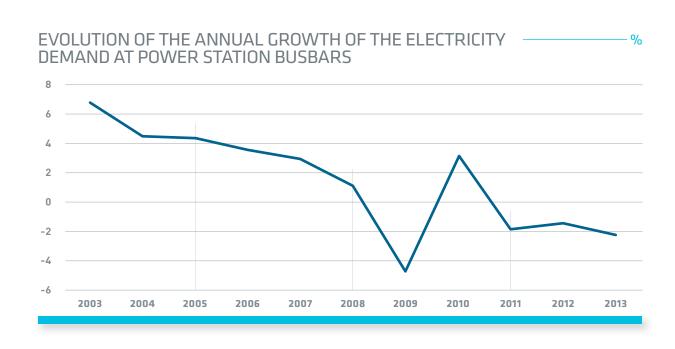
Load curves for the days of maximum average hourly demand Maximum average hourly demand and daily energy

29

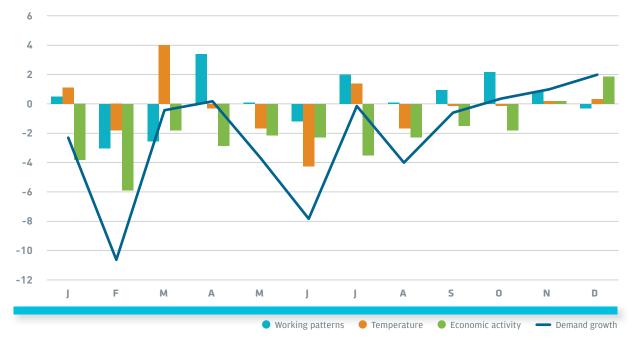
Maximum instantaneous power



- %



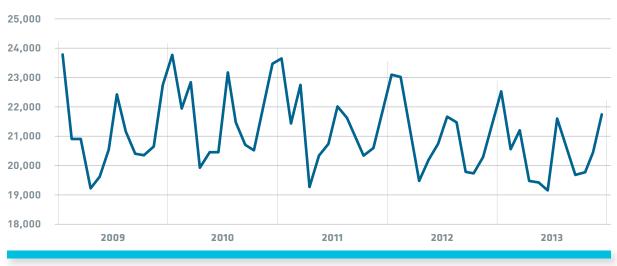
COMPONENTS OF THE MONTHLY GROWTH IN DEMAND



MONTHLY DISTRIBUTION OF THE ELECTRICITY DEMAND AT POWER STATION BUSBARS

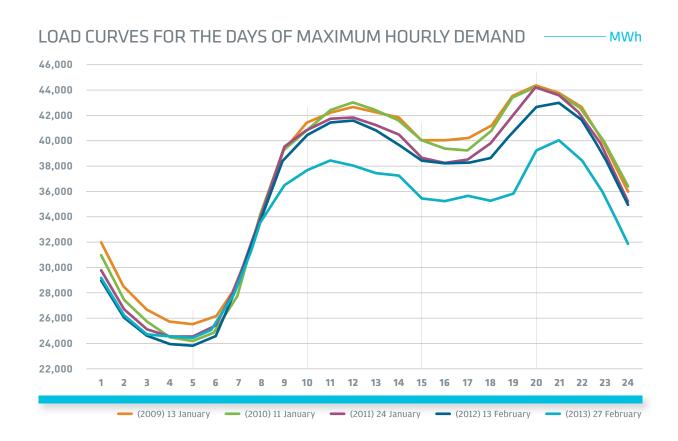
		2009		2010		2011		2012		2013
	GWh	%								
January	23,771	9.4	23,751	9.1	23,668	9.3	23,108	9.2	22,553	9.2
February	20,885	8.3	21,911	8.4	21,415	8.4	22,990	9.1	20,549	8.3
March	20,926	8.3	22,816	8.8	22,737	8.9	21,331	8.5	21,222	8.6
April	19,228	7.6	19,935	7.7	19,255	7.5	19,477	7.7	19,498	7.9
Мау	19,642	7.8	20,423	7.8	20,347	8.0	20,191	8.0	19,447	7.9
June	20,540	8.1	20,439	7.8	20,743	8.1	20,752	8.2	19,144	7.8
July	22,425	8.9	23,145	8.9	22,023	8.6	21,671	8.6	21,638	8.8
August	21,149	8.4	21,456	8.2	21,592	8.4	21,448	8.5	20,608	8.4
September	20,401	8.1	20,702	7.9	21,021	8.2	19,799	7.9	19,680	8.0
October	20,325	8.0	20,499	7.9	20,339	8.0	19,717	7.8	19,772	8.0
November	20,644	8.2	22,012	8.4	20,615	8.1	20,270	8.0	20,462	8.3
December	22,725	9.0	23,444	9.0	21,877	8.6	21,328	8.5	21,741	8.8
Total	252,660	100.0	260,530	100.0	255,631	100.0	252,083	100.0	246,313	100.0

MONTHLY EVOLUTION OF THE ELECTRICITY DEMAND AT POWER STATION BUSBARS



GWh

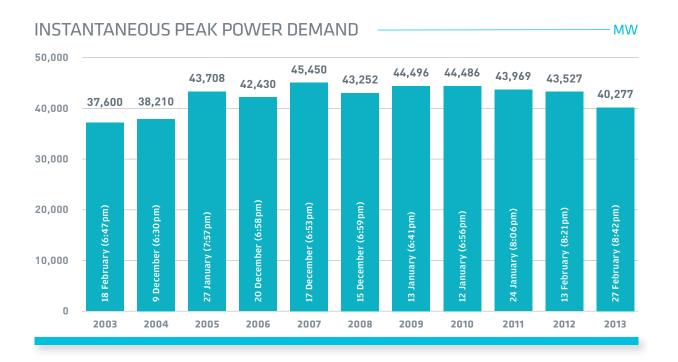




MAXIMUM HOURLY AND DAILY ELECTRICITY DEMAND







02

DEMAND COVERAGE PENINSULAR SYSTEM

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Average hourly demand coverage 32 for peak periods Annual evolution of installed capacity Annual evolution of electricity 33

demand coverage

Demand coverage structure at power station busbars

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Monthly evolution of electricity demand coverage



Monotone load curve

COVERAGE OF MAXIMUM HOURLY D	DEMAND				—— MWh
	2009 13 JANUARY 7-8 PM	2010 11 JANUARY 7-8 PM	2011 24 JANUARY 7-8 PM	2012 13 FEBRUARY 8-9 PM	2013 27 FEBRUARY 8-9 PM
Conventional and mixed Hydro	4,306	6,946	8,469	3,435	5,988
Pumped storage	1,641	1,566	1,264	1,537	876
Hydro	5,947	8,512	9,733	4,972	6,864
Nuclear	7,344	5,410	6,486	7,463	7,096
Coal	7,633	5,021	2,878	7,789	8,037
Fuel / gas	264	389	0	0	0
Combined cycle	17,038	16,284	11,636	10,381	3,786
Thermal	32,279	27,104	21,000	25,633	18,918
Total scheduled production	38,226	35,616	30,733	30,604	25,782
Ordinary regime	38,226	35,616	30,733	30,604	25,782
Special regime	7,809	10,010	14,041	15,116	15,273
Peninsula-Balearic Islands link	-	-	-	-	-102
Andorra	-59	-23	-59	-30	-23
France	-400	-500	-300	-1,000	-1,000
Portugal	-435	-381	442	-930	813
Morrocco	-700	-600	-750	-750	-780
International physical energy exchange balance (*)	-1,594	-1,504	-667	-2,710	-990
Demand at power station busbars	44,440	44,122	44,107	43,010	39,963

(*) Positive value: import balance; Negative value: export balance.

ANNUAL EVOLUTION OF INSTALLED CAPACITY

- MW

		INSTALLE			
	2009	2010	2011	2012	2013
Conventional and mixed Hydro	14,808	14,817	14,824	15,039	15,038
Pumped storage	2,747	2,747	2,747	2,747	2,747
Hydro	17,554	17,564	17,571	17,785	17,785
Nuclear	7,729	7,790	7,866	7,866	7,866
Coal (1)	11,387	11,408	11,648	11,114	11,131
Fuel / gas	3,008	2,282	833	520	520
Combined cycle	23,114	25,284	25,318	25,353	25,353
Ordinary regime	62,793	64,328	63,236	62,638	62,655
Hydro	2,022	2,036	2,042	2,042	2,102
Wind	18,723	19,569	21,026	22,617	22,854
Solar photovoltaic	3,250	3,654	4,057	4,320	4,422
Solar thermoelectric	232	532	999	1,950	2,300
Renewable thermal	741	780	884	970	975
Non-renewable thermal	7,001	7,124	7,200	7,160	7,089
Special regime (2)	31,969	33,694	36,207	39,058	39,741
Total	94,761	98,022	99,443	101,696	102,395

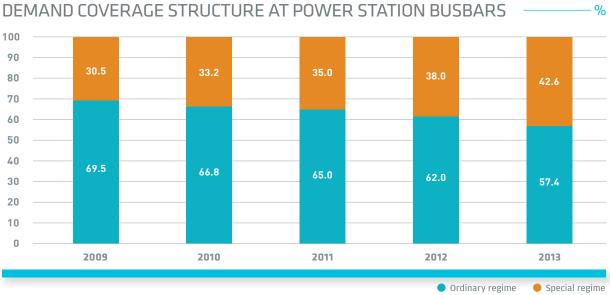
As of 1 January2011 GICC (Elcogas) in included in national coal as according to RD 134/2010 this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the resolution process of restrictions for guaranteeing supply.
 Provisional data. Source: Comisión Nacional de Energia (CNE) - Spanish National Energy Commission.

02

ANNUAL EVOLUTION OF ELECTRICITY DEMAND COVERAGE

	2009	2010	2011	2012	2013	%13/12
Hydro	23,862	38,653	27,571	19,455	33,970	74.6
Nuclear	52,761	61,990	57,731	61,470	56,827	-7.6
Coal (1)	33,862	22,097	43,488	54,721	39,807	-27.3
Fuel / gas	2,082	1,825	0	0	0	-
Combined cycle	78,279	64,604	50,734	38,593	25,091	-35.0
Ordinary regime	190,846	189,169	179,525	174,239	155,695	-10.6
Generation consumption	-7,117	-6,673	-7,247	-7,661	-6,270	-18.2
Hydro	5,454	6,824	5,294	4,645	7,099	52.8
Wind	37,889	43,208	42,105	48,140	54,338	12.9
Solar photovoltaic	5,829	6,140	7,092	7,830	7,915	1.1
Solar thermoelectric	130	692	1,832	3,444	4,442	29.0
Renewable thermal	3,044	3,172	4,285	4,746	5,064	6.7
Non-renewable thermal	28,466	30,789	32,051	33,493	31,989	-4.5
Special regime	80,811	90,825	92,660	102,298	110,846	8.4
Net generation	264,540	273,321	264,937	268,875	260,271	-3.2
Pumped storage consumption	-3,794	-4,458	-3,215	-5,023	-5,958	18.6
Pumped storage consumption (2) (3)	-	-	-0.5	-570	-1,269	-
International exchanges (3)	-8,086	-8,333	-6,090	-11,200	-6,732	-39.9
Demand at power station busbars	252,660	260,530	255,631	252,083	246,313	-2.3

(1) As of 1 January 2011 GICC (Elcogas) in included in national coal as according to RD 134/2010 this power station is obliged to participate, as a selling unit that uses local coal as fuel, in the resolution process of restrictions for guaranteeing supply.
 (2) Peninsula-Balearic Islands link working at minimum technical level until 13 August 2012.
 (3) Positive value: import balance; Negative value: export balance.



DEMAND COVERAGE STRUCTURE AT POWER STATION BUSBARS

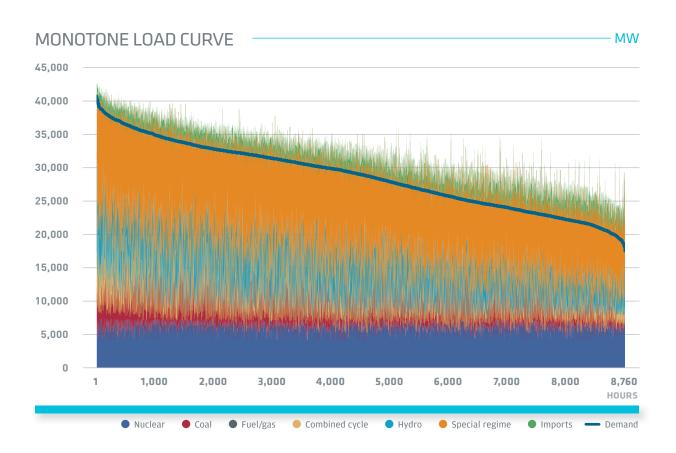
33

GWh

	ELEUIRI	ICITY DE	EMAND	LUVERA	46E —		— GW
	JAN	FEB	MAR	APR	MAY	JUN	
Hydro	2,752	3,243	4,281	4,964	3,322	2,794	
Nuclear	4,804	4,622	5,436	4,655	4,172	4,517	
Coal	3,073	2,585	1,352	983	2,046	2,662	
Fuel / gas	0	0	0	0	0	0	
Combined cycle	2,683	2,017	1,548	1,166	1,683	1,419	
Ordinary regime	13,312	12,467	12,618	11,768	11,223	11,392	
Generation consumption	-516	-460	-412	-370	-408	-455	
Hydro	667	688	842	845	780	659	
Wind	6,292	5,341	5,749	4,397	3,932	3,827	
Solar photovoltaic	419	501	531	725	833	886	
Solar thermoelectric	113	204	125	301	499	647	
Renewable thermal	436	415	453	421	438	392	
Non-renewable thermal	3,001	2,690	2,882	2,783	2,818	2,651	
Special regime	10,928	9,838	10,583	9,473	9,300	9,063	
Net generation	23,724	21,845	22,789	20,871	20,116	20,000	
Pumped storage consumption	-698	-563	-1,052	-873	-453	-385	
Peninsula-Balearic Islands link (1) (2)	-109	-91	-84	-88	-84	-113	
International exchanges (2)	-364	-642	-430	-411	-132	-359	
Demand at power station busbars	22,553	20,549	21,222	19,498	19,447	19,144	(CONTINUES
	JUL	AUG	SEP	ост	NOV	DEC	тот
Hydro							
Hydro	2,388	1,926	1,684	1,760	2,554	2,302	33,9
Nuclear	2,388 5,383	1,926 5,276	1,684 4,975	1,760 4,557	2,554 4,257	2,302 4,173	33,9 56,8
Nuclear Coal	2,388	1,926	1,684	1,760	2,554	2,302	33,9 56,8
Nuclear Coal Fuel / gas	2,388 5,383 5,584 0	1,926 5,276 4,675 0	1,684 4,975 4,856 0	1,760 4,557 4,310 0	2,554 4,257 2,690 0	2,302 4,173 4,990 0	33,9 56,8 39,8
Nuclear Coal Fuel / gas Combined cycle	2,388 5,383 5,584 0 2,277	1,926 5,276 4,675 0 2,428	1,684 4,975 4,856 0 2,294	1,760 4,557 4,310 0 2,617	2,554 4,257 2,690 0 2,104	2,302 4,173 4,990 0 2,854	33,9 56,8 39,8 25,0
Nuclear Coal Fuel / gas Combined cycle Ordinary regime	2,388 5,383 5,584 0 2,277 15,632	1,926 5,276 4,675 0 2,428 14,305	1,684 4,975 4,856 0 2,294 13,809	1,760 4,557 4,310 0 2,617 13,244	2,554 4,257 2,690 0 2,104 11,605	2,302 4,173 4,990 0 2,854 14,319	33,9 56,8 39,8 25,0 155,6
Nuclear Coal Fuel / gas Combined cycle Ordinary regime Generation consumption	2,388 5,383 5,584 0 2,277	1,926 5,276 4,675 0 2,428	1,684 4,975 4,856 0 2,294	1,760 4,557 4,310 0 2,617	2,554 4,257 2,690 0 2,104 11,605 -466	2,302 4,173 4,990 0 2,854	33,9' 56,8' 39,8' 25,0' 155,6' -6,2'
Nuclear Coal Fuel / gas Combined cycle Ordinary regime	2,388 5,383 5,584 0 2,277 15,632 -688 535	1,926 5,276 4,675 0 2,428 14,305 -637 403	1,684 4,975 4,856 0 2,294 13,809 -633 303	1,760 4,557 4,310 0 2,617 13,244 -596 343	2,554 4,257 2,690 0 2,104 11,605 -466 523	2,302 4,173 4,990 0 2,854 14,319 -628 511	33,9' 56,8 39,8' 25,0' 155,6' -6,2 7,0'
Nuclear Coal Fuel / gas Combined cycle Ordinary regime Generation consumption Hydro	2,388 5,383 5,584 0 2,277 15,632 -688 535 2,844	1,926 5,276 4,675 0 2,428 14,305 -637	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214	1,760 4,557 4,310 0 2,617 13,244 -596 343 3,964	2,554 4,257 2,690 0 2,104 11,605 -466 523 6,424	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943	33,9 56,8 39,8 25,0 155,6 -6,2 7,0 54,3
NuclearCoalFuel / gasCombined cycleOrdinary regimeGeneration consumptionHydroWindSolar photovoltaic	2,388 5,383 5,584 0 2,277 15,632 -688 535	1,926 5,276 4,675 0 2,428 14,305 -637 403 3,411 857	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214 724	1,760 4,557 4,310 0 2,617 13,244 -596 343	2,554 4,257 2,690 0 2,104 11,605 -466 523	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943 417	33,9' 56,8. 39,8' 25,0' 155,6' -6,2' 7,0' 54,3. 7,9
Nuclear Coal Fuel / gas Combined cycle Drdinary regime Generation consumption Hydro Wind	2,388 5,383 5,584 0 2,277 15,632 -688 535 2,844 930 759	1,926 5,276 4,675 0 2,428 14,305 -637 403 3,411 857 662	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214 724 479	1,760 4,557 4,310 0 2,617 13,244 -596 343 3,964 603 294	2,554 4,257 2,690 0 2,104 11,605 -466 523 6,424 489	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943 417 158	33,9' 56,8 39,8' 25,0' 155,6' -6,2' 7,0' 54,3' 7,9' 4,4'
Nuclear Coal Fuel / gas Combined cycle Ordinary regime Generation consumption Hydro Wind Solar photovoltaic Solar thermoelectric	2,388 5,383 5,584 0 2,277 15,632 -688 535 2,844 930 759 432	1,926 5,276 4,675 0 2,428 14,305 -637 403 3,411 857 662 417	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214 724 479 398	1,760 4,557 4,310 0 2,617 13,244 -596 343 3,964 603 294 404	2,554 4,257 2,690 0 2,104 11,605 -466 523 6,424 489 199 413	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943 417 158 444	33,9 56,8 39,8 25,0 155,6 -6,2 7,0 54,3 7,9 4,4 5,0
NuclearCoalFuel / gasCombined cycleOrdinary regimeGeneration consumptionHydroWindSolar photovoltaicSolar thermoelectricRenewable thermalNon-renewable thermal	2,388 5,383 5,584 0 2,277 15,632 -688 535 2,844 930 759 432 2,657	1,926 5,276 4,675 0 2,428 14,305 -637 403 3,411 857 662 417 2,097	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214 724 479 398 2,532	1,760 4,557 4,310 0 2,617 13,244 -596 343 3,964 603 294 404 2,609	2,554 4,257 2,690 0 2,104 11,605 -466 523 6,424 489 199 413 2,602	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943 417 158 444 2,666	33,9' 56,8 39,8' 25,0' 155,6' -6,2 7,0' 54,3: 7,9' 4,4 5,0' 31,9'
NuclearCoalFuel / gasCombined cycleOrdinary regimeGeneration consumptionHydroWindSolar photovoltaicSolar thermoelectricRenewable thermalNon-renewable thermalSpecial regime	2,388 5,383 5,584 0 2,277 15,632 -688 535 2,844 930 759 432 2,657 8,156	1,926 5,276 4,675 0 2,428 14,305 -637 403 3,411 857 662 417 2,097 7,847	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214 724 479 398 2,532 7,651	1,760 4,557 4,310 0 2,617 13,244 -596 343 3,964 603 294 404 2,609 8,217	2,554 4,257 2,690 0 2,104 11,605 -466 523 6,424 489 199 413 2,602 10,650	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943 417 158 444 2,666 9,140	33,9' 56,8 39,8' 25,0' 155,6' -6,2' 7,0' 54,3' 7,9' 4,4' 5,0' 31,9' 110,8'
NuclearCoalFuel / gasCombined cycleOrdinary regimeGeneration consumptionHydroWindSolar photovoltaicSolar thermoelectricRenewable thermalNon-renewable thermalSpecial regimeNet generation	2,388 5,383 5,584 0 2,277 15,632 -688 535 2,844 930 759 432 2,657 8,156 23,100	1,926 5,276 4,675 0 2,428 14,305 -637 403 3,411 857 662 417 2,097 7,847 21,515	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214 724 479 398 2,532 7,651 20,827	1,760 4,557 4,310 0 2,617 13,244 -596 343 3,964 603 294 603 294 404 2,609 8,217 20,865	2,554 4,257 2,690 0 2,104 11,605 -466 523 6,424 489 199 413 2,602 10,650 21,789	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943 417 158 417 158 444 2,666 9,140 22,831	33,9 56,8 39,8 25,0 155,6 -6,2 7,0 54,3 7,9 4,4 5,0,3 31,9 110,8 260,2
NuclearCoalFuel / gasCombined cycleOrdinary regimeGeneration consumptionHydroWindSolar photovoltaicSolar thermoelectricRenewable thermalNon-renewable thermalSpecial regimeNet generationPumped storage consumption	2,388 5,383 5,584 0 2,277 15,632 -688 535 2,844 930 759 432 2,657 8,156 23,100 -257	1,926 5,276 4,675 0 2,428 14,305 -637 403 3,411 857 662 417 2,097 7,847 21,515 -232	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214 724 479 398 2,532 7,651 20,827 -212	1,760 4,557 4,310 0 2,617 13,244 -596 343 3,964 603 294 404 2,609 8,217 20,865 -306	2,554 4,257 2,690 0 2,104 11,605 -466 523 6,424 489 199 413 2,602 10,650 21,789 -348	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943 417 158 444 2,666 9,140 22,831 -581	33,9' 56,8 39,8' 25,0' 155,6' -6,2' 7,0' 54,3' 7,9' 4,4' 5,0' 31,9' 110,8' 260,2' -5,9'
NuclearCoalFuel / gasCombined cycleOrdinary regimeGeneration consumptionHydroWindSolar photovoltaicSolar thermoelectricRenewable thermalNon-renewable thermalSpecial regimeNet generation	2,388 5,383 5,584 0 2,277 15,632 -688 535 2,844 930 759 432 2,657 8,156 23,100	1,926 5,276 4,675 0 2,428 14,305 -637 403 3,411 857 662 417 2,097 7,847 21,515	1,684 4,975 4,856 0 2,294 13,809 -633 303 3,214 724 479 398 2,532 7,651 20,827	1,760 4,557 4,310 0 2,617 13,244 -596 343 3,964 603 294 603 294 404 2,609 8,217 20,865	2,554 4,257 2,690 0 2,104 11,605 -466 523 6,424 489 199 413 2,602 10,650 21,789	2,302 4,173 4,990 0 2,854 14,319 -628 511 4,943 417 158 417 158 444 2,666 9,140 22,831	TOT 33,9' 56,8: 39,8! 25,0' 155,6' -6,2' 7,0' 54,3: 7,9' 4,44 5,0' 31,9' 110,8' 260,2' -5,9! -1,2' -6,7:

(1) Link working at minimum technical level until 13 August 2012. (2) Positive value: import balance; Negative value: export balance.





HE SPANISH ELECTRICITY SYSTEM **2013**

03

ORDINARY REGIME peninsular system

38	Power variations in generator equipment Hydroelectric production per basin
39	Daily producible hydroelectric energy during 2013 compared with the all-time average producible Monthly producible hydroelectric energy
40	Monthly evolution of hydroelectric reserves
	Extreme values of reserves
	Annual evolution of hydroelectric production at generator terminals

Annual evolution of producible 41 hydroelectric energy Installed power and hydroelectric reserves as at 31 December per drainage basin Evolution of the hydroelectric 42 reserves Evolution of the annual hvdroelectric reserves Evolution of the hyperannual hydroelectric reserves Production (at power station 43 busbars) of coal-fired stations Utilisation and availability of

coal-fired generating units 2012



45	Utilisation and availability of coal-fired generating units 2013
46	Production (at power station busbars) of coal-fired stations by type of fuel Utilisation and availability of fuel/gas fired generating units 2012 Utilisation and availability of fuel/gas fired generating units 2013
47	Production (at power station busbars) of combined-cycle stations
49	Utilisation and availability of combined-cycle generating units 2012
51	Utilisation and availability of combined-cycle generating units 2013

- Production (at power station busbars) of nuclear generating units
- Utilisation and availability of nuclear generating units 2012 Utilisation and availability of nuclear generating units 2013



53

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

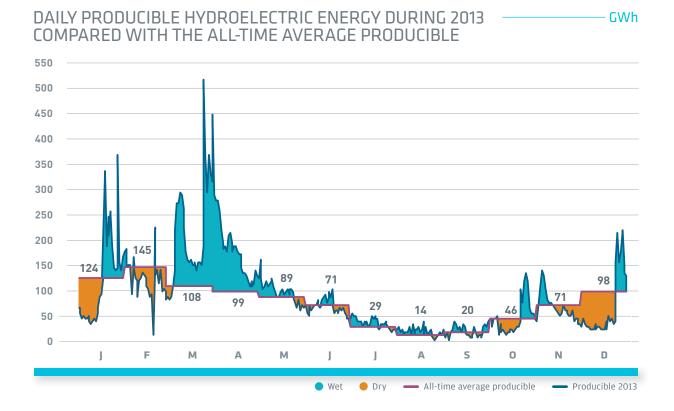
POWER VARIATIONS IN GENERATOR EQUIPMENT

POWER STATION	ТҮРЕ	DATE	POWER (MW)
Meirama	Coal	February-13	17.5
Las Picadas 1	Hydroelectric	April-13	2.3
Total commissioned			19.8
Castrelo 2	Hydroelectric	May-13	1.0
San Esteban II	Hydroelectric	February-13	1.7
Total decommissioned			2.7
Balance			17.0

HYDROELECTRIC PRODUCTION PER BASIN

	POWER		PRODUCT	'ION (GWh)	PRODUCIBLE (GWh)			
BASIN	MW	2012	2013	%13/12	2012	2013	%13/12	
Norte	4,879	5,878	11,669	98.5	4,798	11,298	135.5	
Duero	3,887	5,098	7,531	47.7	2,500	7,968	218.7	
Tajo-Júcar-Segura	4,343	2,728	5,034	84.5	934	4,280	358.1	
Guadiana	226	184	273	48.5	58	378	549.6	
Guadalquivir-Sur	1,025	773	1,224	58.3	367	889	142.4	
Ebro-Pirineo	3,425	4,793	8,239	71.9	4,065	7,818	92.3	
Total	17,785	19,455	33,970	74.6	12,722	32,631	156.5	





MONTHLY PRODUCIBLE HYDROELECTRIC ENERGY

				2012				2013		
		GWh		INDEX	INDEX GWh			INDEX		
	MONTHLY	CUMULAT,	MONTHLY	CUMULAT,	MONTHLY	CUMULAT,	MONTHLY	CUMULAT,		
January	852	852	0.22	0.22	3,828	3,828	0.99	0.99		
February	671	1,523	0.16	0.19	3,480	7,309	0.86	0.92		
March	634	2,157	0.19	0.19	6,538	13,847	1.96	1.23		
April	1,608	3,765	0.54	0.26	5,608	19,454	1.89	1.37		
Мау	2,419	6,184	0.87	0.36	3,074	22,528	1.11	1.33		
June	884	7,069	0.41	0.37	2,094	24,622	0.98	1.29		
July	336	7,404	0.37	0.37	1,165	25,787	1.28	1.29		
August	176	7,581	0.40	0.37	628	26,414	1.43	1.29		
September	585	8,165	0.98	0.39	649	27,063	1.09	1.28		
October	651	8,816	0.46	0.39	1,464	28,527	1.03	1.27		
November	1,531	10,347	0.72	0.42	2,014	30,541	0.95	1.24		
December	2,375	12,722	0.78	0.46	2,089	32,631	0.69	1.18		

-GWh

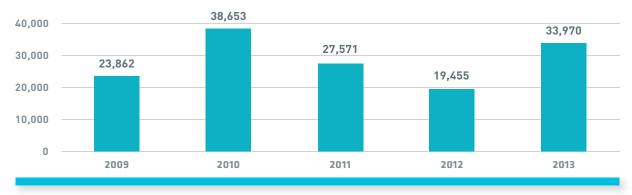
						2012						2013
	AN	NUAL	HIPERAN	NUAL	OVE	RALL	AN	NUAL	HIPERANI	NUAL	OVE	RALL
	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%	GWh	%
January	3,696	41	5,562	58	9,258	50	4,918	55	4,113	43	9,032	49
February	3,847	43	5,327	56	9,174	49	5,132	57	4,584	48	9,716	52
March	3,718	41	5,104	53	8,822	48	6,911	77	6,262	65	13,173	71
April	4,278	48	5,150	54	9,428	51	7,115	79	7,305	76	14,421	78
Мау	5,187	58	5,114	53	10,301	56	7,027	78	7,512	78	14,539	78
June	4,803	54	4,714	49	9,516	51	6,745	75	7,432	78	14,178	76
July	4,067	45	4,314	45	8,381	45	6,055	68	7,000	73	13,056	70
August	3,335	37	3,977	42	7,312	39	5,234	58	6,511	68	11,746	63
September	2,827	32	3,838	40	6,666	36	4,430	49	6,231	65	10,662	58
October	2,841	32	3,608	38	6,449	35	4,360	49	6,247	65	10,607	57
November	3,108	35	3,438	36	6,546	35	4,394	49	5,960	62	10,354	56
December	3,672	41	3,407	36	7,079	38	4,658	52	6,009	63	10,667	58

MONTHLY EVOLUTION OF HYDROELECTRIC RESERVES

EXTREME VALUES OF RESERVES

				2013	ALL-TI	ME HIGHS
		GWh	DATE	%	DATE	%
Maximum	Annual	7,159	12 May	79.8	May 1969	92.0
	Hiperannual	7,551	3 June	78.9	April 1979	91.1
	Overall	14,600	19 May	78.8	April 1979	86.6
Minimum	Annual	3,584	11 January	40.0	January 1976	24.9
	Hiperannual	3,408	9 February	35.6	November 1983	17.6
	Overall	7,003	11 January	37.8	October 1995	23.6

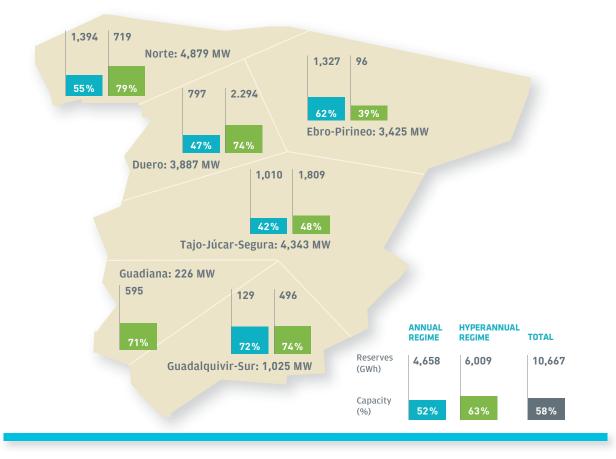
ANNUAL EVOLUTION OF HYDROELECTRIC PRODUCTION AT GENERATOR TERMINALS



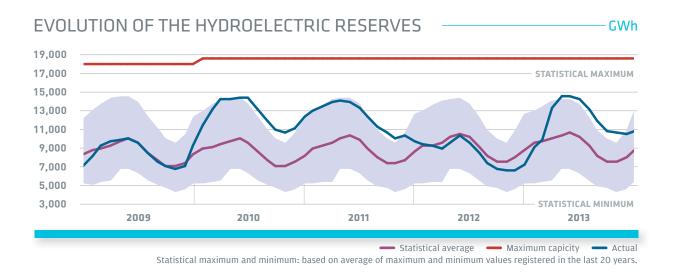
ANNUAL EVOLUTION OF PRODUCIBLE HYDROELECTRIC ENERGY

YEAR	GWh	INDICE	PROBABILITY OF BEING EXCEEDED
2009	22,262	0.79	76%
2010	36,174	1.29	16%
2011	22,506	0.81	74%
2012	12,722	0.46	100%
2013	32,631	1.18	25%

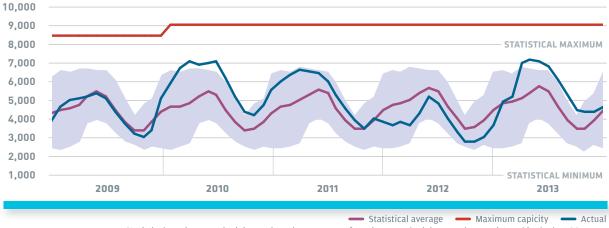
INSTALLED CAPACITY AND HYDROELECTRIC RESERVES AS AT 31 DECEMBER PER DRAINAGE BASIN







EVOLUTION OF THE ANNUAL HYDROELECTRIC RESERVES _____ GWh



Statistical maximum and minimum: based on average of maximum and minimum values registered in the last 20 years.

EVOLUTION OF THE HYPERANNUAL HYDROELECTRIC RESERVES ----- GWh



Statistical maximum and minimum: based on average of maximum and minimum values registered in the last 20 years.

PRODUCTION (AT POWER STATION BUSBARS) OF COAL-FIRED STATIONS

	POWER		2012		2013	
POWER STATIONS	MW	GWh	%	GWh	%	% 13/12
Aboño	916	5,591	10.2	5,748	14.4	2.8
Anllares	365	1,689	3.1	863	2.2	-48.9
Cercs (1)	-	0	0.0	-	-	-
Compostilla II	1,200	5,355	9.8	2,560	6.4	-52.2
Escucha (2)	159	439	0.8	0	0.0	-
GICC-PL ELCOGAS	320	1,401	2.6	899	2.3	-35.8
Guardo	516	1,792	3.3	1,105	2.8	-38.3
La Robla	655	2,360	4.3	1,689	4.2	-28.4
Lada (3)	358	1,892	3.5	1,432	3.6	-24.3
Litoral de Almería	1,159	6,846	12.5	6,148	15.4	-10.2
Los Barrios	589	3,556	6.5	2,924	7.3	-17.8
Meirama	580	2,900	5.3	2,529	6.4	-12.8
Narcea	595	1,725	3.2	899	2.3	-47.9
Pasajes (4)	-	1,027	1.9	-	-	-
Puentenuevo 3	324	1,127	2.1	703	1.8	-37.6
Puentes García Rodríguez	1,468	9,927	18.1	7,356	18.5	-25.9
Puertollano	221	603	1.1	30	0.1	-95.0
Soto de la Ribera	604	1,628	3.0	1,145	2.9	-29.6
Teruel	1,102	4,864	8.9	3,777	9.5	-22.3
Total	11,131	54,721	100.0	39,807	100.0	-27.3

(1) Decommissioned in June 2012.
 (2) Inactive since July 2013.
 (3) Generating unit Lada 3 decommissioned in December 2012.
 (4) Decommissioned in December 2012.

UTILISATION AND AVAILABILITY OF COAL-FIRED GENERATING UNITS 2012

				UTILISAT	ION COEFFICIENT (%)	NON-A	/AILABILITY (%)	
GENERATING UNITS	POWER MW		HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Aboño 1	360	2,138	7,053	70.2	84.2	0.0	3.7	96.3
Aboño 2	556	3,453	7,362	84.5	84.4	13.7	2.6	83.6
Anllares	365	1,689	4,945	52.7	93.6	0.0	0.0	100.0
Cercs (3)	-	0	0	0.0	0.0	0.0	99.6	0.4
Compostilla 2	148	380	2,998	31.6	85.7	0.0	7.5	92.5
Compostilla 3	337	1,514	5,003	54.8	89.7	0.0	6.6	93.4
Compostilla 4	359	1,579	4,980	53.2	88.4	0.5	5.3	94.2
Compostilla 5	356	1,882	5,838	61.5	90.6	0.0	2.1	97.9
Escucha (4)	159	439	3,908	43.8	70.5	0.0	28.4	71.6
GICC-PL ELCOGAS	320	1,401	6,096	75.1	71.8	2.2	31.4	66.4
Guardo 1	155	178	1,468	14.7	78.2	8.9	2.0	89.0
Guardo 2	361	1,614	4,872	60.6	91.8	14.4	1.6	84.0
La Robla 1	284	573	2,321	23.6	87.0	0.0	2.6	97.4
La Robla 2	371	1,786	5,455	56.9	88.3	0.0	3.7	96.3
Lada 3 (5)	-	0	0	0.0	0.0	0.0	1.8	98.2
Lada 4	358	1,892	6,468	64.2	81.7	1.8	4.4	93.8
Litoral de Almería 1	577	3,344	7,350	73.5	78.9	0.0	10.3	89.7
Litoral de Almería 2	582	3,502	7,816	72.0	77.0	3.0	1.9	95.1
Los Barrios	589	3,556	7,494	80.6	80.6	0.0	14.7	85.3
Meirama	563	2,900	6,845	60.7	75.3	2.2	1.1	96.7
Narcea 1	65	0	0	0.0	0.0	0.0	0.0	100.0
Narcea 2	166	77	570	5.2	80.8	0.0	0.0	100.0
Narcea 3	364	1,649	5,000	53.0	90.6	1.1	1.6	97.3
Pasajes (6)	-	1,027	6,361	57.5	74.4	0.0	6.3	93.7
Puentenuevo 3	324	1,127	3,770	44.6	92.4	3.6	7.6	88.8
Puentes 1	369	2,410	7,756	76.8	84.2	1.5	1.7	96.8
Puentes 2	366	2,683	8,473	83.4	86.4	0.0	0.1	99.9
Puentes 3	366	2,250	7,176	78.6	85.7	9.5	1.6	89.0
Puentes 4	367	2,584	8,389	80.2	83.9	0.0	0.0	100.0
Puertollano	221	603	3,407	34.3	80.1	5.7	3.8	90.5
Soto de la Ribera 2	254	509	2,548	23.7	78.6	3.8	0.0	96.2
Soto de la Ribera 3	350	1,119	3,596	37.4	88.9	0.0	2.6	97.4
Teruel 1	368	1,467	4,580	47.5	87.0	0.0	4.5	95.5
Teruel 2	368	1,910	5,921	60.7	87.7	0.0	2.7	97.3
Teruel 3	366	1,487	4,680	53.9	86.8	13.3	1.0	85.7
Total	11,114	54,721	5,766	61.0	85.4	2.7	5.3	91.9

This is the coefficient between the actual production and the available production or maximum production that the power station can reach operating at nominal power during the hours it is available.
 This is the coefficient between the actual production and the total that the power station could have reached operating at nominal power in the set of hours in which it has been connected to the grid (producing).
 Unit with permanent unavailability of 99.6% due to scheduled downtime. Inactive since 22/12/2011.
 Unit with permanent unavailability of 0.005% due to long-term downtime.
 Unit with permanent unavailability of 1.8% due to decommissioned in December 2012.
 Unit with 3.7% unavailability of 2.6% due to decommissioning of unit. Inactive since 5/12/2012. Decommissioned in December 2012.

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				UTILISAT	ION COEFFICIENT (%)	NON-A	/AILABILITY (%)	
GENERATING UNITS	POWER MW		HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Aboño 1	360	1,966	6,751	64.0	80.9	0.0	2.6	97.4
Aboño 2	556	3,782	8,240	81.0	82.6	0.0	4.1	95.9
Anllares	365	863	2,599	28.0	90.9	3.4	0.3	96.3
Compostilla 2	148	129	1,054	11.0	82.6	8.6	1.3	90.1
Compostilla 3	337	646	2,193	22.5	87.3	0.0	3.1	96.9
Compostilla 4	359	849	2,708	32.0	87.5	12.8	2.7	84.6
Compostilla 5	356	936	2,883	30.5	91.2	0.0	1.4	98.6
Escucha (3)	159	0	0	0.0	0.0	0.0	100.0	0.0
GICC-PL ELCOGAS	320	899	3,626	38.8	77.5	0.0	17.4	82.6
Guardo 1	155	83	580	6.2	92.6	0.0	0.5	99.5
Guardo 2	361	1,022	3,116	32.6	90.9	0.0	0.7	99.3
La Robla 1	284	520	2,044	21.0	89.6	0.0	0.7	99.3
La Robla 2	371	1,169	3,547	36.8	88.8	0.0	2.2	97.8
Lada 4	358	1,432	4,849	53.8	82.5	14.0	1.2	84.9
Litoral de Almería 1	577	3,073	7,152	71.8	74.5	12.5	2.9	84.6
Litoral de Almería 2	582	3,076	6,831	61.7	77.4	0.0	2.3	97.7
Los Barrios	589	2,924	6,714	72.0	73.9	12.0	9.3	78.7
Meirama	580	2,529	5,756	50.5	75.7	0.0	1.5	98.5
Narcea 1	65	0	0	0.0	0.0	0.0	0.0	100.0
Narcea 2	166	120	867	8.2	83.0	0.0	0.2	99.8
Narcea 3	364	779	2,377	24.8	90.0	0.0	1.5	98.5
Puentenuevo 3	324	703	2,328	27.2	93.3	4.4	4.4	91.2
Puentes 1	369	2,019	6,578	69.5	83.2	9.4	0.7	89.9
Puentes 2	366	1,547	5,007	55.2	84.3	12.2	0.4	87.3
Puentes 3	366	1,922	6,161	61.4	85.2	0.0	2.4	97.6
Puentes 4	367	1,868	6,009	58.2	84.7	0.0	0.2	99.8
Puertollano (4)	221	30	162	3.0	84.0	39.5	9.1	51.4
Soto de la Ribera 2	254	443	2,192	19.9	79.5	0.0	0.2	99.8
Soto de la Ribera 3	350	703	2,190	23.2	91.7	0.0	1.1	98.9
Teruel 1	368	851	2,690	29.3	86.0	9.0	1.0	90.0
Teruel 2	368	1,415	4,406	44.5	87.2	0.0	1.5	98.5
Teruel 3	366	1,512	4,655	47.3	88.7	0.0	0.3	99.7
Total	11,131	39,807	4,350	44.5	82.2	4.3	4.0	91.7

UTILISATION AND AVAILABILITY OF COAL-FIRED GENERATING UNITS 2013

(1) This is the coefficient between the actual production and the available production or maximum production that the power station can reach operating at nominal power during the hours it is available. (2) This is the coefficient between the actual production and the total that the power station could have reached operating at nominal power in the set of hours in which it has been connected to the grid (producing). (3) Unit with permanent unavailability of 100% due to long-term downtime. Inactive since 10/07/2013. (4) Unit not available 0.1% due to fault and with permanent unavailability of 9.1% due to long-term scheduled downtime since 29/11/2013. Inactive since 29/11/2013.

PRODUCTION (AT POWER STATION BUSBARS) OF COAL-FIRED STATIONS BY TYPE OF FUEL

		2012		2013	
	GWh	%	GWh	%	%13/12
Domestic Coal	17,841	32.6	9,871	24.8	-44.7
Bituminous + Anthracite	15,099	27.6	7,823	19.7	-48.2
Black lignite	2,742	5.0	2,048	5.1	-25.3
Imported coal	34,775	63.5	27,605	69.3	-20.6
Total coal	52,616	96.2	37,476	94.1	-28.8
Support fuels	2,105	3.8	2,331	5.9	10.8
Fuel-gasoil	329	0.6	243	0.6	-26.0
Natural gas	1,019	1.9	945	2.4	-7.3
Syngas	756	1.4	1,142	2.9	51.1
Total	54,721	100.0	39,807	100.0	-27.3

UTILISATION AND AVAILABILITY OF FUEL/GAS FIRED GENERATING UNITS 2012

			UTILISAT	ION COEFFICIENT (%)	NON-A			
GENERATING UNITS	POWER MW	PRODUCTION GWh	HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Aceca 1 (3)	-	0	0	-	-	0.0	3.3	96.7
Foix	520	0	0	0.0	-	0.0	0.0	100.0
Total	520	0	0	0.0	-	0.0	1.2	98.8

(1) Es el cociente entre la producción real y la producción disponible o máxima producción que podría alcanzar la central funcionando a la potencia nominal durante las horas en la que está disponible.
 (2) Es el cociente entre la producción real y la producción total que hubiese podido alcanzar la central funcionando a potencia nominal en el conjunto de horas en las que ha estado acoplada (produciendo).
 (3) Grupo con indisponibilidad permanente del 3,3% por cierre del grupo. Inactivo desde 14/12/2012. Baja en diciembre 2012.

UTILISATION AND AVAILABILITY OF FUEL/GAS FIRED GENERATING UNITS 2013

			UTILISAT	ION COEFFICIENT (%)	NON-A			
GENERATING UNITS	POWER MW	PRODUCTION GWh	HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Foix	520	0	0	0.0	-	0.0	0.0	100.0
Total	520	0	0	0.0	-	0.0	0.0	100.0

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

PRODUCTION (AT POWER STATION BUSBARS) OF COMBINED-CYCLE STATIONS

	POWER		2012		2013	
POWER STATIONS	MW	GWh	%	GWh	%	% 13/12
Aceca 3	392	457	1.2	189	0.8	-58.6
Aceca 4	379	2,168	5.6	954	3.8	-56.0
Algeciras 3 CC	831	518	1.3	0.2	0.0	-
Amorebieta	795	849	2.2	169	0.7	-80.1
Arcos 1	396	0	0.0	0	0.0	-
Arcos 2	379	1	0.0	15	0.1	-
Arcos 3	844	175	0.5	102	0.4	-41.7
Arrúbal 1	402	672	1.7	228	0.9	-66.0
Arrúbal 2	397	670	1.7	177	0.7	-73.5
Bahía de Bizkaia	800	3,349	8.7	3,032	12.1	-9.5
Besós 3	419	326	0.8	162	0.6	-50.4
Besós 4	407	1,941	5.0	2,186	8.7	12.6
Besós 5	873	1,466	3.8	702	2.8	-52.1
Campo Gibraltar 1	393	1,164	3.0	209	0.8	-82.1
Campo Gibraltar 2	388	1,510	3.9	207	0.8	-86.3
Cartagena 1	425	1,201	3.1	794	3.2	-33.9
Cartagena 2	425	904	2.3	582	2.3	-35.7
Cartagena 3	419	805	2.1	945	3.8	17.5
Castejón 1	429	335	0.9	243	1.0	-27.4
Castejón 2	381	7	0.0	0	0.0	-
Castejón 3	426	521	1.4	138	0.6	-73.5
Castellón 3	793	72	0.2	50	0.2	-30.1
Castellón 4	854	746	1.9	479	1.9	-35.8
Castelnou	798	51	0.1	90	0.4	76.2
Colón 4	398	386	1.0	165	0.7	-57.1
El Fangal 1	409	36	0.1	34	0.1	-6.9
El Fangal 2	408	111	0.3	19	0.1	-82.5
El Fangal 3	402	91	0.2	40	0.2	-55.5
Escatrón 3	818	907	2.4	3	0.0	-99.7
Escatrón Peaker	283	13	0.0	8	0.0	-42.3
Escombreras 6	831	36	0.1	0	0.0	-
Málaga 1 CC	421	2,089	5.4	1,713	6.8	-18.0
Palos 1	394	575	1.5	335	1.3	-41.8
Palos 2	396	686	1.8	440	1.8	-35.8
Palos 3	398	844	2.2	723	2.9	-14.3
Plana del Vent 1	426	1,091	2.8	258	1.0	-76.4
Plana del Vent 2	421	1,021	2.6	426	1.7	-58.3
Puentes García Rodríguez 5	870	452	1.2	258	1.0	-42.8
Puerto de Barcelona 1	447	732	1.9	1,244	5.0	70.0

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PRODUCTION (AT POWER STATION BUSBARS) OF COMBINED-CYCLE STATIONS

	POWER		2012		2013		
POWER STATIONS	MW	GWh	%	GWh	%	% 13/12	
Puerto de Barcelona 2	445	1,146	3.0	760	3.0	-33.7	
Sabón 3	397	891	2.3	950	3.8	6.6	
Sagunto 1	417	2,074	5.4	1,547	6.2	-25.4	
Sagunto 2	420	1,422	3.7	946	3.8	-33.5	
Sagunto 3	419	589	1.5	1,028	4.1	74.4	
San Roque 1	397	1,914	5.0	1,858	7.4	-3.0	
San Roque 2	402	139	0.4	223	0.9	60.0	
Santurce 4	403	50	0.1	1	0.0	-97.9	
Soto de la Ribera 4	432	629	1.6	236	0.9	-62.5	
Soto de la Ribera 5	434	173	0.4	81	0.3	-53.4	
Tarragona Endesa	400	57	0.1	0	0.0	-	
Tarragona Power	424	526	1.4	138	0.5	-73.8	
Total combined-cycle	25,353	38,593	100.0	25,091	100.0	-35.0	

UTILISATION AND AVAILABILITY OF COMBINED-CYCLE GENERATING UNITS 2012

GENERATING UNITSPOWER MVAceca 3392	GWh 2 457	HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC		AVAILABILITY
		1 0 2 2			REVISION	BREAKDOWNS	%
	2,168	1,023	14.1	64.1	3.1	2.8	94.1
Aceca 4 379		7,386	66.9	77.4	1.6	1.2	97.2
Algeciras 3 CC 83	518	1,439	7.5	43.3	4.8	0.8	94.4
Amorebieta 795	5 849	1,917	12.4	55.7	1.7	0.1	98.3
Arcos 1 396	5 0	0	0.0	0.0	7.8	1.3	90.9
Arcos 2 379	2 1	8	0.04	38.6	11.3	10.7	78.1
Arcos 3 844	i 175	649	2.8	31.9	1.1	13.7	85.2
Arrúbal 1 402	2 672	2,376	19.0	70.4	0.0	0.1	99.9
Arrúbal 2 392	670	2,391	19.4	70.6	0.0	0.7	99.3
Bahia Bizcaya 800	3,349	6,881	57.0	60.8	10.2	6.1	83.7
Besós 3 419	326	1,698	9.8	45.8	8.7	1.2	90.1
Besós 4 407	7 1,941	6,779	62.3	70.4	12.6	0.1	87.3
Besós 5 873	3 1,466	5,859	20.5	28.7	0.0	6.6	93.4
Campo de Gibraltar 1 393	3 1,164	3,793	38.0	78.2	9.0	2.2	88.8
Campo de Gibraltar 2 388	3 1,510	4,825	45.0	80.7	0.0	1.5	98.5
Cartagena 1 425	5 1,201	4,144	33.8	68.3	2.3	2.4	95.3
Cartagena 2 425	5 904	3,234	24.3	65.9	0.2	0.2	99.7
Cartagena 3 419	805	2,850	22.4	67.3	1.8	0.5	97.7
Castejón 1 429	335	1,391	9.9	56.1	10.0	0.7	89.3
Castejón 2 38	7	28	0.2	65.8	13.2	0.0	86.8
Castejón 3 426	5 521	2,173	14.2	56.3	0.0	2.1	97.9
Castellón 3 793	3 72	329	1.0	27.5	0.0	0.0	100.0
Castellón 4 854	746	2,517	17.4	34.7	37.7	5.1	57.2
Castelnou 798	3 51	255	0.7	25.1	0.0	0.9	99.1
Colón 4 398	386	1,861	11.1	52.1	0.0	0.4	99.6
El Fangal 1 409	36	158	1.0	56.4	0.0	2.7	97.3
El Fangal 2 408	3 111	417	3.1	65.2	0.0	1.6	98.4
El Fangal 3 402	2 91	351	2.6	64.5	0.0	0.7	99.3
Escatrón 3 818	907	2,488	14.4	44.6	4.5	7.6	88.0
Escatrón Peaker 283	3 13	328	0.6	14.5	1.2	0.4	98.4
Escombreras 6 83	36	157	0.6	27.8	12.2	2.1	85.7
Málaga 1 CC 42′	2,089	7,157	58.9	69.3	3.1	1.0	96.0
Palos 1 394	575	1,904	16.7	76.6	0.0	0.3	99.7
Palos 2 396	686	2,277	22.7	76.1	11.1	1.8	87.1
Palos 3 398	8 844	2,937	24.2	72.3	0.0	0.3	99.7
Plana del Vent 1 426	5 1,091	3,395	36.7	75.5	17.7	2.8	79.5
Plana del Vent 2 42	1,021	3,222	33.2	75.3	15.5	1.2	83.3

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UTILISATION AND AVAILABILITY OF COMBINED-CYCLE GENERATING UNITS 2012

				UTILISATION COEFFICIENT (%)		NON-A	VAILABILITY (%)	
GENERATING UNITS	POWER MW	PRODUCTION GWh	HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Puentes Gcía. Rguez. 5	870	452	1,555	6.1	33.4	0.0	3.6	96.4
Puerto de Barcelona 1	447	732	2,415	20.3	67.8	0.0	8.1	91.9
Puerto de Barcelona 2	445	1,146	3,891	31.5	66.3	5.1	1.6	93.3
Sabón 3	397	891	2,899	27.3	77.3	4.8	1.5	93.6
Sagunto 1	417	2,074	6,883	57.6	72.2	1.4	0.4	98.2
Sagunto 2	420	1,422	4,725	39.2	71.7	1.5	0.0	98.5
Sagunto 3	419	589	2,015	16.5	69.9	0.0	2.6	97.4
San Roque 1	397	1,914	6,903	57.8	69.9	0.6	4.4	95.0
San Roque 2	402	139	827	4.1	42.0	0.0	3.6	96.4
Santurce 4	403	50	227	1.5	54.4	8.7	0.0	91.3
Soto de la Ribera 4	432	629	2,487	18.2	58.6	8.2	0.5	91.3
Soto de la Ribera 5	434	173	747	4.6	53.4	1.1	0.2	98.8
Tarragona Endesa	400	57	216	1.6	65.8	0.9	0.0	99.1
Tarragona Power	424	526	2,102	15.9	59.1	3.2	7.9	89.0
Total	25,353	38,593	2,492	18.8	61.1	5.0	2.7	92.3

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

UTILISATION AND AVAILABILITY OF COMBINED-CYCLE GENERATING UNITS 2013

				UTILISATION COEFFICIENT (%)		NON-A	AILABILITY (%)	
GENERATING UNITS	POWER MW	PRODUCTION GWh	HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Aceca 3	392	189	965	5.9	50.1	5.9	0.2	93.9
Aceca 4	379	954	3,301	39.6	76.2	27.0	0.5	72.5
Algeciras 3 CC	831	0.2	5	0.004	6.0	5.9	0.0	94.1
Amorebieta	795	169	610	2.5	34.9	1.9	0.0	98.1
Arcos 1	396	0	0	0.0	0.0	3.6	0.5	95.9
Arcos 2	379	15	75	0.5	51.7	2.6	0.3	97.1
Arcos 3	844	102	539	1.5	22.4	8.5	0.2	91.3
Arrúbal 1	402	228	784	6.7	72.4	2.9	0.1	97.0
Arrúbal 2	397	177	590	5.7	75.7	9.9	0.1	90.1
Bahia Bizcaya	800	3,032	7,862	48.2	48.2	4.7	5.6	89.7
Besós 3	419	162	833	4.4	46.3	0.0	0.4	99.6
Besós 4	407	2,186	7,584	63.1	70.9	1.2	1.6	97.2
Besós 5	873	702	3,132	10.1	25.7	1.2	8.0	90.8
Campo de Gibraltar 1	393	209	669	6.7	79.5	0.0	9.2	90.8
Campo de Gibraltar 2	388	207	706	7.1	75.6	3.4	10.7	85.8
Cartagena 1	425	794	2,694	21.6	69.4	0.0	1.3	98.7
Cartagena 2	425	582	2,083	16.8	65.8	1.4	5.5	93.1
Cartagena 3	419	945	3,319	26.2	67.9	0.0	1.6	98.4
Castejón 1	429	243	966	6.7	58.6	0.0	2.9	97.1
Castejón 2	381	0	0	0.0	0.0	1.9	2.2	95.9
Castejón 3	426	138	614	3.8	52.9	1.1	0.2	98.7
Castellón 3	79	50	210	0.8	30.1	9.6	1.1	89.3
Castellón 4	854	479	2,384	6.7	23.5	3.6	0.3	96.0
Castelnou	798	90	518	1.3	21.7	3.1	0.0	96.9
Colón 4	398	165	801	4.7	51.9	0.0	0.0	100.0
El Fangal 1	409	34	147	0.9	56.4	0.0	0.1	99.9
El Fangal 2	408	19	69	0.5	69.0	0.0	0.1	99.9
El Fangal 3	402	40	189	1.2	53.2	0.0	2.7	97.3
Escatrón 3	818	3	18	0.0	19.9	0.0	0.0	100.0
Escatrón Peaker	283	8	123	0.4	22.3	1.4	16.0	82.6
Escombreras 6	831	0	0	0.0	0.0	9.5	0.0	90.5
Málaga 1 CC	421	1,713	5,813	51.3	70.0	0.0	9.4	90.6
Palos 1	394	335	1,248	9.9	68.1	0.0	2.5	97.5
Palos 2	396	440	1,660	13.0	67.1	0.0	2.2	97.8
Palos 3	398	723	2,503	21.4	72.6	0.0	2.9	97.1
Plana del Vent 1	426	258	990	7.1	61.2	0.9	1.3	97.8
Plana del Vent 2	421	426	1,826	12.1	55.4	3.0	1.6	95.4

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UTILISATION AND AVAILABILITY OF COMBINED-CYCLE GENERATING UNITS 2013

				UTILISAT	ION COEFFICIENT (%)	NON-A	AILABILITY (%)	
GENERATING UNITS	POWER MW	PRODUCTION GWh	HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Puentes Gcía. Rguez. 5	870	258	1,309	3.5	22.7	2.5	0.3	97.2
Puerto de Barcelona 1	447	1,244	4,159	34.0	66.9	3.3	3.3	93.4
Puerto de Barcelona 2	445	760	2,735	19.8	62.5	0.0	1.4	98.6
Sabón 3	397	950	3,118	28.4	76.6	2.7	1.1	96.2
Sagunto 1	417	1,547	5,350	44.1	69.3	3.5	0.6	96.0
Sagunto 2	420	946	3,443	25.9	65.5	0.0	0.7	99.3
Sagunto 3	419	1,028	3,497	28.8	70.2	2.4	0.2	97.4
San Roque 1	397	1,858	6,881	60.8	68.0	10.5	1.7	87.8
San Roque 2	402	223	1,229	6.4	45.2	0.0	0.7	99.3
Santurce 4	403	1	9	0.0	29.0	0.0	0.0	100.0
Soto de la Ribera 4	432	236	943	6.3	58.0	0.8	0.2	99.0
Soto de la Ribera 5	434	81	317	2.2	58.7	0.0	1.7	98.3
Tarragona Endesa	400	0	0	0.0	0.0	3.8	0.0	96.2
Tarragona Power	424	138	1,101	4.0	29.6	5.3	1.5	93.2
Total	25,353	25,091	1,736	11.9	57.0	3.2	1.9	94.9

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

PRODUCTION (AT POWER STATION BUSBARS) OF NUCLEAR GENERATING UNITS

	POWER		2012		2013	
POWER STATIONS	MW	GWh	%	GWh	%	% 13/12
Almaraz I	1,049	7,610	12.4	8,001	14.1	5.1
Almaraz II	1,044	8,039	13.1	7,720	13.6	-4.0
Ascó I	1,033	7,739	12.6	9,055	15.9	17.0
Ascó II	1,027	8,276	13.5	7,638	13.4	-7.7
Cofrentes	1,092	9,378	15.3	8,327	14.7	-11.2
Garoña (1)	466	3,873	6.3	0	0.0	-
Trillo I	1,067	8,502	13.8	8,003	14.1	-5.9
Vandellós II	1,087	8,053	13.1	8,083	14.2	0.4
Total	7,866	61,470	100.0	56,827	100.0	-7.6

(1) Inactive since December 2012.

UTILISATION AND AVAILABILITY OF NUCLEAR GENERATING UNITS 2012

				UTILISAT	ION COEFFICIENT (%)	NON-A	VAILABILITY (%)	
GENERATING UNITS	POWER MW	PRODUCTION GWh	HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Almaraz I	1,049	7,610	7,406	97.9	97.9	14.0	1.7	84.3
Almaraz II	1,044	8,039	7,729	98.7	99.6	11.2	0.0	88.8
Ascó I	1,033	7,739	7,667	98.0	97.8	12.5	0.4	87.1
Ascó II	1,027	8,276	8,326	97.4	96.8	3.3	2.4	94.2
Cofrentes	1,092	9,378	8,688	98.7	98.8	0.0	1.0	99.0
Garoña (3)	466	3,873	8,352	99.5	99.5	0.0	4.9	95.1
Trillo I	1,067	8,502	8,067	98.8	98.7	8.1	0.1	91.8
Vandellós II	1,087	8,053	7,603	97.4	97.4	12.9	0.5	86.6
Total	7,866	61,470	7,954	98.2	98.2	8.3	1.1	90.6

This is the coefficient between the actual production and the available production or maximum production that the power station can reach operating at nominal power during the hours it is available.
 This is the coefficient between the actual production and the total that the power station could have reached operating at nominal power in the set of hours in which it has been connected to the grid (producing).
 Unit not available 0.8% due to fault and with permanent unavailability of 4.1%. Inactive since 17/12/2012.

UTILISATION AND AVAILABILITY OF NUCLEAR GENERATING UNITS 2013

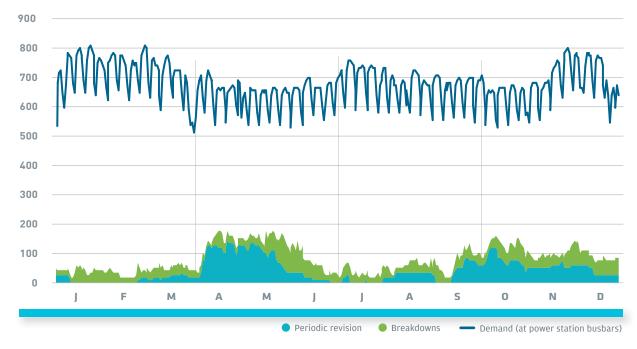
				UTILISAT	ION COEFFICIENT (%)	NON-A	AILABILITY (%)	
GENERATING UNITS	POWER MW	PRODUCTION GWh	HOURS IN OPERATION	S/AVAILABLE (1)	HOURS CONNECTED TO GRID (2)	PERIODIC REVISION	BREAKDOWNS	AVAILABILITY %
Almaraz I	1,049	8,001	7,882	96.7	96.7	2.7	7.3	90.0
Almaraz II	1,044	7,720	7,555	97.8	97.8	10.5	3.2	86.3
Ascó I	1,033	9,055	8,759	100.0	100.0	0.0	0.0	100.0
Ascó II	1,027	7,638	7,499	99.2	99.2	12.9	1.5	85.6
Cofrentes	1,092	8,327	7,801	97.7	97.8	10.9	0.0	89.1
Garoña (3)	466	0	0	0.0	0.0	0.0	100.0	0.0
Trillo I	1,067	8,003	7,657	97.9	97.9	0.0	12.6	87.4
Vandellós II	1,087	8,083	7,685	96.9	96.8	11.8	0.6	87.6
Total	7,866	56,827	7,368	98.2	98.1	6.6	9.4	84.0

This is the coefficient between the actual production and the available production or maximum production that the power station can reach operating at nominal power during the hours it is available.
 This is the coefficient between the actual production and the total that the power station could have reached operating at nominal power in the set of hours in which it has been connected to the grid (producing).
 Unit with permanent 100% unavailability. Inactive since 17/12/2012.

	COAL		FU	JEL/GAS	СОМВ	NED CYCLE		NUCLEAR		
	2012	2013	2012	2013	2012	2013	2012	2013		
Power (MW)	11,114	11,131	520	520	25,353	25,353	7,866	7,866		
Production (GWh)	54,721	39,807	0	0	38,593	25,091	61,470	56,827		
Hours in operation	5,766	4,350	0	0	2,492	1,736	7,954	7,368		
Utilisation coefficients (%)										
Over available (1)	61.0	44.5	0.0	0.0	18.8	11.9	98.2	98.2		
In No. of hours connected to grid (2)	85.4	82.2	-	-	61.1	57.0	98.2	98.1		
Non-Availability (%)										
Periodic revision	2.7	4.3	0.0	0.0	5.0	3.2	8.3	6.6		
Breakdowns	5.3	4.0	1.2	0.0	2.7	1.9	1.1	9.4		
Availability (%)	91.9	91.7	98.8	100.0	92.3	94.9	90.6	84.0		

UTILISATION AND AVAILABILITY OF THERMAL POWER STATIONS

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



COMPARISON OF DAILY DEMAND AT POWER STATION BUSBARS WITH — GWh THE DAILY NON-AVAILABILITY OF THE THERMAL POWER STATIONS









SPECIAL REGIME peninsular system

56 🛛 😹 RED ELÉCTRICA DE ESPAÑA



Graph showing the evolution of the energy acquired from special regime Evolution of the energy acquired from special regime

59

Graph showing the evolution of special regime installed capacity Evolution of special regime installed capacity

GWh





GRAPH SHOWING THE EVOLUTION OF THE ENERGY ACQUIRED FROM SPECIAL REGIME

EVOLUTION OF THE ENERGY ACQUIRED FROM SPECIAL REGIME GWh										
	2009	2010	2011	2012	2013	%13/12				
Hydro	5,454	6,824	5,294	4,645	7,099	52.8				
Wind	37,889	43,208	42,105	48,140	54,338	12.9				
Solar photovoltaic	5,829	6,140	7,092	7,830	7,915	1.1				
Solar thermoelectric	130	692	1,832	3,444	4,442	29.0				
Renewable thermal	3,044	3,172	4,285	4,746	5,064	6.7				
Non-renewable thermal	28,466	30,789	32,051	33,493	31,989	-4.5				
Total	80,811	90,825	92,660	102,298	110,846	8.4				
						Provisional data.				

Provisional data.



MW



GRAPH SHOWING THE EVOLUTION OF SPECIAL REGIME INSTALLED CAPACITY

Iro
Wind
Solar photovoltaic
Solar thermoelectric
Renewable thermal
Non-renewable thermal
Provisional data. Source: National Commission of Markets and Competition (CNMC).

EVOLUTION OF SPECIAL REGIME INSTALLED POWER										
	2009	2010	2011	2012	2013	%13/12				
Hydro	2,022	2,036	2,042	2,042	2,102	2.9				
Wind	18,723	19,569	21,026	22,617	22,854	1.0				
Solar photovoltaic	3,250	3,654	4,057	4,320	4,422	2.4				
Solar thermoelectric	232	532	999	1,950	2,300	17.9				
Renewable thermal	741	780	884	970	975	0.5				
Non-renewable thermal	7,001	7,124	7,200	7,160	7,089	-1.0				
Total	31,969	33,694	36,207	39,058	39,741	1.7				

Provisional data. Source: National Commission of Markets and Competition (CNMC).

THE SPANISH ELECTRICITY SYSTEM **2013**

05

SYSTEM OPERATION peninsular system

62	Components of the average final price. National demand Final prices and energy. National demand	66	Energ syster regarc Resolu constr
63	Repercussion of the adjustment services in the average final price Evolution of the average price. National demand	67	Resolu Resolu Avera
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Energy managed in the peninsular system adjustment services with regard to demand Resolution of security of supply constraints Resolution of technical constraints

Resolution of technical constraints Average weighted prices and energies

Resolution of technical constraints. Breakdown by type of constraint Resolution of technical constraints. Breakdown by technology. Annual total

Additional upward power reserve allocated

Adjustment services markets. Energy managed



70	Secondary control Secondary control band. Average weighted price and average band	74	Deviation management. Average weighted prices and energies Deviation management. Breakdown by technology. Annual total
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72	Tertiary control Tertiary control. Average weighted prices and energies	76	Measured net deviations. Average monthly weighted prices and net energy of the balance markets Measured net deviations
73	Tertiary control. Breakdown by technology. Annual total Deviation management	77	Deviation price in relation to the day-ahead market price Deviation hours against the system

COMPONENTS OF THE AVERAGE FINAL PRICE. NATIONAL DEMAND	— €/MWh
(LAST RESORT SUPPLY + FREE CONTRACTING)	

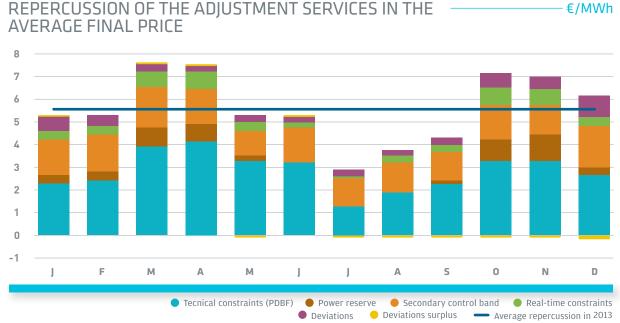
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ост	NOV	DEC	TOTAL	%13/12
Day-ahead market	53.21	46.90	28.41	19.33	44.15	42.13	52.25	48.98	51.58	52.73	43.47	67.40	46.20	-5.5
Intraday market	-0.01	-0.08	-0.11	-0.02	-0.09	-0.14	0.02	-0.02	-0.02	-0.16	-0.04	-0.03	-0.06	36.6
System adjustment services	5.21	5.29	7.57	7.53	5.21	5.23	2.86	3.72	4.18	7.02	6.90	5.94	5.54	19.1
Technical constraints (PDBF)	2.27	2.42	3.88	4.16	3.30	3.20	1.28	1.88	2.25	3.27	3.28	2.68	2.80	32.8
Power reserve (1)	0.39	0.42	0.84	0.76	0.19	0.00	0.00	0.05	0.21	0.94	1.19	0.33	0.44	_
Secondary control band	1.55	1.56	1.81	1.48	1.08	1.51	1.24	1.26	1.21	1.51	1.26	1.78	1.44	4.8
Real-time constraints	0.40	0.41	0.64	0.77	0.43	0.25	0.10	0.31	0.29	0.83	0.70	0.38	0.46	-5.7
Deviations	0.57	0.48	0.31	0.23	0.25	0.22	0.30	0.28	0.32	0.57	0.56	0.93	0.43	47.1
Deviations surplus	0.03	0.00	0.09	0.13	-0.04	0.05	-0.06	-0.06	-0.10	-0.10	-0.09	-0.16	-0.03	-118.9
Capacity payment	7.09	6.95	5.71	5.46	5.36	6.13	7.29	4.69	5.36	5.33	5.45	6.94	6.01	-1.6
Final price 2013	65.50	59.06	41.58	32.30	54.63	53.35	62.42	57.37	61.10	64.92	55.78	80.25	57.69	-3.2
Final price 2012	63.85	66.22	59.23	53.41	53.71	63.72	61.29	58.84	58.32	59.76	57.06	57.79	59.57	

Note: The prices are calculated using the latest settlements available from the System Operator.
[1] Process started for scheduling on 11-June-2012



FINAL PRICES AND ENERGY. NATIONAL DEMAND (LAST RESORT SUPPLY + FREE CONTRACTING)





REPERCUSSION OF THE ADJUSTMENT SERVICES IN THE

EVOLUTION OF THE AVERAGE PRICE. NATIONAL DEMAND -€/MWh (LAST RESORT SUPPLY + FREE CONTRACTING)

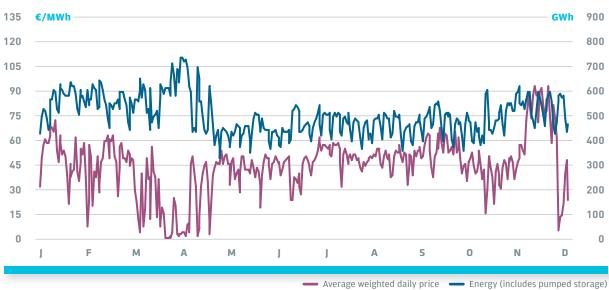


Average monthly price
 Average annual price

05

	ENERGY (*)			PRICE (€/MWh)
	(GWh)	HOURLY MINIMUM	MONTHLY AVG.	HOURLY MAX.
January	17,443	0.00	52.16	87.54
February	15,888	0.00	45.44	90.00
March	17,292	0.00	24.69	90.00
April	18,002	0.00	15.86	90.00
Мау	13,422	16.70	43.91	72.50
June	13,405	0.00	40.81	57.25
July	14,772	11.50	52.26	68.69
August	14,316	20.00	49.05	62.80
September	14,083	1.00	51.40	72.00
October	14,542	1.00	52.79	79.99
November	15,284	0.00	42.51	72.08
December	16,699	0.00	65.03	112.00
Annual	185,148	0.00	44.33	112.00

(*) Includes pumped storage.



DAY-AHEAD MARKET. AVERAGE WEIGHTED DAILY PRICE AND ENERGY

ENERGY AND AVERAGE WEIGHTED PRICES IN THE INTRADAY MARKET

	ENERGY	ENERGY (1) (2)		PRICE (€/MWh)
	SALES (GWh)	(GWh)	MONTHLY AVG.	HOURLY MAX.
January	3,148	937	52.92	95.04
February	2,819	1,040	45.84	84.77
March	2,981	997	28.43	80.31
April	2,497	758	21.55	79.20
Мау	2,777	1,227	42.11	66.00
June	2,744	1,492	40.79	65.00
July	2,885	614	52.88	100.00
August	2,966	1,044	48.89	76.00
September	2,816	942	51.61	80.00
October	3,261	1,483	49.91	75.99
November	3,112	1,291	44.79	93.00
December	2,571	847	64.82	130.00
Annual	34,577	12,672	45.51	130.00

(1) Includes pumped storage. (2) Negotiated net result of energy of production units.

ENERGY MANAGED IN THE SYSTEM ADJUSTMENT SERVICES (1) GWh

		2012		2013		% 13/12
	UPWARD	DOWNWARD	UPWARD	DOWNWARD	UPWARD	DOWNWARD
Security of supply constraints (2)	12,008	-	4,085	-	-66.0	-
Technical constraints (PDBF) (3)	6,162	61	7,240	193	17.5	217.6
Secondary control	1,510	1,262	1,806	1,070	19.5	-15.2
Tertiary control	2,992	2,330	3,330	1,812	11.3	-22.3
Deviation management	2,658	1,232	2,347	905	-11.7	-26.5
Reat-time constraints (4)	635	484	558	1,701	-12.1	251.6
Total energy managed		31,335		25,048		-20.1

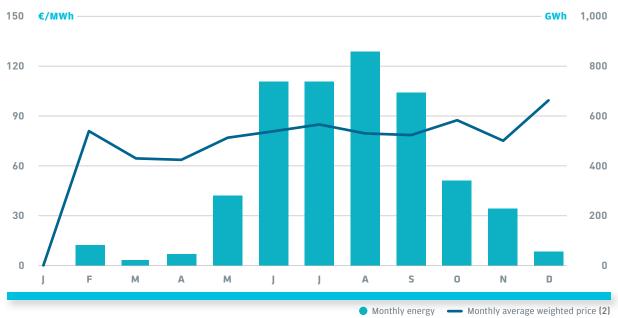
Does not include power reserve and secondary control reserves.
 Energy increased in phase 1 of the resolution of security of supply constraints (Royal Decree 134/210 modified by RD 1221/2010).
 Energy increased or reduced in phase 1 of the resolution of technical constraints of the PDBF (P.O.3.2).
 Includes 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 (LAST RESORT SUPPLY + FREE CONTRACTING) 14 12 10 8 6 4 2 0 F М Α Α S 0 Ν D J М J J

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

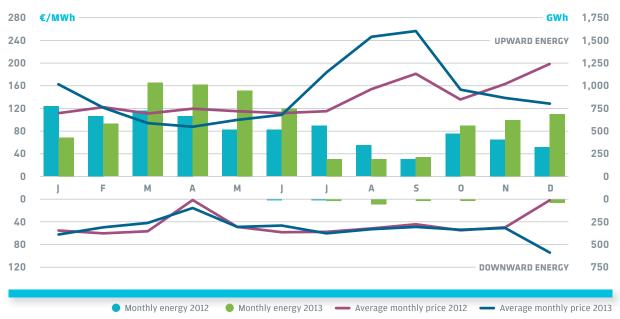
RESOLUTION OF SECURITY OF SUPPLY CONSTRAINTS (1)



Energy increased in phase I of the resolution of security of supply constraints (RD 134/2010 modified by RD 1221/2010).
 Calculated on the basis of the cost of settlement of the security of supply constraint process divided between the energy scheduled for security of supply constraints.

RESOLUTI	ON OF TECH	INICAL CONST	RAINTS (P	DBF) ——		Phase I
			DOWNWAR	RD ENERGY		
		I	PRICE (€/MWh)		PRIC	E (€/MWh)
	ENERGY (GWh)	WEIGHTED AVERAGE	MAX.	ENERGY (GWh)	WEIGHTED AVERAGE	MAX.
January	423	166.87	15,200.00	5	63.10	82.09
February	578	124.28	9,980.00	1	49.71	63.00
March	1,035	96.75	147.37	2	42.35	69.00
April	1,006	90.72	126.12	0	14.16	50.13
Мау	944	102.42	157.17	1	49.05	59.10
June	763	111.74	191.81	6	47.64	57.25
July	202	186.85	2,985.46	28	59.86	68.69
August	199	246.60	6,077.63	57	54.28	62.80
September	211	257.13	7,868.00	26	49.74	71.55
October	563	156.80	6,151.22	23	54.29	79.99
November	630	142.72	3,549.48	2	49.88	68.50
December	685	129.52	9,511.31	42	94.58	110.00
Annual	7,240	127.61	15,200.00	193	62.94	110.00

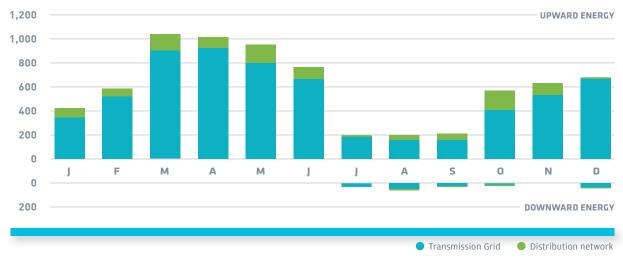
RESOLUTION OF TECHNICAL CONSTRAINTS (PDBF). AVERAGE WEIGHTED PRICES AND ENERGIES



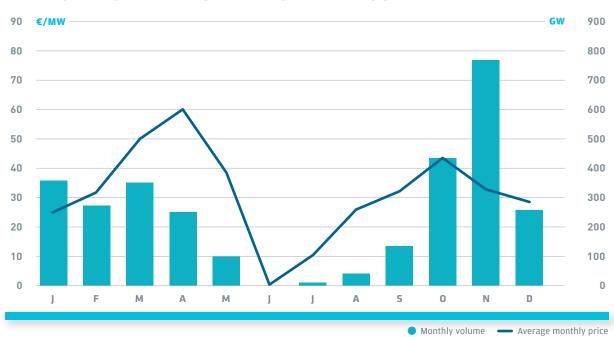


GWh





RESOLUTION OF TECHNICAL CONSTRAINTS (PDBF). % BREAKDOWN BY TECHNOLOGY. ANNUAL TOTAL - UPWARD ENERGY PHASE I -**PHASE II** UPWARD ENERGY • Combined cycle **65%** • Combined cycle **49%** • Coal **35%** Pumped turbine 35% • Coal **8%** Hydro 8% PHASE I -**DOWNWARD ENERGY PHASE II DOWNWARD ENERGY** Pumped turbine 44% Hydro 24% Pumped storage consumption **23%** Combined cycle **24%** Special regime 20% Combined cycle 20% Hvdro 6% Pumped turbine 16% • Coal **6%** • Nuclear 8% Coal **4%** International exchanges 3% Special regime 2%



ADDITIONAL UPWARD POWER RESERVE ALLOCATED





Secondary control
 Tertiary control
 Deviation management
 Real-time constraints
 Does not include constraints due to security of supply nor PDBF techincal constraints.

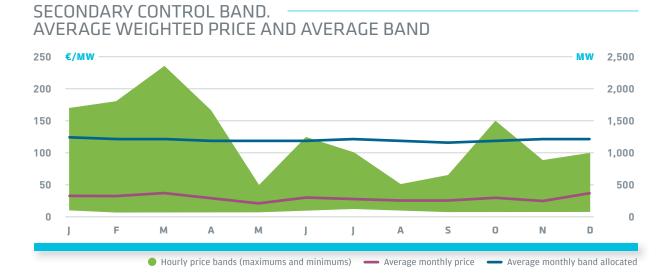
GWh

SECONDARY CONTROL

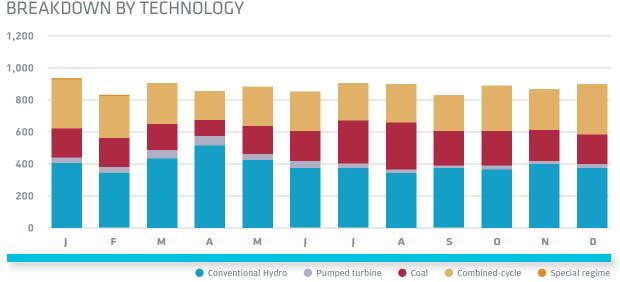
05

											ENERGY	
					BAND		UPWARD			DOWNWARD		
	AVERAGE POWER (MW)			PRICE (€/MW)			PRICE (€/MWh)			PRICE (€/MWh)		
	UP- WARD	DOWN- WARD	TOTAL	WEIGHTED AVERAGE	MAX.	ENERGY (GWh)	AVG. (1)	MAX.	ENERGY (GWh)	AVG. (2)	MAX.	
January	722	529	1,252	32.42	170.39	172	58.93	141.48	94	35.44	180.00	
February	703	527	1,230	32.67	181.04	146	53.96	114.30	81	30.16	73.96	
March	698	517	1,215	36.43	237.00	177	33.56	180.01	98	12.89	76.01	
April	679	505	1,184	28.52	166.00	192	31.20	96.94	86	10.30	180.30	
Мау	679	506	1,185	20.78	50.00	170	49.69	82.72	77	24.81	60.00	
June	677	506	1,183	30.35	125.00	149	47.04	80.46	78	23.98	56.00	
July	698	520	1,218	26.83	100.00	125	56.27	113.60	88	35.69	180.00	
August	694	510	1,203	26.29	51.50	126	52.07	115.40	93	33.57	180.32	
September	666	492	1,158	25.43	64.90	112	53.20	113.70	101	33.01	74.61	
October	686	506	1,191	30.12	150.00	133	52.43	180.30	102	30.10	73.90	
November	698	509	1,207	26.11	90.00	154	50.48	180.30	84	27.96	70.33	
December	696	516	1,212	38.19	100.43	150	77.20	135.00	88	44.96	110.00	
Annual	691	512	1,203	29.55	237.00	1,806	50.55	180.30	1,070	28.66	180.32	

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







MONTHLY TOTAL FOR SECONDARY CONTROL RESERVES ALLOCATED. —— GW BREAKDOWN BY TECHNOLOGY

SECONDARY CONTROL. AVERAGE WEIGHTED PRICES AND ENERGIES



05

TERTIARY CONTROL

05

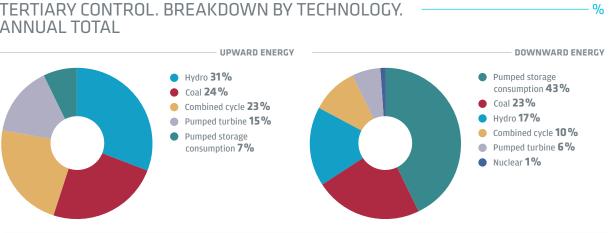
	UPWARD ENERGY				DOWNWAR			
	ENERGY (1)	PF	RICE (€/MWh)	ENERGÍA (1)	PRICE (€/MWh)			
	(GWh)	AVG. (2)	MAX.	(GWh)	AVG. (3)	MAX.		
January	321	70.84	140.00	221	22.07	72.57		
February	358	62.90	98.92	135	23.06	50.40		
March	221	53.13	98.12	209	6.44	45.00		
April	187	46.03	120.42	171	5.35	39.70		
Мау	252	54.03	82.47	154	14.18	41.00		
June	216	51.64	91.33	152	13.48	48.20		
July	299	61.16	125.00	130	24.87	75.00		
August	307	60.83	115.00	94	22.70	49.00		
September	235	61.54	110.12	126	19.70	50.00		
October	274	63.06	120.00	193	15.91	57.00		
November	306	56.85	121.00	103	13.02	55.00		
December	354	89.50	133.33	125	30.13	97.90		
Annual	3,330	62.51	140.00	1,812	16.83	97.90		

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



TERTIARY CONTROL. AVERAGE WEIGHTED PRICES AND ENERGIES





TERTIARY CONTROL. BREAKDOWN BY TECHNOLOGY. **ANNUAL TOTAL**

DEVIATION MANAGEMENT

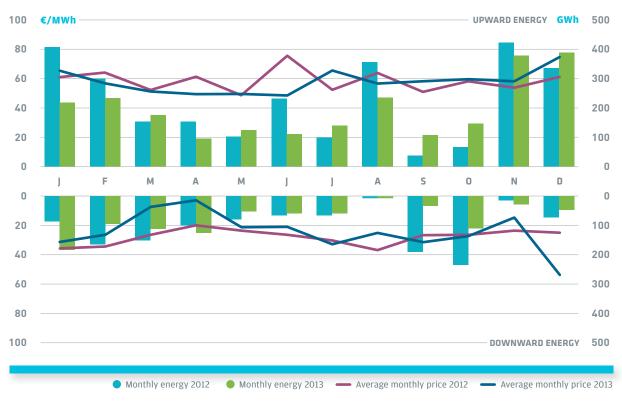
		UPW	ARD ENERGY		DOWNW	ARD ENERGY
	ENERGY	PF	RICE (€/MWh)	ENERGY	PR	ICE (€/MWh)
	(GWh)	AVG. (1)	MAX.	(GWh)	AVG. (2)	MAX.
January	219	65.48	118.00	182	31.27	67.07
February	231	56.20	90.28	91	25.87	60.00
March	173	51.28	91.13	112	6.83	46.00
April	92	50.20	200.00	124	2.61	32.49
Мау	121	49.87	79.00	51	21.56	40.00
June	113	47.48	62.00	59	20.48	43.20
July	141	65.34	175.00	58	32.20	47.10
August	235	56.85	83.33	10	25.37	42.00
September	113	58.78	100.00	34	31.33	54.00
October	146	60.29	111.15	110	27.17	66.11
November	374	58.26	127.50	29	14.11	47.12
December	387	74.74	127.21	44	53.57	104.00
Annual	2,347	60.10	200.00	905	22.55	104.00

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

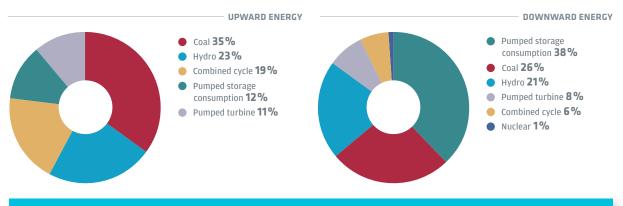


- %

DEVIATION MANAGEMENT. AVERAGE WEIGHTED PRICES AND ENERGIES



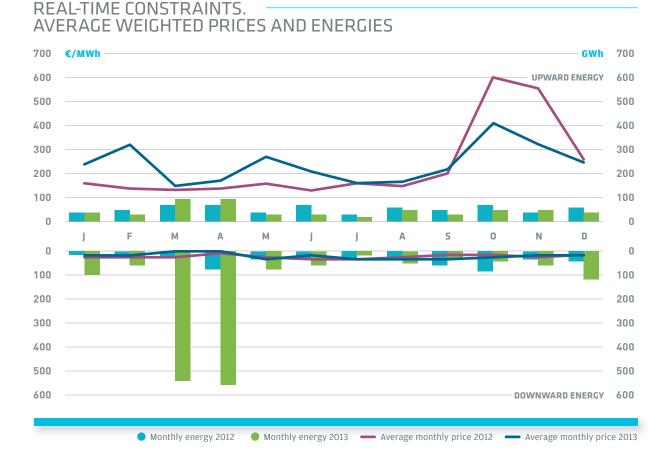
DEVIATION MANAGEMENT. BREAKDOWN BY TECHNOLOGY.



REAL-TIME CONSTRAINTS

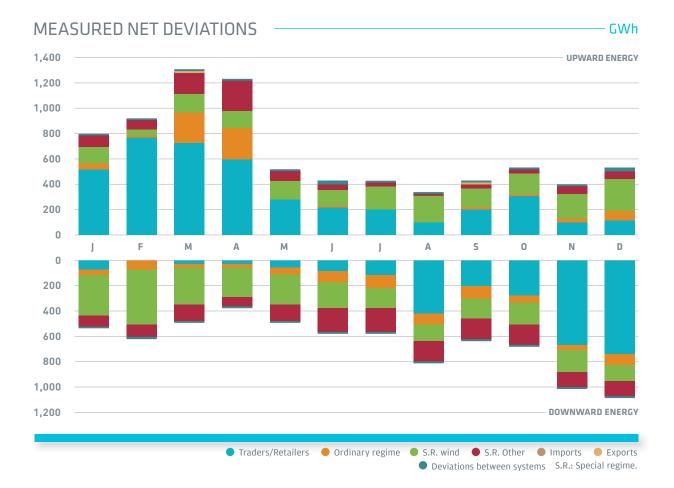
	UPWARD ENERGY				DOWNWARD ENERGY			
	ENERGY (1)	PRICE (€/MWh)		ENERGY (1)	PRI	CE (€/MWh)		
	(GWh)	AVG. (2)	MAX.	(GWh)	AVG. (3)	MAX.		
January	41	239.78	1,962.39	99	16.74	62.83		
February	30	319.69	1,772.70	58	18.98	75.65		
March	93	151.04	5,234.25	545	1.53	52.26		
April	95	168.84	3,800.17	560	1.38	67.34		
Мау	34	275.07	2,905.05	76	30.67	53.20		
June	27	208.80	3,216.33	62	19.95	53.89		
July	17	160.35	4,143.36	14	31.37	66.52		
August	48	175.68	1,387.81	51	34.29	60.20		
September	35	222.71	1,455.86	13	31.34	69.69		
October	46	416.81	2,878.90	45	28.05	64.10		
November	53	320.91	2,304.61	61	19.60	60.00		
December	41	251.05	2,423.93	118	17.22	100.10		
Annual	558	231.94	5,234.25	1,701	8.82	100.10		

 Does not include energy redispatched through the link between the Spanish peninsular electricity system and the Balearic Islands' electricity system.
 Average weighted sell price.
 Average weighted buy back price.

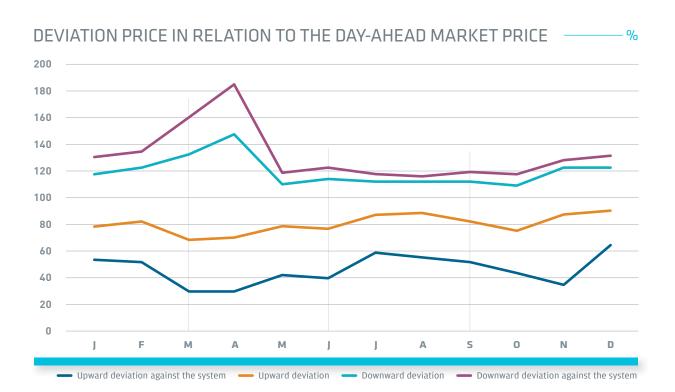


MEASURED NET DEVIATIONS. AVERAGE MONTHLY WEIGHTED PRICES AND NET ENERGY OF THE BALANCE MARKETS

		UPWARD ENERGY		IWARD ENERGY
	ENERGY (GWh)	PRICE (€/MWh)	ENERGY (GWh)	PRICE (€/MWh)
January	801	39.66	539	59.14
February	912	37.20	625	54.95
March	1,307	17.76	492	34.55
April	1,235	12.65	377	26.70
Мау	519	33.90	497	48.44
June	421	31.69	577	46.61
July	430	45.02	583	57.76
August	343	43.07	810	53.85
September	422	41.03	638	56.00
October	536	38.94	684	56.55
November	403	36.66	1,010	50.94
December	530	57.72	1,075	77.91
Annual	7,861	36.28	7,908	51.95







DEVIATION HOURS AGAINST THE SYSTEM



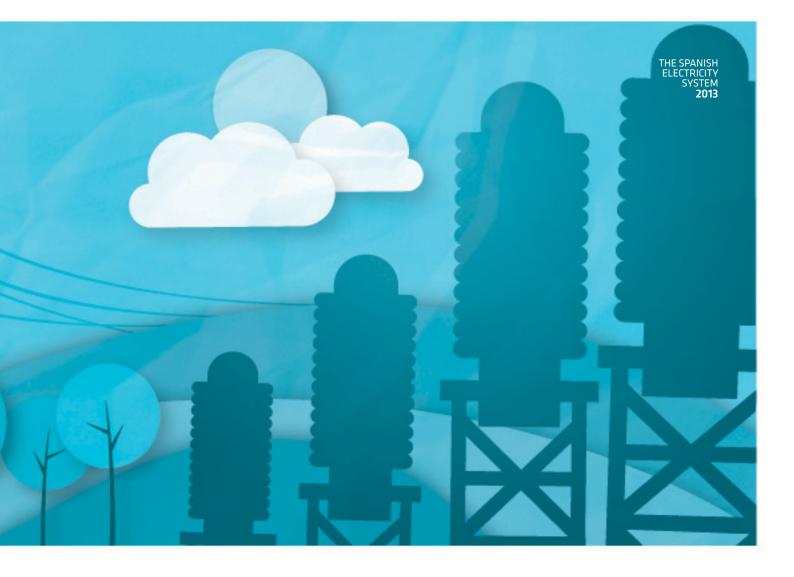
Hours with downward deviation when the system requires lower production
 Hours with downward deviation when the system requires higher production

%

THE SPANISH ELECTRICITY SYSTEM **2013**

06

TRANSMISSION GRID peninsular system



- Evolution of the transmission system and transformer capacity
 400 kV transmission lines commissioned in 2013
- 81

220 kV transmission lines commissioned in 2013

Increase in line capacity in 2013 Substation switchyards commissioned in 2013 83 Tra Evo

84

Transformers inventoried in 2013 Evolution of the 400 and ≤ 220 kV transmission grid

Graph showing the evolution of the 400 and ≤ 220 kV transmission grid Transmission grid lines with load above 70%

EVOLUTION OF THE TRANSMISSION SYSTEM AND TRANSFORMER CAPACITY

		2009	2010	2011	2012	2013
km of 400 kV circuit	Red Eléctrica	18,019	18,792	19,671	20,109	20,641
	Other companies	38	0	0	0	0
	Total	18,056	18,792	19,671	20,109	20,641
km of \leq 220 kV circuit	Red Eléctrica	16,806	17,291	17,891	18,313	18,557
	Other companies	501	109	109	109	109
	Total	17,307	17,401	18,001	18,422	18,667
Transformer	Red Eléctrica	65,547	66,596	68,996	74,296	76,571
capacity (MVA)	Other companies	800	0	0	0	0
	Total	66,347	66,596	68,996	74,296	76,571

400 kV TRANSMISSION LINES COMMISSIONED IN 2013

LINE	COMPANY	No. OF CIRCUITS	km	TRANSMISSION CAPACITY (MVA) (*)
E/S Grado L/ Soto-Tabiella	Red Eléctrica	2	13.5	1,812
E/S Muniesa L/ Fuendetodos-Mezquita	Red Eléctrica	1	0.6	2,441
L/ Abanto-L/ Penagos-Güeñes	Red Eléctrica	4	40.3	2,441
L/ Almaraz-San Serván	Red Eléctrica	2	285.4	2,441
L/ Penagos-Güeñes	Red Eléctrica	2	5.1	2,441
L/ Salas-Grado	Red Eléctrica	2	54.7	2,441
L/ San Serván-Brovales	Red Eléctrica	2	132.5	2,441
Total			532.1	

[*] Capacity of the conductor indicated in the execution project. This capacity may vary depending on the operating conditions and the time of year (MVA per circuit).



220 kV TRANSMISSION LINES COMMISSIONED IN 2013

LINE	COMPANY	No. OF CIRCUITS	km	TRANSMISSION CAPACITY (MVA) (*)
E/S Aldaia L/ La Eliana-Torrente (S)	Red Eléctrica	2	1.3	551
E/S Novelda L/ Benejama-Petrel	Red Eléctrica	2	0.5	800
E/S Novelda L/ Benejama-Petrel (S)	Red Eléctrica	2	1.5	544
E/ San Sebastián de los Reyes	Red Eléctrica	2	4.7	894
E/ San Sebastián de los Reyes (5)	Red Eléctrica	1	0.9	894
E/S Villaviciosa L/ Boadilla-Lucero	Red Eléctrica	2	0.1	894
L/ Aljarafe-Rocío	Red Eléctrica	2	117.8	894
L/ Atios-Montouto	Red Eléctrica	1	24.0	437
L/ Brovales-Balboa	Red Eléctrica	1	1.0	894
L/ Costa de la Luz-Onuba	Red Eléctrica	2	40.9	487
L/ Costa de la Luz-Onuba (s)	Red Eléctrica	2	0.2	404
L/ Gandía-Valle del Cárcer (previously Vilanova) with E/ S Valldigna	Red Eléctrica	2	40.9	437
L/ Gandía-Valle del Cárcer (previously Vilanova) with E/S Valldigna (s)	Red Eléctrica	2	9.4	486
San Sebastian de los Reyes switchyard reconfiguration (s)	Red Eléctrica	1	0.5	581
Tres Cantos GIS 220: feeder to TR5 (s)	Red Eléctrica	1	0.2	508
Tres Cantos GIS 220: connection to E/S San Sebastián de los Reyes (s)	Red Eléctrica	1	0.2	620
Tres Cantos GIS 220: connection to hybrid bay (s)	Red Eléctrica	1	0.2	598
Total			244.2	

[*] Capacity of the conductor indicated in the execution project. This capacity may vary depending on the operating conditions and the time of year (MVA per circuit).
 (S) Underground. GIS (Gas Insulated Swithgear): Gas insulated substation. TR: Transformer.

INCREASE IN LINE CAPACITY IN 2013

LINE	VOLTAGE (kV)	km	INCREASE IN CAPACITY (MVA) (*)
L/ Aldeadávila-Villarino	400	17.5	432
L/ Cartelle-Velle	220	26.8	105
L/ Constantí-Penedés/ Montblanc	220	83.6	185
L/ Parque Eólico do Sil-Trives	220	29.4	105
L/ San Esteban-San Pedro	220	8.5	105
Total		165.8	

(*) Capacity of the conductor indicated in the execution project. This capacity may vary depending on the operating conditions and the time of year (MVA per circuit).

SUBSTATION SWITCHYARDS COMMISSIONED IN 2013

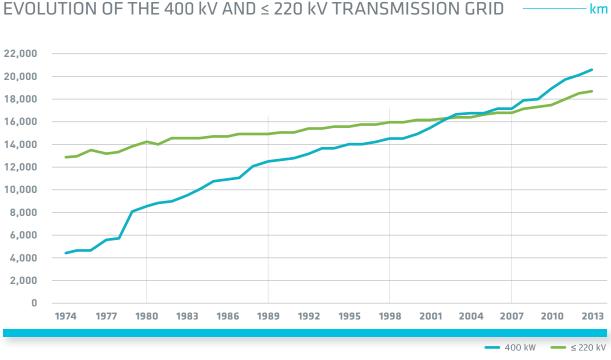
SUBSTATION	COMPANY	VOLTAGE kV
Grado	Red Eléctrica	400
Ludrio	Red Eléctrica	400
Muniesa	Red Eléctrica	400
Puebla de Guzmán	Red Eléctrica	400
San Serván	Red Eléctrica	400
Alcobendas	Red Eléctrica	220
Aldaia	Red Eléctrica	220
Algete	Red Eléctrica	220
Balsicas	Red Eléctrica	220
Brovales	Red Eléctrica	220
Eiris	Red Eléctrica	220
El Fargue	Red Eléctrica	220
Gandía	Red Eléctrica	220
Gavarrot	Red Eléctrica	220
Polígono C	Red Eléctrica	220
San Serván	Red Eléctrica	220
Torrellano (Nueva Saladas)	Red Eléctrica	220
Villaverde GIS	Red Eléctrica	220

TRANSFORMERS INVENTORIED IN 2013

			TRANSFORM	IER CAPACITY
SUBSTATION	COMPANY	VOLTAGE kV	kV	MVA
Eliana	Red Eléctrica	400	400/ 220	75
La Serna	Red Eléctrica	400	400/220	600
San Serván	Red Eléctrica	400	400/220	600
Solórzano	Red Eléctrica	400	400/220	600
Mobile Transformers	Red Eléctrica	400	400/220	400
Total				2,275

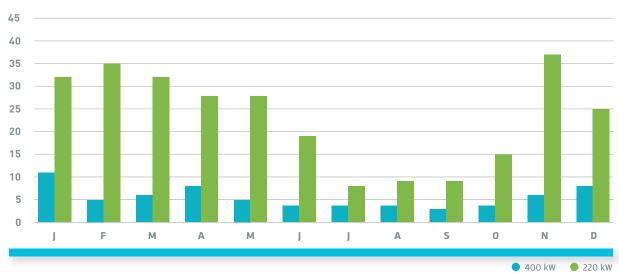
EVOLU	TION OF THE 400	kV AN	$ID \leq 220 \text{ kV TRANSMISS}$	ION GRID	km
YEAR	400 kV	≤ 220 kV	YEAR	400 kV	≤ 220 kV
1974	4,437	12,830	1994	13,737	15,586
1975	4,715	12,925	1995	13,970	15,629
1976	4,715	13,501	1996	14,084	15,734
1977	5,595	13,138	1997	14,244	15,776
1978	5,732	13,258	1998	14,538	15,876
1979	8,207	13,767	1999	14,538	15,975
1980	8,518	14,139	2000	14,918	16,078
1981	8,906	13,973	2001	15,364	16,121
1982	8,975	14,466	2002	16,067	16,296
1983	9,563	14,491	2003	16,592	16,344
1984	9,998	14,598	2004	16,841	16,464
1985	10,781	14,652	2005	16,846	16,530
1986	10,978	14,746	2006	17,052	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	18,422
1993	13,611	15,442	2013	20,641	18,667





EVOLUTION OF THE 400 kV AND ≤ 220 kV TRANSMISSION GRID

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.









SERVICE QUALITY PENINSULAR SYSTEM

86 🛛 😹 RED ELÉCTRICA DE ESPAÑA



Energy not supplied (ENS) due to incidences in the transmission grid Average interruption time (AIT) due to incidences

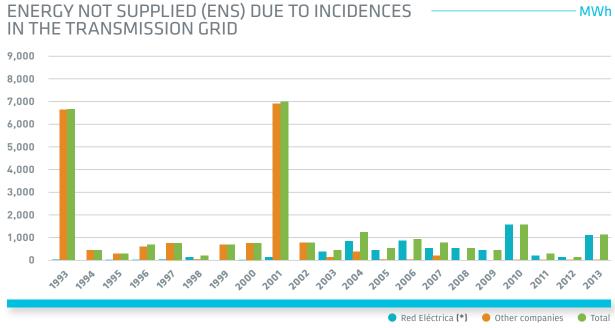
89

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



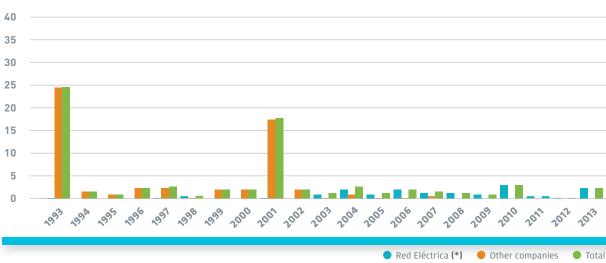
minutes





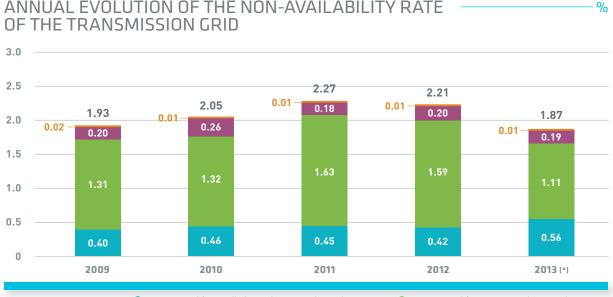
(*) As of 2003, the data of Red Eléctrica includes transmission assets acquired from other companies.

AVERAGE INTERRUPTION TIME (AIT) DUE TO INCIDENCES



(*) As of 2003, the data of Red Eléctrica includes transmission assets acquired from other companies. Average Interruption Time (AIT) = Energy Not Supplied (ENS)/Average Power of the system.





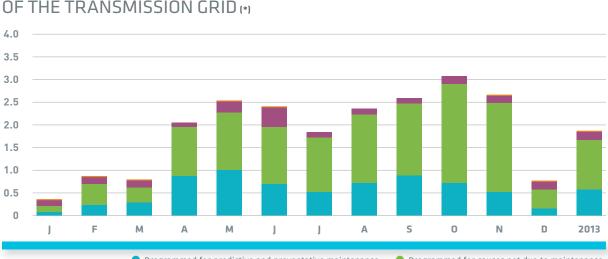
ANNUAL EVOLUTION OF THE NON-AVAILABILITY RATE

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

Note: Classification according to RD 1955/2000.

%

The total non-availibility rate of the transmission grid does not include non-availibilities due to force-majeure or third party actions. (*) Provisional data pending auditing.



MONTHLY EVOLUTION OF THE NON-AVAILABILITY RATE OF THE TRANSMISSION GRID (*)

Programmed for causes not due to maintenance. • Non-programmed due to fortuitous circumstances. Note: Classification according to RD 1955/2000.

Programmed for predictive and preventative maintenance. • Non-programmed due to corrective maintenance.

The total non-availibility rate of the transmission grid does not include non-availibilities due to force-majeure or third party actions. (*) Provisional data pending auditing.

HE SPANISH ELECTRICITY SYSTEM **2013**

INTO ANTON

INTERNATIONAL EXCHANGES PENINSULAR SYSTEM

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92	Evolution of imports in international physical energy exchanges
	Evolution of exports in international physical energy exchanges
	Evolution of the net internetional

08

Evolution of the net international physical energy exchanges
 Map of international physical energy exchanges

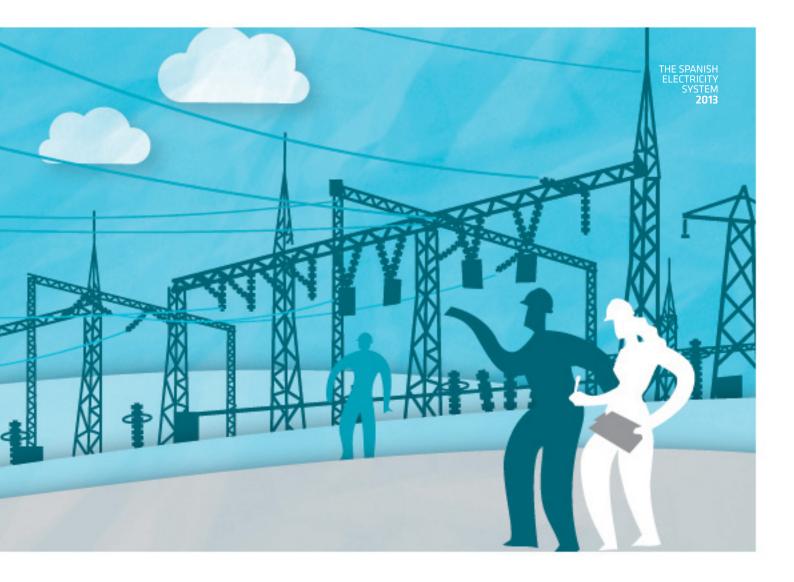
International physical energy exchanges Scheduled international energy exchanges Summary of scheduled international energy exchanges Monthly net scheduled international energy exchanges

Scheduled international transactions by type of market agent and interconnection

Commercial exchange capacity of the interconnections

Average usage of commercial exchange capacity of the interconnections Utilisation rate of the commercial exchange capacity of the interconnections

94



Evolution of the capacity auctions 98 for the interconnection with France Capacity negotiated in explicit 99 auctions for the interconnection with France (IFE) Capacity negotiated in explicit intraday auctions for the interconnection with France (IFE) Congestion rent derived from 100 the capacity auctions for the interconnection with France (IFE) Monthly evolution of congestion rent derived from the capacity auctions for the interconnection with France (IFE)

101

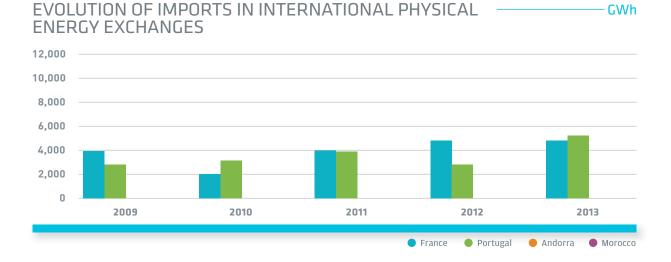
Measures applied to the counter-trading schedules applied for the interconnection with france

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

102

Congestion rent derived from market splitting for the interconnection with portugal

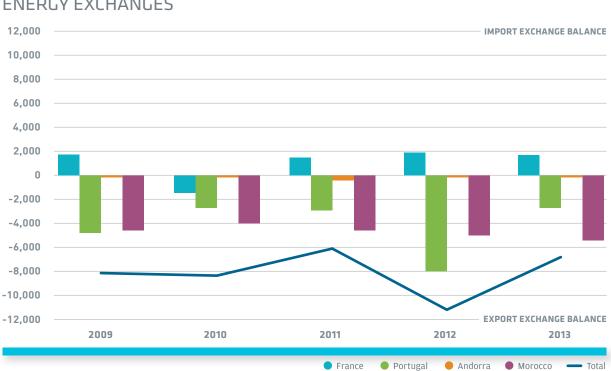
Counter-trading schedules applied for the interconnection with Portugal



EVOLUTION OF EXPORTS IN INTERNATIONAL PHYSICAL GWh ENERGY EXCHANGES



08



EVOLUTION OF EXPORTS IN INTERNATIONAL PHYSICAL ENERGY EXCHANGES

MAP OF INTERNATIONAL PHYSICAL ENERGY EXCHANGES



GWh

GWh

INTERNATIONAL PHYSICAL ENERGY EXCHANGES									
		INCOMING		OUTGOING B/		BALANCE (1)		VOLUME	
	2012	2013	2012	2013	2012	2013	2012	2013	
France	4,911	4,879	3,028	3,171	1,883	1,708	7,938	8,050	
Portugal	2,871	5,323	10,768	8,100	-7,897	-2,777	13,638	13,424	
Andorra	0	0	286	287	-286	-287	286	287	
Morocco	5	1	4,904	5,377	-4,900	-5,376	4,909	5,378	
Total	7,786	10,204	18,986	16,936	-11,200	-6,732	26,772	27,139	

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

SCHEDULED INTERNATIONAL ENERGY EXCHANGES							
		IMPORT		EXPORT	BALANCE (1)		
	2012	2013	2012	2013	2012	2013	
France (2)	5,864	5,759	3,971	4,052	1,893	1,707	
Portugal (3)	408	2,450	8,305	5,232	-7,897	-2,782	
Andorra	0	0	286	287	-286	-287	
Morocco	0,4	0	4,897	5,373	-4,897	-5,373	
Total	6,272	8,209	17,459	14,944	-11,187	-6,736	

Positive value: import exchange balance. Negative values: export exchange balance.
 Includes exchanges with other European countries.
 As of 1 July 2007, with the launch of the MIBEL market (day-ahead and intraday), the management of the Portugal-Spain interconnection is carried out via a market splitting mechanism where the Market Operator performs a joint matching of the Iberian market and calculates the prices for each one of the areas in the event of congestion. The exchange capacity is not allocated to any particular market agent/participant nor to a specific transaction but, as a result of this process, a balance of energy exchange schedules through this interconnection is established.

GWh

SUMMARY OF SCHEDULED INTERNATIONAL ENERGY EXCHANGES

	IMPORT	EXPORT	BALANCE
Transactions (market + physical bilateral contracts)	8,201	14,940	-6,739
France (1)	5,752	4,049	1,703
Portugal	2,449	5,231	-2,782
Andorra	0	287	-287
Могоссо	0	5,373	-5,373
Counter-Trading France - Spain	6	2	4
Counter-Trading Portugal - Spain	1	1	0
Support exchanges	0	0.4	0
Total scheduled exchanges	8,209	14,944	-6,736
Frequency control deviations compensated for			3
Balance of international physical energy exchanges			-6,732

(1) Includes exchanges with other European countries.

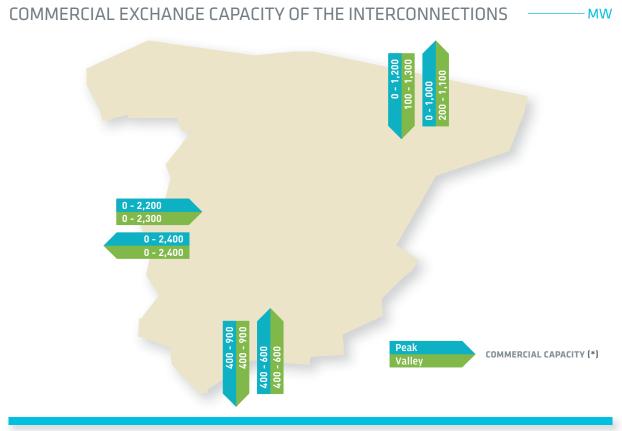
MONTHLY NET SCHEDULED INTERNATIONAL GWh ENERGY EXCHANGES



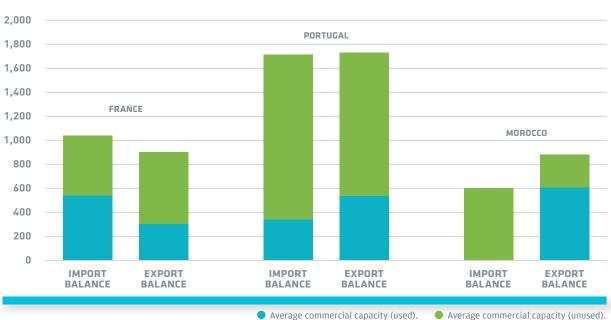
SCHEDULED INTERNATION OF MARKET AGENT AND I		ВҮ ТҮРЕ	GWh
	EXCHANCE	COUNTED	

	TRADERS/ RESELLERS		S	HEDULES	SUPPORT EXCHANGES		-TRADING ACTIONS		TOTAL		
	IMPORT	EXPORT	IMPORT	EXPORT	IMPORT	EXPORT	IMPORT	EXPORT	IMPORT	EXPORT	BALANCE
France (1)	5,752	4,049	0	0	0	0	6	2	5,759	4,052	1,707
Portugal (2)	0	0	2,449	5,231	0	0	1	1	2,450	5,232	-2,782
Andorra	0	287	0	0	0	0.4	0	0	0	287	-287
Morocco	0	5,373	0	0	0	0	0	0	0	5,373	-5,373
Total	5,752	9,710	2,449	5,231	0	0.4	7	3	8,209	14,944	-6,736

(1) Includes exchanges with other European countries. (2) As of 1 July 2007, with the launch of the MIBEL market (day-ahead and intraday), the management of the Portugal-Spain interconnection is carried out via a market splitting mechanism where the Market Operator performs a joint matching of the Iberian market and calculates the prices for each one of the areas in the event of congestion. The exchange capacity is not allocated to any particular market agent/participant nor to a specific transaction but, as a result of this process, a balance of energy exchange schedules through this interconnection is established.

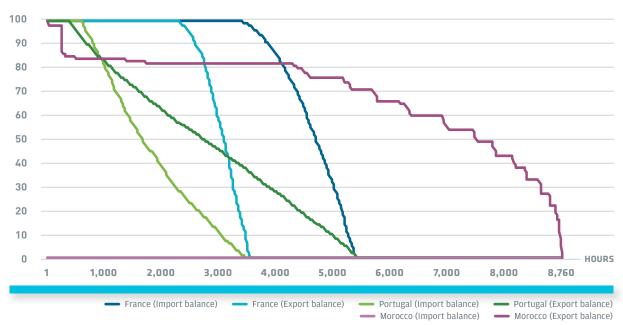


(*) Extreme hourly values considering non-availibilities of the grid elements and generating stations.



AVERAGE USAGE OF COMMERCIAL EXCHANGE CAPACITY OF THE INTERCONNECTIONS

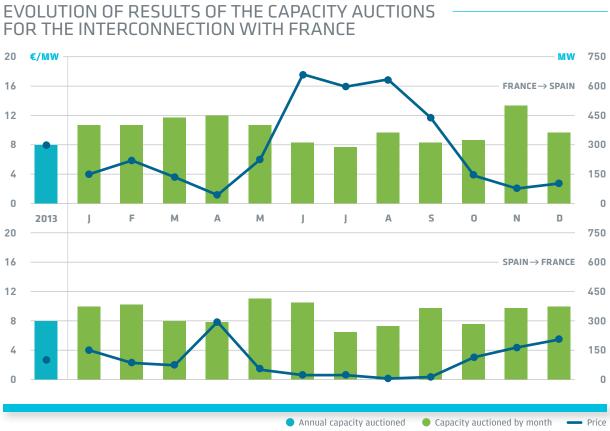
UTILISATION RATE OF THE COMMERCIAL EXCHANGE CAPACITY OF THE INTERCONNECTIONS



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

MW

% Usage



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

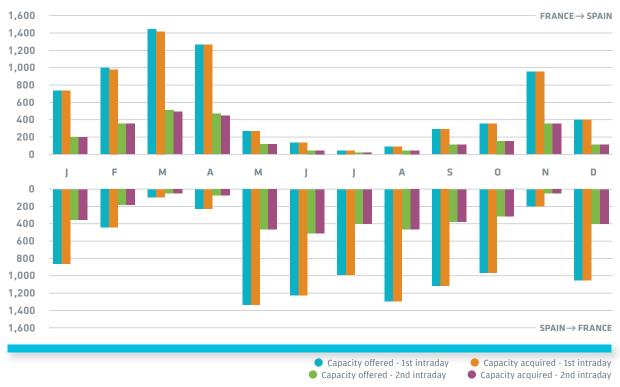




CAPACITY NEGOTIATED IN EXPLICIT AUCTIONS FOR THE INTERCONNECTION WITH FRANCE (IFE) (1)

Capacity acquired (GW)
 Energy exchange schedule (GWh)
 (1) Includes annual, monthly and daily capacities.

CAPACITY NEGOTIATED IN EXPLICIT INTRADAY AUCTIONS GW FOR THE INTERCONNECTION WITH FRANCE (IFE)



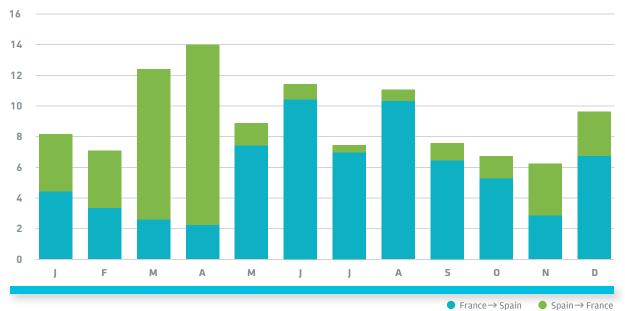
– Million €

CONGESTION RENT DERIVED FROM THE CAPACITY AUCTIONS FOR THE INTERCONNECTION WITH FRANCE (IFE) (1)

FRANCE	\rightarrow SPAIN	SPAIN	TOTAL		
THOUSAND €	%	THOUSAND €	%	THOUSAND €	%
20,300	18.4	6,676	6.0	26,976	24.4
19,165	17.4	6,375	5.8	25,540	23.1
28,663	26.0	26,273	23.8	54,936	49.8
1,243	1.1	1,697	1.5	2,940	2.7
69,370	62.8	41,022	37.2	110,392	100.0
	THOUSAND € 20,300 19,165 28,663 1,243	20,30018.419,16517.428,66326.01,2431.1	THOUSAND € % THOUSAND € 20,300 18.4 6,676 19,165 17.4 6,375 28,663 26.0 26,273 1,243 1.1 1,697	THOUSAND € % THOUSAND € % 20,300 18.4 6,676 6.0 19,165 17.4 6,375 5.8 28,663 26.0 26,273 23.8 1,243 1.1 1,697 1.5	THOUSAND € % THOUSAND € % THOUSAND € 20,300 18.4 6,676 6.0 26,976 19,165 17.4 6,375 5.8 25,540 28,663 26.0 26,273 23.8 54,936 1,243 1.1 1,697 1.5 2,940

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

MONTHLY EVOLUTION OF CONGESTION RENT DERIVED FROM THE CAPACITY AUCTIONS FOR THE INTERCONNECTION WITH FRANCE (IFE) (1)

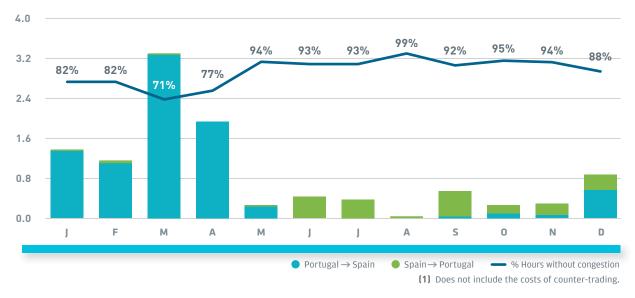


(1) Does not include the costs of counter-trading actions nor other costs.

MEASURES APPLIED TO THE COUNTER-TRADING SCHEDULES APPLIED FOR THE INTERCONNECTION WITH FRANCE

MONTH	DAY	DIRECTION/FLOW	MWh
March	1	France \rightarrow Spain	4,200
July	5	Spain \rightarrow France	400
	26	Spain \rightarrow France	700
August	6	Spain \rightarrow France	498
September	12	Spain \rightarrow France	919
September	13	Spain \rightarrow France	938
October	20	Spain \rightarrow France	730
November	13	France \rightarrow Spain	62
November	30	Spain \rightarrow France	25
Total Spain → France			2,353
Total France → Spain			6,119

CONGESTION RENT AND COUPLING RATE DERIVED FROM – MARKET SPLITTING IN THE DAY-AHEAD MARKET FOR THE INTERCONNECTION WITH PORTUGAL (1)



Million €

CONGESTION RENT DERIVED FROM MARKET SPLITTING FOR ______ Million € THE INTERCONNECTION WITH PORTUGAL (1)

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	1.34	0.01	0.09
February	1.09	0.05	0.06
March	3.27	0.02	0.10
April	1.93	0.00	0.05
Мау	0.24	0.02	0.02
June	0.00	0.43	0.06
July	0.00	0.37	0.05
August	0.00	0.03	0.01
September	0.03	0.52	0.03
October	0.09	0.16	0.01
November	0.06	0.23	0.02
December	0.58	0.30	0.02
Total	8.63	2.15	0.52

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

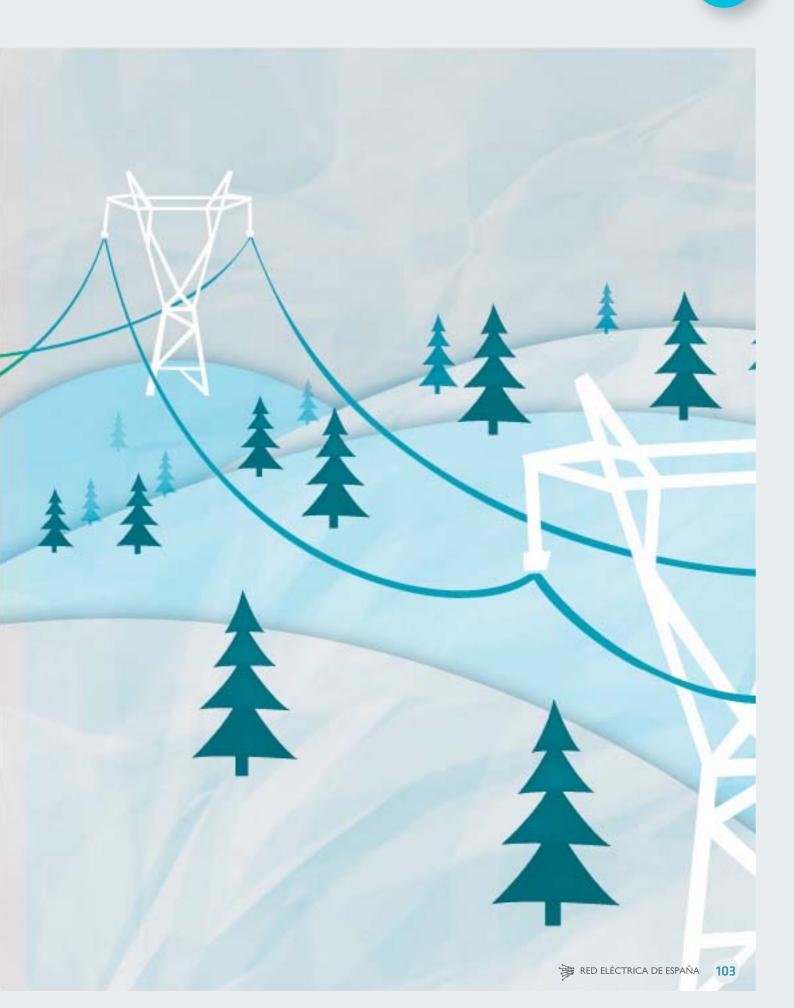
COUNTER-TRADING SCHEDULES APPLIED FOR THE INTERCONNECTION WITH PORTUGAL

MONTH	DAY	DIRECTION/FLOW	MWh
November	4	Portugal → Spain	1,279
December	11	Spain \rightarrow Portugal	1,065
Total Spain → Portugal			1,065
Total Portugal → Spain			1,279



INTERNATIONAL EXCHANGES PENINSULAR SYSTEM

08



HE SPANISH ELECTRICITY SYSTEM **2013**

NON-PENINSULAR SYSTEMS

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Annual growth of the electricity demand at power station busbars Monthly distribution of the electricity demand at power station busbars

Evolution of the monthly electricity demand at power station busbars Annual evolution of electricity demand coverage

Annual balance of electrical energy

NP



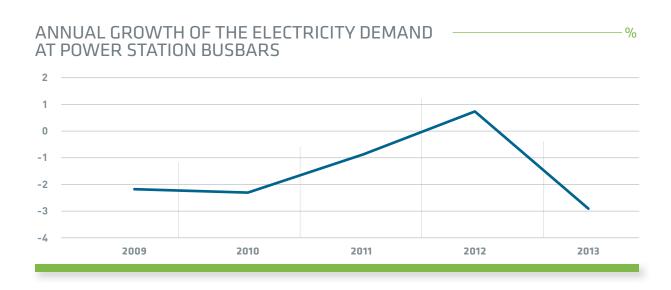
109	Installed capacity as at 31.12.2013 Annual evolution of electrical energy demand
110	Monthly growth of electrical energy demand at power station busbars Peak demand of average hourly and daily energy
111	Variations in generator equipment within ordinary regime Increase in line capacity in 2013 Transformers inventoried in 2013

113

Evolution of the transmission and transformer capacity system Quality of the transmission grid

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

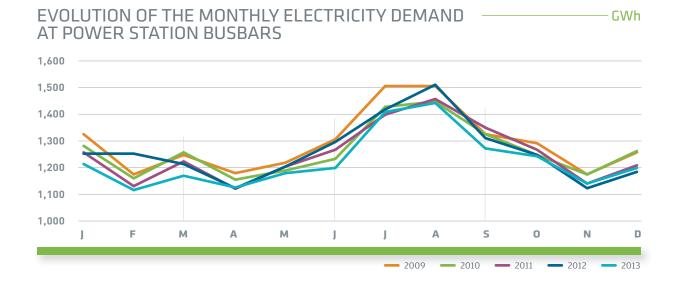




MONTHLY DISTRIBUTION OF THE ELECTRICITY DEMAND — AT POWERSTATION BUSBARS

		2009		2010		2011		2012		2013	
	GWh	%									
January	1,324	8.5	1,281	8.4	1,258	8.4	1,255	8.3	1,214	8.3	
February	1,176	7.6	1,160	7.7	1,132	7.5	1,251	8.3	1,117	7.6	
March	1,249	8.0	1,258	8.3	1,225	8.2	1,214	8.0	1,171	8.0	
April	1,179	7.6	1,156	7.6	1,122	7.5	1,124	7.4	1,125	7.7	
Мау	1,220	7.9	1,192	7.9	1,205	8.0	1,203	7.9	1,180	8.0	
June	1,305	8.4	1,231	8.1	1,266	8.4	1,296	8.6	1,198	8.1	
July	1,505	9.7	1,426	9.4	1,399	9.3	1,419	9.4	1,408	9.6	
August	1,504	9.7	1,449	9.6	1,456	9.7	1,511	10.0	1,442	9.8	
September	1,327	8.6	1,325	8.7	1,352	9.0	1,312	8.7	1,272	8.6	
October	1,292	8.3	1,248	8.2	1,265	8.4	1,250	8.3	1,246	8.5	
November	1,177	7.6	1,177	7.8	1,141	7.6	1,124	7.4	1,140	7.7	
December	1,259	8.1	1,262	8.3	1,210	8.1	1,186	7.8	1,198	8.1	
Total	15,518	100.0	15,166	100.0	15,031	100.0	15,145	100.0	14,710	100.0	





ANNUAL EVOLUTION OF ELECTRICITY DEMAND COVERAGE

	2009	2010	2011	2012	2013	%13/12
						/013/12
Hydro	0	0	0	0	0	-
Coal	3,450	3,381	3,031	2,941	2,591	-11.9
Fuel / gas (1)	7,934	7,721	7,471	7,533	6,995	-7.1
Combined cycle	3,961	3,991	4,406	3,917	3,581	-8.6
Auxiliary generation (2)	39	7	9	9	7	-21.7
Ordinary regime	15,384	15,100	14,916	14,399	13,175	-8.5
Consumption in generation	-882	-899	-882	-850	-784	-7.8
Hydro	0	0	2	2	3	70.2
Wind	364	337	360	368	370	0.4
Solar photovoltaic	243	283	333	372	409	9.8
Renewable thermal	273	161	33	9	9	5.9
Non-renewable thermal	135	184	268	274	260	-5.4
Special regime	1,016	965	996	1,025	1,050	2.5
Net generation	15,518	15,166	15,031	14,574	13,441	-7.8
Balearic Islands' link (3)	-	-	0.5	570	1,269	-
Demand at power station busbars	15,518	15,166	15,031	15,145	14,710	-2.9

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

RED ELÉCTRICA DE ESPAÑA 107

NP

-GWh

NON-PENINSULAR SYSTEMS

	BALEARIC	ISLANDS	CANARY	ISLANDS		CEUTA		MELILLA		TOTAL
	GWh	%13/12	GWh	%13/12	GWh	%13/12	GWh	%13/12	GWh	%13/12
Hydro	-	-	0	-	-	-	-	-	0	-
Coal	2,591	-11.9	-	-	-	-	-	-	2,591	-11.9
Internal-combustion engines	767	-20.6	2,190	-1.9	220	-5.0	216	-6.1	3,393	-7.3
Gas turbine	526	51.2	380	-36.7	0.3	-53.7	0.1	-33.8	906	-4.4
Steam turbine	-	-	2,696	-7.8	-	-	-	-	2,696	-7.8
Fuel / gas	1,293	-1.6	5,266	-8.5	221	-5.1	216	-6.1	6,995	-7.1
Combined cycle	447	-52.6	3,134	5.4	-	-	-	-	3,581	-8.6
Auxiliary generation (1)	7	-21.7	0	-	-	-	-	-	7	-21.7
Ordinary regime	4,338	-16.7	8,401	-3.8	221	-5.1	216	-6.1	13,175	-8.5
Consumption in generation	-313	-10.3	-438	-6.1	-19	-8.3	-14	-3.8	-784	-7.8
Hydro	-	-	3	70.2	-	-	-	-	3	70.2
Wind	6	-5.4	364	0.5	-	-	-	-	370	0.4
Solar photovoltaic	122	5.6	287	11.8	-	-	0.1	-3.6	409	9.8
Renewable thermal	1	30.6	8	4.2	-	-	-	-	9	5.9
Non-renewable thermal	252	-7.5	0	-	-	-	8	248.2	260	-5.4
Special regime	381	-3.6	662	5.4	-	-	8	239.3	1,050	2.5
Net generation	4,405	-16.1	8,625	-3.0	202	-4.8	210	-3.5	13,441	-7.8
Balearic Islands' link (2)	1,269	-	-	-	_	-	-	-	1,269	-
Demand at power station busbars	5,674	-2.6	8,625	-3.0	202	-4.8	210	-3.5	14,710	-2.9

ANNUAL BALANCE OF ELECTRICAL ENERGY

 Emergency generators installed temporarily in specific zones to cover a deficit in generation.
 Peninsula-Balearic Islands' link working at minimum technical level until 13 August 2012. Positive value: import balance; Negative value: export balance.

NP

	BALEARIC	ISLANDS	CANARY	ISLANDS		CEUTA		MELILLA		TOTAL
	MW	%13/12	MW	%13/12	MW	%13/12	MW	%13/12	MW	%13/12
Hydro	-	-	1	0.0	-	-	-	-	1	0.0
Coal	510	0.0	_	_	-	_	-	_	510	0.0
Internal-combustion engines	199	0.0	566	3.6	83	0.0	70	0.0	918	2.2
Gas turbine	678	8.0	639	0.0	16	0.0	15	0.0	1,348	3.9
Steam turbine	-	-	713	0.0	-	-	-	-	713	0.0
Fuel / gas	877	6.0	1,918	1.0	99	0.0	85	0.0	2,979	2.4
Combined cycle	934	0.0	920	0.0	-	-	-	-	1,854	0.0
Auxiliary generation (1)	-	-	-	-	-	-	-	-	-	-
Total Ordinary regime	2,321	2.2	2,839	0.7	99	0.0	85	0.0	5,343	1.3
Hydro	-	-	0.5	0.0	-	-	-	-	0.5	0.0
Wind	4	0.0	153	5.2	-	-	-	-	157	5.0
Solar photovoltaic	78	0.2	165	1.9	-	-	0.1	0.0	243	1.3
Renewable thermal	2	0.0	3	0.0	-	-	-	-	5	0.0
Non-renewable thermal	86	0.0	33	0.0	-	-	2	0.0	121	0.0
Total Special regime (2)	169	0.1	355	3.1	-	-	2	0.0	527	2.1
Total	2,490	2.1	3,195	1.0	99	0.0	87	0.0	5,870	1.4

Emergency generators installed temporarily in specific zones to cover a deficit in generation.
 Provisional data. Source: National Commission for Markets and Competition (CNMC).

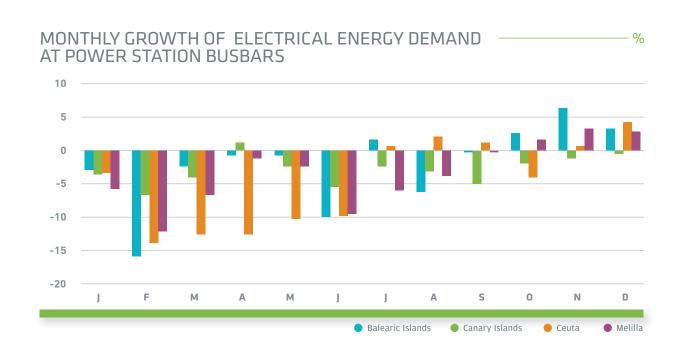
ANNUAL EVOLUTION OF ELECTRICAL ENERGY DEMAND

	BAL	EARIC ISLANDS	CANARY ISLANDS		CEUTA			MELILLA
	GWh	Δ ANNUAL (%)	GWh	Δ ANNUAL (%)	GWh	Δ ANNUAL (%)	GWh	Δ ANNUAL (%)
2009	5,993	-2.1	9,107	-2.4	212	0.9	206	2.4
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	8,625	-3.0	202	-4.8	210	-3.5

(**Δ**) Variation with respect to the previous year.







MAXIMUM HOURLY AND DAILY ELECTRICITY DEMAND

976	26 February (8-9 pm)	BALEARICS	4 October	18,317
1,187	7 August (9-10 pm)		7 August	23,374
1,378	31 December (7-8 pm)	CANADIES	1 October	25,569
1,336	30 September (8-9 pm)	CANARIES	23 August	26,850
36	28 February (8-9 pm)	CEUTA	11 December	649
35	5 September (1-2 pm)	CEUTA	21 August	657
36	12 February (8-9 pm)		3 October	646
37	26 August (1-2 pm)	MELILLA	6 August	709

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

VARIATIONS IN GENERATOR EQUIPMENT WITHIN ORDINARY REGIME -

		COMMISS	IONED		DECOMMISSION				
	ТҮРЕ	DATE	MW	ТҮРЕ	DATE	MW			
Balearic Islands									
Formentera AUX	Emergency generators	June-13	10	Emergency generators	September-13	10			
Ibiza TG7 (A and B)	Gas turbine	May-13	50						
Canary Islands									
Llanos Blancos generating unit 16	Diesel engines	October-13	2						
Punta Grande generating unit 11 (1)	Diesel engines	October-13	18						
Total			80			10			

(1) Generating unit in test phase.

INCREASE IN LINE CAPACITY IN 2013

LINE	VOLTAGE (kV)	km	INCREASE IN CAPACITY (MVA) (*)
Balearic Islands			
L/ Santa Maria-Vinyeta	66	10.2	14
L/ Bunyola-Ses Veles	66	7.5	30
Canary Islands			
L/ Jinámar-Barranco Seco	66	2.9	43
Total		20.6	

(*) Capacity of the conductor indicated in the execution project. This capacity may vary depending on the operating conditions and the time of year (MVA per circuit).

TRANSFORMERS INVENTORIED IN 2013

		VOLTAGE	TRANSFORMER CAPACITY			
	COMPANY	kV	kV	MVA		
Balearic Islands						
San Martín TR1	Red Eléctrica	220	220/66	125		
San Martín TR2	Red Eléctrica	220	220/66	125		
Total				250		

EVOLUTION OF THE TRANSMISSION SYSTEM AND TRANSFORMER CAPACITY

		2009	2010	2011	2012	2013
km of 220 kV circuit	Balearic Islands	185	185	430	430	430
	Canary Islands	163	163	163	163	163
	Total	348	348	594	594	594
km of \leq 132 kV circuit	Balearic Islands	1,083	1,095	1,110	1,113	1,113
	Canary Islands	1,126	1,126	1,126	1,126	1,126
	Total	2,209	2,221	2,236	2,239	2,239
Transformer	Balearic Islands	1,998	1,998	2,248	2,498	2,748
capacity (MVA)	Canary Islands	1,375	1,625	1,625	1,625	1,625
	Total	3,373	3,623	3,873	4,123	4,373
					the elitical end of the second	e e utre e d'indre

Includes submarine links.

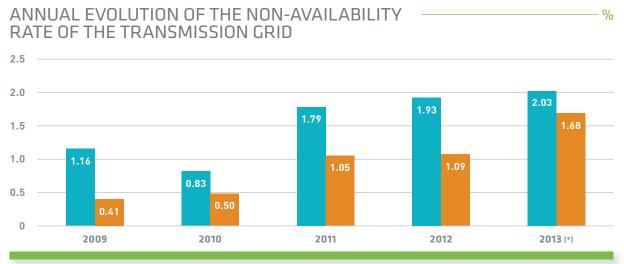
QUALITY OF THE TRANSMISSION GRID

		ENS (MWh)		AIT (minutes)
	BALEARIC ISLANDS	CANARY ISLANDS	BALEARIC ISLANDS	CANARY ISLANDS
2009	39.1	1,678.5	3.41	96.89
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

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







🛛 🔵 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. (*) Provisional data pending audit.

HE SPANISH ELECTRICITY SYSTEM **2013**

AC THE ELECTRICITY SYSTEM PER AUTONOMOUS COMMUNITY

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Electrical energy balance

Ordinary regime production structure by power station type

Ordinary regime and special regime generation

 Installed capacity - ordinary regime Ordinary regime installed capacity structure by power station type
 Location of the main electricity power stations
 Production at power station busbars of thermal power stations on the peninsula

Installed capacity - special regime

122



- Special regime installed capacity 123 structure Structure of the energy acquired to special regime Energy acquired from special regime 124 Energy exchange balance per 125 autonomous community Transmission grid access requests 126 from new generation 1999-2014 Access to the transmission grid. New ordinary regime generation 1999-2014
- Access to the transmission grid. New special regime generation 1999-2014
 Access to the transmission grid. Demand and distribution 1999-2014
 Energy Not Supplied and Average Interruption Time

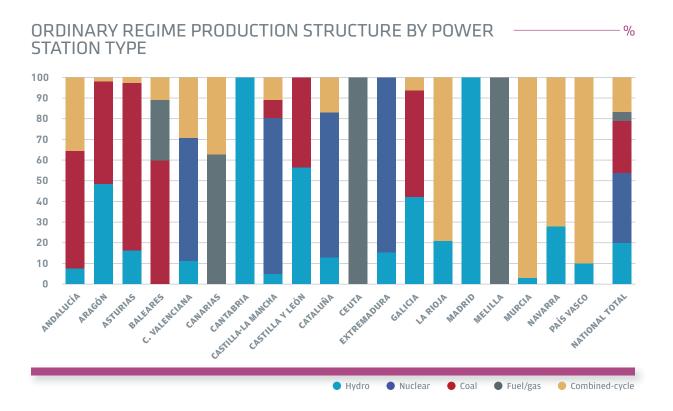
RED ELÉCTRICA DE ESPAÑA 115

ELECTRICAL ENEI	RGY BA	LANC	Е —							— GWł
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		uciA	alt -	AS	atts in	CIANIA CIA	5	RIA LI	ALA M. LA	VILED IN
	AN	JAUUCIA ARA	jon ASTUR	IAS BALEP	RES C. VALEN	Cland Canadal	S CANTAR	CASTILL	CASTILIA RANCHA	CATALINA
Hydro	1,303	3,594	1,911	-	1,584	0	611	551	7,955	4,607
Nuclear	-	-	-	-	8,327	-	-	8,003	0	24,777
Coal	9,775	3,777	9,224	2,591	_	-	-	929	6,216	_
Fuel / gas (1)	-	-	-	1,300	_	5,266	-	-	-	0
Combined-cycle	5,991	101	317	447	4,051	3,134	-	1,144	-	5,875
Ordinary regime	17,069	7,471	11,452	4,338	13,962	8,401	611	10,627	14,172	35,259
Generation consumption	-675	-395	-702	-313	-452	-438	-7	-704	-592	-1,302
Special regime	18,296	9,707	2,895	381	5,321	662	1,657	12,907	17,303	11,148
Net generation	34,689	16,784	13,646	4,405	18,832	8,625	2,261	22,830	30,883	45,105
Pumped storage	/ 71	2/0	-77		1 500		750	207	1 700	225
consumption	-471	-368		-	-1,520	-	-759	-207	-1,729	-335
Energy exchange bal. (2)	3,062	-6,226	-3,041	1,269	8,303	-	2,960	-10,878	-15,568	2,353
Demand at power station busbars 2013	37,280	10,190	10,527	5,674	25,615	8,625	4,462	11,745	13,586	47,122
Demand at power station busbars 2012	38,268	10,307	10,766	5,823	26,360	8,893	4,549	12,079	13,947	48,170
% 13/12	-2.6	-1.1	-2.2	-2.6	-2.8	-3.0	-1.9	-2.8	-2.6	-2.2
	LEV	TA EXTR	EMADURA GALLEY	ALARIY	NA MADRID	MELILLA	MURCIA	NAVAR	A PAISVAS	o rotal
Hydro	-	2,855	8,226	106	69	-	76	146	375	33,970
Nuclear	-	15,721	-	-	-	-	-	-	-	56,827
Coal	-	-	9,885	-	-	-	-	-	-	42,398
Fuel / gas (1)	221	-	-	-	-	216	-	-	-	7,002
Combined-cycle	-	-	1,208	406	-	-	2,415	381	3,203	28,672
Ordinary regime	221	18,576	19,319	512	69	216	2,491	527	3,578	168,870
Generation consumption	-19	-656	-636	-11	-1	-14	-73	-21	-45	-7,054
Special regime	-	2,977	14,398	1,438	1,564	8	3,463	4,872	2,900	111,897
Net generation	202	20,897	33,081	1,940	1,632	210	5,881	5,378	6,434	273,713
Pumped storage consumption	-	-57	-436	0	0	-	0	0	0	-5,958
Energy exchange bal. (2)	-	-16,253	-13,107	-285	28,537	-	1,920	-658	10,882	-6,732
Demand at power station busbars 2013	202	4,586	19,538	1,655	30,169	210	7,801	4,720	17,316	261,023
Demand at power										
station busbars 2012	212	4,701	19,944	1,692	30,830	217	7,992	4,845		267,227
% 13/12	-4.8	-2.4	-2.0	-2.2	-2.1	-3.5	-2.4	-2.6	-1.8	-2.3

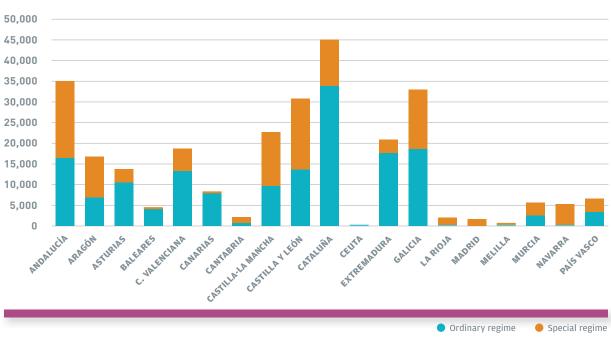
(1) Generation by auxiliary units is included in the Balearic Islands' electricity system. (2) Provisional value. Includes values corresponding to intra-national and international energy exchange balances. Positive values indicate an import exchange balance and negative values show an export exchange balance.



THE ELECTRICITY SYSTEM PER AUTONOMOUS COMMUNITY



ORDINARY REGIME AND SPECIAL REGIME GENERATION _____ GWh



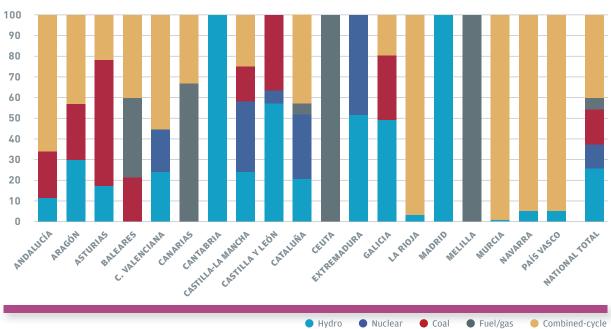
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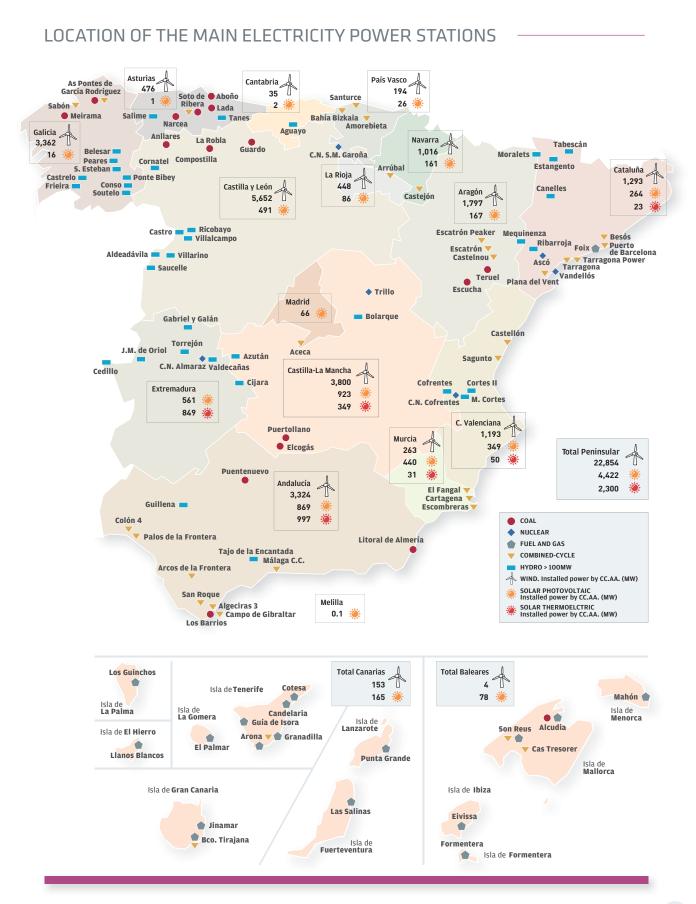
INSTALLED CAF	PACITY - C	RDINA	ARY RI	EGIME						— MW
	ANDALL	tia ARACON	ASTURIAS	BALEARES	c. valent	CANARIAS CANARIAS	CANTABRI	A CASTILA	LAMANCHA LASTILA	CATALUNA CATALUNA
Hydro	1,051	1,310	748	-	1,279	1	389	781	4,253	2,104
Nuclear	-	-	-	-	1,092	-	-	1,067	466	3,147
Coal	2,071	1,261	2,473	510	-	-	-	541	2,735	-
Fuel / gas	-	-	-	877	-	1,918	-	-	-	520
Combined-cycle	6,035	1,898	865	934	2,902	920	-	771	-	4,261
Total 2013	9,158	4,470	4,087	2,321	5,273	2,839	389	3,160	7,454	10,031
Total 2012	9,158	4,470	4,087	2,271	5,273	2,820	389	3,160	7,454	10,031
% 13/12	0.0	0.0	0.0	2.2	0.0	0.7	0.0	0.0	0.0	0.0
			URA							•
	LEUTA	EXTREM	GALICIA GALICIA	LARIOIA	MADRID	MELILLA	MURCIA	NAVARR	PAISVAS	TOTAL
Hydro	-	2,292	3,268	30	61	-	24	77	120	17,786
Nuclear	-	2,094	-	-	-	-	-	-	_	7,866
Coal	-	-	2,049	-	-	_	_	_	_	11,641
Fuel / gas	99	-	-	-	-	85	-	-	_	3,498
Combined-cycle	-	-	1,268	799	-	-	3,318	1,236	1,998	27,206
Total 2013	99	4,386	6,585	829	61	85	3,342	1,313	2,118	67,998
Total 2012	99	4,386	6,570	829	58	85	3,342	1,313	2,118	67,911
% 13/12	0.0	0.0	0.2	0.0	4.0	0.0	0.0	0.0	0.0	0.1

ORDINARY REGIME INSTALLED CAPACITY STRUCTURE BY POWER STATION TYPE





THE ELECTRICITY SYSTEM PER AUTONOMOUS COMMUNITY



CA

PRODUCTION AT POWER STATION BUSBARS OF THERMAL — POWER STATIONS ON THE PENINSULA

	ТҮРЕ	POWER		EN	ERGY (GWh)
POWER STATIONS	OF TATION	(MW)	2012	2013	% 13/12
Puentenuevo 3	Coal	324	1,127	703	-37.6
Litoral de Almería	Coal	1,159	6,846	6,148	-10.2
Los Barrios	Coal	589	3,556	2,924	-17.8
San Roque 1	Combined-cycle	397	1,914	1,858	-3.0
San Roque 2	Combined-cycle	402	139	223	60.0
Arcos 1	Combined-cycle	396	0	0	-
Arcos 2	Combined-cycle	379	1	15	-
Arcos 3	Combined-cycle	844	175	102	-41.7
Palos 1	Combined-cycle	394	575	335	-41.8
Palos 2	Combined-cycle	396	686	440	-35.8
Palos 3	Combined-cycle	398	844	723	-14.3
Campo de Gibraltar 1	Combined-cycle	393	1,164	209	-82.1
Campo de Gibraltar 2	Combined-cycle	388	1,510	207	-86.3
Colón 4	Combined-cycle	398	386	165	-57.1
Algeciras 3 CC	Combined-cycle	831	518	0,2	-
Málaga 1 CC	Combined-cycle	421	2,089	1,713	-18.0
Andalucía		8,107	21,530	15,766	-26.8
Escucha	Coal	159	439	0	-
Teruel	Coal	1,102	4,864	3,777	-22.3
Castelnou	Combined-cycle	798	51	90	76.2
Escatrón 3	Combined-cycle	818	907	3	-99.7
Escatrón Peaker	Combined-cycle	283	13	8	-42.3
Aragón		3,160	6,275	3,878	-38.2
Aboño	Coal	916	5,591	5,748	2.8
Lada (1)	Coal	358	1,892	1,432	-24.3
Narcea	Coal	595	1,725	899	-47.9
Soto de la Ribera	Coal	604	1,628	1,145	-29.6
Soto de la Ribera 4	Combined-cycle	432	629	236	-62.5
Soto de la Ribera 5	Combined-cycle	434	173	81	-53.4
Asturias		3,339	11,639	9,541	-18.0
Trillo I	Nuclear	1,067	8,502	8,003	-5.9
Puertollano	Coal	221	603	30	-95.0
Aceca (2)	Fuel/gas	-	0	-	-
Aceca 3	Combined-cycle	392	457	189	-58.6
Aceca 4	Combined-cycle	379	2,168	954	-56.0
GICC-PL ELCOGAS	Coal	320	1,401	899	-35.8
Castilla-La Mancha		2,379	13,131	10,076	-23.3
Garoña (3)	Nuclear	466	3,873	0	_
Anllares	Coal	365	1,689	863	-48.9
Compostilla	Coal	1,200	5,355	2,560	-52.2
Guardo	Coal	516	1,792	1,105	-38.3
La Robla	Coal	655	2,360	1,689	-28.4
Castilla y León		3,201	15,068	6,216	-58.7
Ascó I	Nuclear	1,033	7,739	9,055	17.0
Ascó II	Nuclear	1,027	8,276	7,638	-7.7
Vandellós II	Nuclear	1,087	8,053	8,083	0.4
Cercs (4)	Coal	-	0	-	
Foix	Fuel/gas	520	0	0	_
Besós 3	Combined-cycle	419	326	162	-50.4
20000	combined cycle	417	020	102	50.4

(CONTINUES ON NEXT PAGE ightarrow)

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PRODUCCIÓN EN B.A. DE LAS CENTRALES TÉRMICAS PENINSULARES

	ТҮРЕ	POWER		E	NERGY (GWh)
POWER STATIONS	OF TATION	(MW)	2012	2013	% 13/12
Besós 4	Combined-cycle	407	1,941	2,186	12.6
Besós 5	Combined-cycle	873	1,466	702	-52.1
Tarragona Endesa	Combined-cycle	400	57	0	-
Tarragona Power	Combined-cycle	424	526	138	-73.8
Plana del Vent 1	Combined-cycle	426	1,091	258	-76.4
Plana del Vent 2	Combined-cycle	421	1,021	426	-58.3
Puerto de Barcelona 1	Combined-cycle	447	732	1,244	70.0
Puerto de Barcelona 2	Combined-cycle	445	1,146	760	-33.7
Cataluña		7,927	32,375	30,652	-5.3
Cofrentes	Nuclear	1,092	9,378	8,327	-11.2
Castellón 3	Combined-cycle	793	72	50	-30.1
Castellón 4	Combined-cycle	85	746	479	-35.8
Sagunto 1	Combined-cycle	417	2,074	1,547	-25.4
Sagunto 2	Combined-cycle	420	1,422	946	-33.5
Sagunto 3	Combined-cycle	419	589	1,028	74.4
C, Valenciana		3,994	14,282	12,378	-13.3
Almaraz I	Nuclear	1,049	7,610	8,001	5.1
Almaraz II	Nuclear	1,044	8,039	7,720	-4.0
Extremadura		2,094	15,649	15,721	0.5
Meirama	Coal	580	2,900	2,529	-12.8
Puentes García Rodríguez	Coal	1,468	9,927	7,356	-25.9
Puentes García Rodríguez 5	Combined-cycle	870	452	258	-42.8
Sabón 3	Combined-cycle	397	891	950	6.6
Galicia		3,317	14,170	11,093	-21.7
Arrúbal 1	Combined-cycle	402	672	228	-66.0
Arrúbal 2	Combined-cycle	397	670	177	-73.5
La Rioja		799	1,342	406	-69.8
Cartagena 1	Combined-cycle	425	1,201	794	-33.9
Cartagena 2	Combined-cycle	425	904	582	-35.7
Cartagena 3	Combined-cycle	419	805	945	17.5
El Fangal 1	Combined-cycle	409	36	34	-6.9
El Fangal 2	Combined-cycle	408	111	19	-82.5
El Fangal 3	Combined-cycle	402	91	40	-55.5
Escombreras 6	Combined-cycle	831	36	0	-
Murcia		3,318	3,185	2,415	-24.2
Castejón 1	Combined-cycle	429	335	243	-27.4
Castejón 2	Combined-cycle	381	7	0	-
Castejón 3	Combined-cycle	426	521	138	-73.5
Navarra		1,236	863	381	-55.8
Amorebieta	Combined-cycle	795	849	169	-80.1
Pasajes (5)	Coal	-	1,027	-	-
Bahía de Bizkaia	Combined-cycle	800	3,349	3,032	-9.5
Santurce 4	Combined-cycle	403	50	1	-97.9
País Vasco		1,998	5,275	3,203	-39.3
Total		44,870	154,784	121,725	-21.4

Lada 3 decommissioned in December 2012.
 Aceca 1 decommissioned in December 2012.
 Inactive since December 2012.
 Decommissioned in June 2012.
 Decommissioned in December 2012.

CA

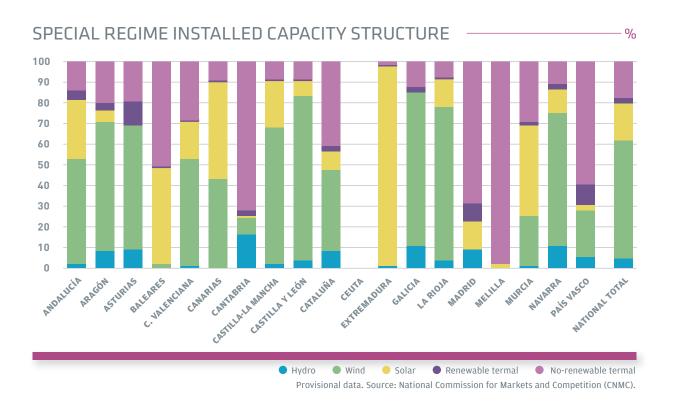


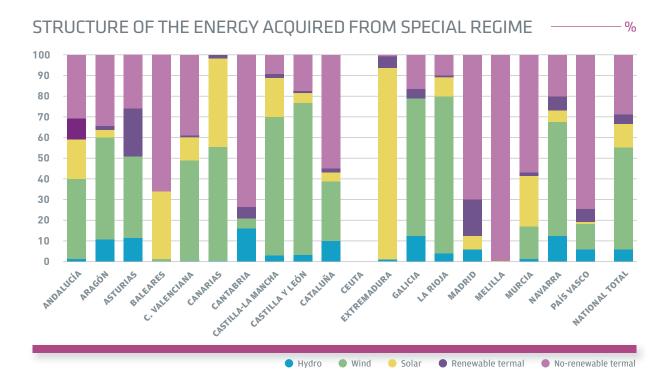
INSTALLED CAPA	CITY - S	PECIA	L REGI	ME -						— MW
	ANDALU	the ARACON	ASTURIAS	BALFARES	C. VALENCIP	CAMARIAS	CANTABRI	A LASTILA	A MANCHA	LEON
Hydro	143	257	77	-	31	0,5	72	126	256	286
Wind	3,324	1,797	476	4	1,193	153	35	3,800	5,652	1,293
Solar photovoltaic	869	167	1	78	349	165	2	923	491	264
Solar thermoelectric	997	-	-	-	50	-	-	349	-	23
Renewable termal	291	87	87	2	26	3	13	58	28	75
No-renewable termal	932	602	156	86	654	33	311	472	637	1,342
Total 2013	6,557	2,910	797	169	2,303	355	433	5,730	7,064	3,282
Total 2012	6,448	2,900	754	169	2,254	345	435	5,717	6,998	3,231
% 13/12	1.7	0.3	5.7	0.1	2.2	3.1	-0.5	0.2	0.9	1.6
			IRA							_
	CEUTA	EXTREME	JURA CALILIA	LARIOIA	MADRID	MELILLA	MURCIA	MANARRA	PAISVAS	o rotal
Hydro	CEUTA	EXTREM [®]	talica 522	LARIOIA 27	MADRID 44	MELILLA	MURLIA 14	NAVARRA 171	PAIS ^{VAST} 55	,0 ,01 ⁶¹ 2,102
Hydro Wind										
•	-		522	27	44		14	171	55	2,102
Wind	-	20	522 3,362	27 448	- 44	-	14 263	171 1,016	55 194	2,102 23,010
Wind Solar photovoltaic	-	20 - 561	522 3,362 16	27 448 86	44 - 66	- - 0.1	14 263 440	171 1,016 161	55 194	2,102 23,010 4,665
Wind Solar photovoltaic Solar thermoelectric		20 - 561 849	522 3,362 16 -	27 448 86 -	44 - 66 -	- - 0.1 -	14 263 440 31	171 1,016 161 -	55 194 26 -	2,102 23,010 4,665 2,300
Wind Solar photovoltaic Solar thermoelectric Renewable termal	- - - -	20 - 561 849 17	522 3,362 16 - 95	27 448 86 - 4	44 - 66 - 43	- 0.1 -	14 263 440 31 21	171 1,016 161 - 47	55 194 26 - 83	2,102 23,010 4,665 2,300 980
Wind Solar photovoltaic Solar thermoelectric Renewable termal No-renewable termal		20 - 561 849 17 19	522 3,362 16 - 95 574	27 448 86 - 4 46	44 - 66 - 43 326	- 0.1 - 2	14 263 440 31 21 321	171 1,016 161 - 47 175	55 194 26 - 83 523	2,102 23,010 4,665 2,300 980 7,210

Provisional data. Source: National Commission for Markets and Competition (CNMC).



THE ELECTRICITY SYSTEM PER AUTONOMOUS COMMUNITY





RED ELÉCTRICA DE ESPAÑA 123

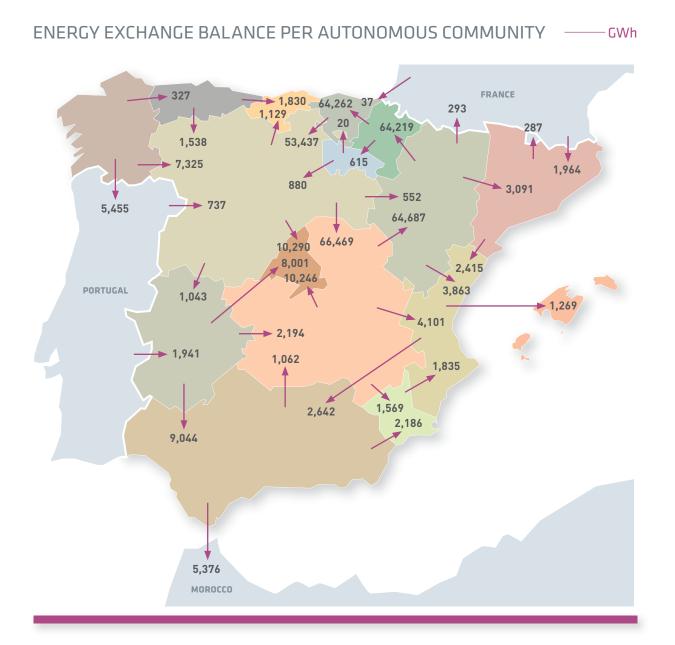
CA

ENERGY ACQUIRI	ED FROI	M SPE	CIAL R	EGIME	(1) —					— GWh
	ANDALL	tia ARACIÓN	ASTURIA	BALEARE	c.valent	CANARIAS	CANTABE	LIA LASTILLA	LAMANCHA CASILLA	LEON CATALUNA
Hydro	331	1,013	331	-	25	3	279	491	628	1,099
Wind	6,987	4,869	1,141	6	2,595	364	75	8,657	12,681	3,195
Solar photovoltaic	1,586	309	1	122	564	287	2	1,697	848	431
Solar thermoelectric	1,988	-	-	-	10	-	-	678	-	74
Renewable termal	1,764	228	666	1	53	8	82	238	181	259
No-renewable termal	5,640	3,288	757	252	2,075	0	1,220	1,146	2,965	6,090
Total 2013	18,296	9,707	2,895	381	5,321	662	1,657	12,907	17,303	11,148
Total 2012	16,578	8,948	2,501	395	5,262	628	1,994	12,231	16,039	10,289
% 13/12	10.4	8.5	15.8	-3.6	1.1	5.4	-16.9	5.5	7.9	8.3
			IRA							
	CENTA	EXTREM	ADURA CALICIA					NAVAR		o total
Hydro			LAUIRA CALICIA 1,844					NAVARA 627		0 101 ⁰¹ 7,102
Hydro Wind		EXTREM		LARIOIA	MADRID	WEIIILA	MURCIA		A PAISVASS	
· · · · · · · · · · · · · · · · · · ·		EXTREM	1,844	LARIONA 68	MADRIE 100	MELILLA	MURCIA 56	627	paisvass 168	7,102
Wind	CHUTA	88 -	1,844 9,496	1,078	ма ^{ран} 100	WEITT	ми ^{рсил} 56 544	627 2,665	рајсиас 168 356	7,102 54,708
Wind Solar photovoltaic		<mark>енте</mark> ни 38 - 1,110	1,844 9,496	1,078	иллен 100 - 92	- 0.1	NUPELP 56 544 802	627 2,665 295	ранстанов 168 356 28	7,102 54,708 8,324
Wind Solar photovoltaic Solar thermoelectric		5470 38 - 1,110 1,649	1,844 9,496 20 -	1,078	марени 100 - 92 -	- - 0.1	wu ^{peth} 56 544 802 43	627 2,665 295 -	A paisures 168 356 28 -	7,102 54,708 8,324 4,442
Wind Solar photovoltaic Solar thermoelectric Renewable termal		ентрени 38 - 1,110 1,649 150	1,844 9,496 20 - 597	LA ^{RIOIA} 68 1,078 130 - 12	ниденя 100 - 92 - 286	- - 0.1 -	NUREIA 56 544 802 43 58	627 2,665 295 - 304	A 168 168 356 28 - 187 2,161	7,102 54,708 8,324 4,442 5,073
Wind Solar photovoltaic Solar thermoelectric Renewable termal No-renewable termal		extreme 38 - 1,110 1,649 150 30	1,844 9,496 20 - 597 2,440	1,078 68 1,078 130 - 12 150	млени 100 - 92 - 286 1,086	- - 0.1 - 8	wi ^{petre} 56 544 802 43 58 1,960	627 2,665 295 - 304 982	 A paisure Paisure 168 356 28 - 187 2,161 2,900 	7,102 54,708 8,324 4,442 5,073 32,248

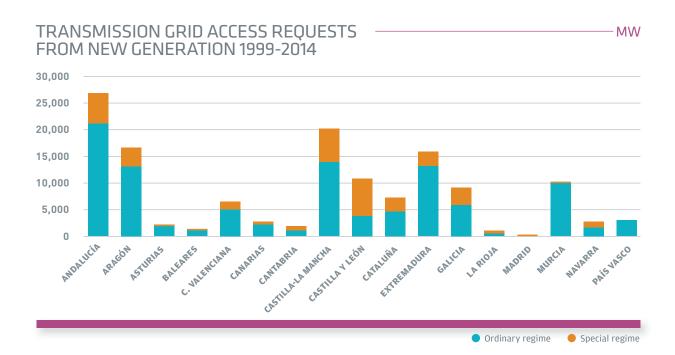
(1) Provisional data. Energy actually evacuated into the electricity system by special regime generators. Does not include the generation destined to the auto-consumption of the power station owners.



THE ELECTRICITY SYSTEM PER AUTONOMOUS COMMUNITY



CA



ACCESS TO THE TRANSMISSION GRID. NEW ORDINARY REGIME GENERATION 1999-2014 (*)

	NUMBER OF REQUESTS RECEIVED	REQUESTS RECEIVED (MW)	REQUESTS MANAGED (MW)	REQUESTS PENDING REPLY COMPLETE DOCUMENT. (MW)	REQUESTS PENDING REPLY INCOMPLETE DOCUMENT. (MW)
Andalucía	69	21,336	19,864	0	1,472
Aragón	25	13,334	13,084	0	250
Asturias	1	2,114	2,114	0	0
C, Valenciana	9	4,981	4,981	0	0
Cantabria	3	1,169	1,169	0	0
Castilla-La Mancha	44	13,899	9,591	0	4,308
Castilla y León	8	3,941	3,941	0	0
Cataluña	9	4,780	4,780	0	0
Extremadura	52	13,164	12,294	0	870
Galicia	12	6,013	4,513	0	1,500
La Rioja	1	785	785	0	0
Madrid	0	0	0	0	0
Murcia	24	10,066	8,414	0	1,652
Navarra	4	1,650	1,650	0	0
País Vasco	4	3,068	3,068	0	0
Peninsular total	265	100,299	90,248	0	10,051
Baleares	21	1,134	1,134	0	0
Canarias	22	2,273	1,888	0	385
Non-peninsular total	43	3,407	3,022	0	385
National Total	308	103,706	93,270	0	10,436

[*] Data as at 31 March 2014. Current magnituds that show for each of the indicated facilities the available updated values that take into account power cancellations and variations.

ACCESS TO THE TRANSMISSION GRID. NEW SPECIAL REGIME GENERATION 1999-2014 (*)

	NUMBER OF REQUESTS RECEIVED	REQUESTS RECEIVED (MW)	REQUESTS MANAGED (MW)	REQUESTS PENDING REPLY COMPLETE DOCUMENT. (MW)	REQUESTS PENDING REPLY INCOMPLETE DOCUMENT. (MW)
Andalucía	52	5,548	5,548	0	0
Aragón	35	3,402	3,402	0	0
Asturias	1	7	7	0	0
C, Valenciana	6	1,498	1,498	0	0
Cantabria	4	713	713	0	0
Castilla-La Mancha	25	6,126	6,121	0	5
Castilla y León	58	6,803	6,664	0	139
Cataluña	21	2,571	2,202	0	369
Extremadura	35	2,805	2,805	0	0
Galicia	46	3,203	3,203	0	0
La Rioja	6	374	374	0	0
Madrid	2	77	77	0	0
Murcia	1	265	265	0	0
Navarra	15	1,192	915	0	276
País Vasco	0	0	0	0	0
Peninsular total	307	34,583	33,794	0	789
Baleares	5	86	86	0	0
Canarias	27	613	591	0	22
Non-peninsular total	32	699	677	0	22
National Total	339	35,283	34,471	0	812

(*) Data as at 31 March 2014. Current magnituds that show for each of the indicated facilities the available updated values that take into account power cancellations and variations.

ACCESS TO THE TRANSMISSION GRID. -DEMAND AND DISTRIBUTION 1999-2013 (*)

	NUMBER OF REQUESTS RECEIVED	REQUESTS RECEIVED (MW)	REQUESTS MANAGED (MW)	REQUESTS PENDING REPLY COMPLETE DOCUMENT. (MW)	REQUESTS PENDING REPLY INCOMPLETE DOCUMENT. (MW)
Andalucía	87	12,216	12,216	0	0
Aragón	28	4,890	4,890	0	0
Asturias	12	2,455	2,455	0	0
C, Valenciana	75	10,335	10,335	0	0
Cantabria	11	976	976	0	0
Castilla-La Mancha	27	3,540	3,540	0	0
Castilla y León	29	2,758	2,758	0	0
Cataluña	107	13,843	13,420	0	423
Extremadura	22	2,993	2,993	0	0
Galicia	37	3,983	3,903	0	80
La Rioja	6	505	505	0	0
Madrid	87	11,460	11,360	0	100
Murcia	12	2,595	2,535	60	0
Navarra	11	1,055	1,055	0	0
País Vasco	25	2,245	2,245	0	0
Peninsular total	576	75,849	75,186	60	603
Baleares	37	1,767	1,617	0	151
Canarias	34	1,666	1,666	0	0
Non-peninsular total	71	3,433	3,282	0	151
National Total	647	79,281	78,468	60	754

(*) Data as at 31 March 2014. Current magnituds that show for each of the indicated facilities the available updated values that take into account power cancellations and variations.

ENERGY NOT SUPPLIED AND AVERAGE — INTERRUPTION TIME

		ENS (MWh)		AIT (minutes)
	RED ELÉCTRICA	TRANSMISSION GRID	RED ELÉCTRICA	TRANSMISSION GRID
Andalucía	96.5	96.5	1.36	1.36
Aragón	0.1	0.1	0.00	0.00
Asturias	0.0	0.0	0.00	0.00
Baleares	79.5	81.0	7.37	7.50
C. Valenciana	0.0	0.0	0.00	0.00
Canarias	2.9	2.9	0.18	0.18
Cantabria	581.2	581.2	68.47	68.47
Castilla-La Mancha	2.9	2.9	0.13	0.13
Castilla y León	0.0	0.0	0.00	0.00
Cataluña	26.1	26.1	0.29	0.29
Extremadura	0.0	0.0	0.00	0.00
Galicia	411.3	411.3	11.07	11.07
La Rioja	0.0	0.0	0.00	0.00
Madrid	7.9	38.1	0.14	0.66
Murcia	0.0	0.0	0.00	0.00
Navarra	0.0	0.0	0.00	0.00
País Vasco	0.0	0.0	0.00	0.00

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

THE SPANISH ELECTRICITY SYSTEM **2013**

INTERNATIONAL COMPARISON

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IC

Total net electricity generation of European Union countries which are members of the Continental Europe (ENTSO-E) Increase in total net electricity

generation 2013 compared to 2012

Electricity demand of European Union countries which are membersof the Continental Europe (ENTSO-E)

Increase in electricity demand 2013 compared to 2012

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Increase in electricity demand 2013 compared to 2009

Consumption per capita of European Union countries which are members of the Continental Europe (ENTSO-E)

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



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

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

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

Structure of net installed power in European Union countries which are members of the Continental Europe (ENTSO-E) International physical energy exchanges in ENTSO-E member countries and neighbouring countries

Map of international physical energy exchanges in ENTSO-E member countries and neighbouring countries (Map)

Transmission tariffs in ENTSO-E member countries

----- %

TOTAL NET ELECTRICITY GENERATION OF EUROPEAN UNION COUNTRIES — TWh WHICH ARE MEMBERS OF THE CONTINENTAL EUROPE (ENTSO-E)

	2012	2013	% 13/12
Germany	570.8	571.8	0.2
Austria	72.0	67.7	-6.0
Belgium	76.6	78.3	2.2
Bulgaria	41.9	39.5	-5.8
Croatia	9.9	12.8	28.8
Slovakia	26.8	27.0	0.7
Slovenia	13.6	13.9	2.1
Spain	283.4	273.7	-3.4
France	541.5	550.8	1.7
Greece	50.5	47.5	-6.0
Netherlands	96.7	92.3	-4.5
Hungary	30.9	27.2	-12.2
Italy	287.7	276.0	-4.1
Luxembourg	3.7	2.8	-24.7
Poland	148.4	150.9	1.7
Portugal	42.6	47.8	12.4
Czech Republic	81.1	80.8	-0.4
Romania	54.3	54.5	0.3
Total	2,432.5	2,415.3	-0.7
		Sourc	e: ENTSO-E, Spain REE.

INCREASE IN TOTAL NET ELECTRICITY GENERATION _____ 2013 COMPARED TO 2012

Luxembourg												
Hungary												
Greece												
Austria												
Bulgaria												
Netherlands												
Italy												
Spain												
Czech Republic												
Germany												
Romania												
Slovakia												
Poland												
France												
Slovenia												
Belgium												
Portugal												
Croatia												
	-25 -3	20	-15	-10	-5	0	5	10	15	20	25	30

ELECTRICITY DEMAND OF EUROPEAN UNION COUNTRIES WHICH ARE MEMBERS OF THE CONTINENTAL EUROPE (ENTSO-E)						
	2012	2013	% 13/12			
Germany	539.9	530.6	-1.7			
Austria	69.3	69.6	0.5			
Belgium	84.9	86.2	1.6			
Bulgaria	32.5	32.2	-0.8			
Croatia	17.3	17.1	-1.3			
Slovakia	26.8	26.6	-0.7			
Slovenia	12.6	12.7	0.2			
Spain	267.2	261.0	-2.3			
France	489.4	495.1	1.2			
Greece	52.1	49.6	-4.8			
Netherlands	113.8	110.6	-2.9			
Hungary	38.9	39.0	0.3			
Italy	328.2	315.9	-3.7			
Luxembourg	6.3	6.2	-1.6			
Poland	144.9	145.5	0.4			
Portugal	49.1	49.2	0.2			
Czech Republic	63.0	62.7	-0.5			
Romania	54.4	52.3	-3.9			
Total	2,390.6	2,362.1	-1.2			

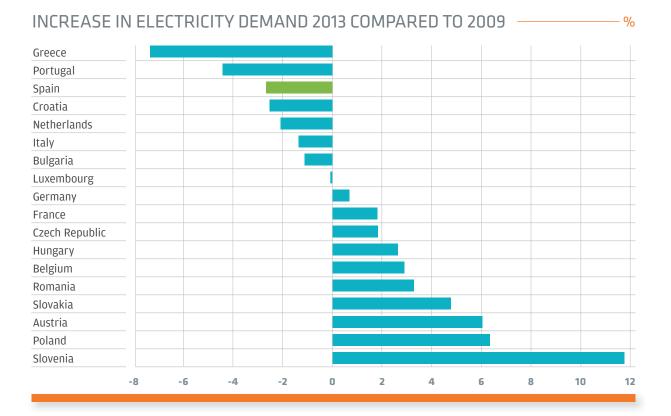
INCREASE IN ELECTRICITY DEMAND 2013 COMPARED TO 2012

Greece Romania Italy Netherlands Spain Germany Luxembourg Croatia Bulgaria Slovakia Czech Republic Portugal Slovenia Hungary Poland Austria France Belgium 2 -6 -4 -2 0 4

%

Source: ENTSO-E, Spain REE.

THE SPANISH ELECTRICITY SYSTEM **2013**



CONSUMPTION PER CAPITA OF EUROPEAN UNION COUNTRIES kWh/hat WHICH ARE MEMBERS OF THE CONTINENTAL EUROPE (ENTSO-E)					
	2012	2013	% 13/12		
Germany	6,721	6,589	-2.0		
Austria	8,237	8,236	0.0		
Belgium	7,648	7,726	1.0		
Bulgaria	4,430	4,422	-0.2		
Croatia	4,043	4,004	-1.0		
Slovakia	4,967	4,925	-0.8		
Slovenia	6,149	6,154	0.1		
Spain	5,708	5,586	-2.1		
France	7,497	7,550	0.7		
Greece	4,681	4,481	-4.3		
Netherlands	6,802	6,588	-3.1		
Hungary	3,917	3,939	0.6		
Italy	5,526	5,293	-4.2		
Luxembourg	11,984	11,530	-3.8		
Poland	3,760	3,776	0.4		
Portugal	4,654	4,687	0.7		
Czech Republic	6,000	5,963	-0.6		
Romania	2,708	2,613	-3.5		
Total	5,854	5,775	-1.3		

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

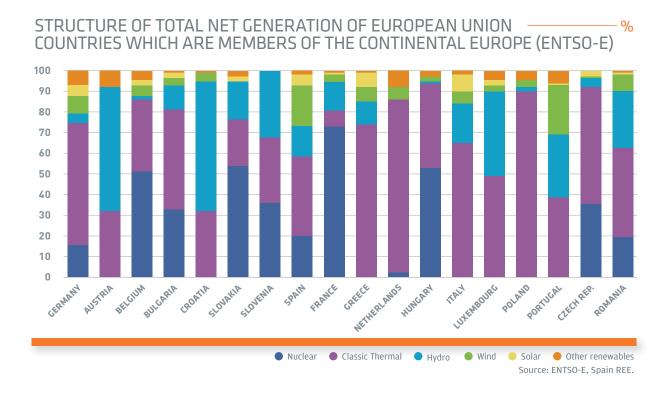
ORIGIN OF TOTAL NET GENERATION OF EUROPEAN UNION COUNTRIES ----- TWh WHICH ARE MEMBERS OF THE CONTINENTAL EUROPE (ENTSO-E)

	NUCLEAR	CLASSIC THERMAL	HYDRO	WIND	SOLAR	OTHER RENEWABLES	TOTAL
Germany	92.1	336.0	24.4	50.8	31.0	37.4	571.8
Austria	0.0	21.8	41.0	0.0	0.0	4.9	67.7
Belgium	40.6	26.9	1.7	3.6	2.4	3.1	78.3
Bulgaria	13.2	19.1	4.6	1.3	1.2	0.1	39.5
Croatia	0.0	4.1	8.0	0.5	0.0	0.1	12.8
Slovakia	14.7	6.0	5.0	0.0	0.6	0.7	27.0
Slovenia	5.0	4.4	4.5	0.0	0.0	0.0	13.9
Spain	54.2	106.3	40.6	54.7	12.8	5.1	273.7
France	403.7	45.0	75.5	15.8	4.6	6.2	550.8
Greece	0.0	35.4	5.2	3.4	3.4	0.2	47.5
Netherlands	2.5	77.0	0.0	5.6	0.0	7.3	92.3
Hungary	14.4	11.1	0.2	0.7	0.0	0.7	27.2
Italy	0.0	181.1	52.8	14.8	22.0	5.3	276.0
Luxembourg	0.0	1.3	1.1	0.1	0.1	0.1	2.8
Poland	0.0	135.7	3.0	5.7	0.0	6.5	150.9
Portugal	0.0	18.3	14.6	11.8	0.4	2.7	47.8
Czech Republic	29.0	45.6	3.7	0.5	2.0	0.0	80.8
Romania	10.7	23.6	14.9	4.6	0.4	0.3	54.5
Total	680.1	1,098.8	300.9	173.7	80.9	80.8	2,415.3

Source: ENTSO-E, Spain REE.



THE SPANISH ELECTRICITY SYSTEM **2013**



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

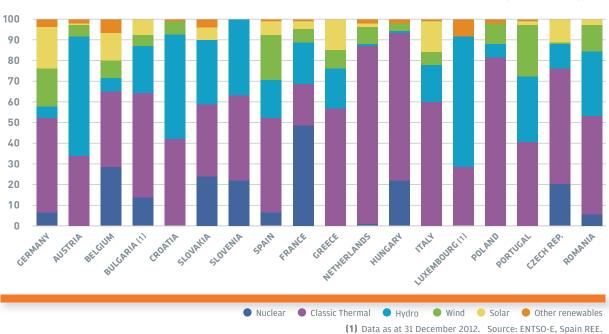
	HYDRO AND OTHER	NUCLEAR	CLASSIC THERMAL	TOTAL NET GENERATION	PUMPED STORAGE CONSUMPTION	EXCHANGE BALANCE	DEMAND
Germany	143.6	92.1	336.0	571.8	7.5	-33.8	530.6
Austria	45.9	0.0	21.8	67.7	5.4	7.3	69.6
Belgium	10.8	40.6	26.9	78.3	1.8	9.6	86.2
Bulgaria	7.2	13.2	19.1	39.5	1.0	-6.2	32.2
Croatia	8.7	0.0	4.1	12.8	0.2	4.5	17.1
Slovakia	6.3	14.7	6.0	27.0	0.4	0.1	26.6
Slovenia	4.5	5.0	4.4	13.9	0.0	-1.2	12.7
Spain	113.2	54.2	106.3	273.7	6.0	-6.7	261.0
France	102.2	403.7	45.0	550.8	7.1	-48.6	495.1
Greece	12.1	0.0	35.4	47.5	0.1	2.1	49.6
Netherlands	12.9	2.5	77.0	92.3	0.0	18.2	110.6
Hungary	1.6	14.4	11.1	27.2	0.0	11.9	39.0
Italy	95.0	0.0	181.1	276.0	2.4	42.3	315.9
Luxembourg	1.4	0.0	1.3	2.8	1.5	4.9	6.2
Poland	15.1	0.0	135.7	150.9	0.8	-4.5	145.5
Portugal	29.5	0.0	18.3	47.8	1.5	2.8	49.2
Czech Republic	6.2	29.0	45.6	80.8	1.2	-16.9	62.7
Romania	20.2	10.7	23.6	54.5	0.2	-2.0	52.3

Source: ENTSO-E, Spain REE.

THE SPANISH ELECTRICITY SYSTEM 2013

NET INSTALLED CAPACITY 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	84.4	10.8	34.0	36.9	6.4	184.6
Austria (1)	0.0	7.9	13.4	1.3	0.2	0.4	23.2
Belgium	5.9	7.5	1.4	1.7	2.7	1.3	20.6
Bulgaria (1)	2.0	6.7	3.2	0.7	1.0	0.0	13.6
Croatia	0.0	1.8	2.1	0.3	0.0	0.0	4.2
Slovakia	1.9	2.8	2.5	0.0	0.5	0.3	8.1
Slovenia	0.7	1.3	1.1	0.0	0.0	0.0	3.1
Spain	7.6	47.2	19.4	22.8	6.9	0.8	104.7
France	63.1	25.6	25.4	8.1	4.3	1.5	128.1
Greece	0.0	9.7	3.2	1.5	2.4	0.0	17.0
Netherlands	0.5	27.4	0.0	2.7	0.8	0.4	31.8
Hungary	1.9	6.2	0.1	0.3	0.0	0.1	8.6
Italy	0.0	74.8	22.0	8.5	18.3	0.7	124.3
Luxembourg (1)	0.0	0.5	1.1	0.0	0.0	0.1	1.8
Poland	0.0	29.2	2.3	3.4	0.0	0.7	35.6
Portugal	0.0	7.3	5.7	4.4	0.3	0.2	17.8
Czech Republic	4.0	11.2	2.2	0.3	2.1	0.0	19.9
Romania	1.3	9.5	6.2	2.5	0.6	0.0	20.1
Total	101.1	361.1	122.2	92.5	77.0	13.1	767.0

(1) Data as at 31 December 2012. Source: ENTSO-E, Spain REE.



STRUCTURE OF NET INSTALLED CAPACITY IN EUROPEAN UNION -% COUNTRIES WHICH ARE MEMBERS OF THE CONTINENTAL EUROPE (ENTSO-E)

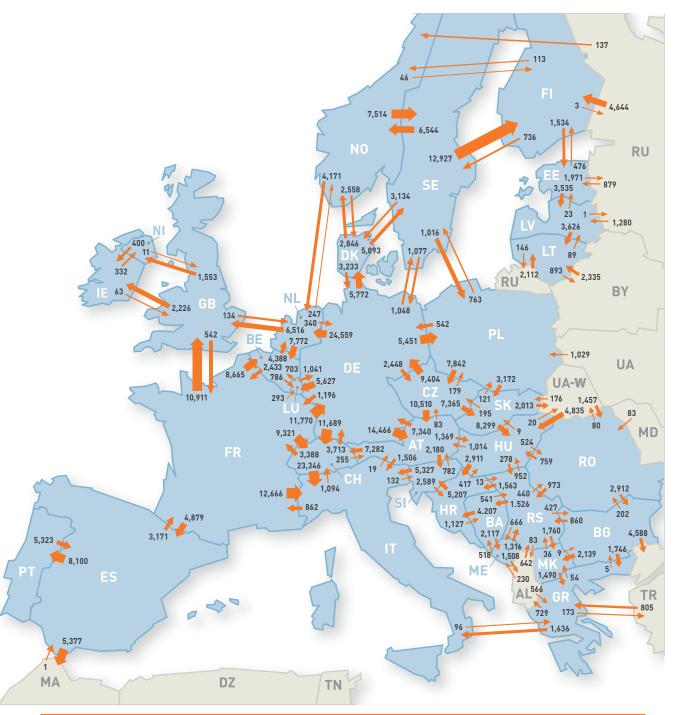
	AL PHYSICAL ENERGY EXCHANGES IN ENTSO-E			
	IMPORTS	EXPORTS	BALANCE	
Albania (AL)	2,320	1,438	882	
Germany (DE)	38,468	72,256	-33,788	
Austria (AT)	27,046	19,760	7,286	
Belgium (BE)	17,140	7,607	9,533	
Belarus (BY)	893	2,335	-1,442	
Bosnia-Herzegovina (BA)	3,171	6,865	-3,694	
Bulgaria (BG)	3,353	9,535	-6,182	
Croatia (HR)	11,270	6,764	4,506	
Denmark (DK)	11,464	11,172	292	
Slovakia (SK)	10,722	10,628	94	
Slovenia (SI)	7,519	8,698	-1,179	
Spain (ES)	10,204	16,648	-6,445	
Estonia (EE)	2,436	5,982	-3,546	
Finland (FI)	18,093	2,386	15,707	
France (FR)	11,592	58,505	-46,913	
FYROM (MK)	3,953	1,535	2,418	
Great Britain (GB)	17,501	4,455	13,046	
Greece (GR)	4,703	2,597	2,106	
Netherlands (NL)	33,252	14,875	18,377	
Hungry (HU)	16,631	4,756	11,875	
Ireland (IE)	2,626	395	2,231	
Northern Ireland (NI)	1,885	411	1,474	
Italy (IT)	44,481	2,203	42,278	
Latvia (LV)	5,006	3,650	1,356	
Lithuania (LT)	8,073	1,128	6,945	
Luxembourg (LU)	6,706	1,744	4,962	
Morocco (MA)	5,377	1	5,376	
Moldava (MD)	0	83	-83	
Montenegro (ME)	3,013	3,342	-329	
Norway (NO)	9,887	14,289	-4,402	
Poland (PL)	7,796	12,319	-4,523	
Portugal (PT)	8,100	5,323	2,777	
Czech Republic (CZ)	10,568	27,458	-16,890	
Romania (RO)	2,706	4,724	-2,018	
Russia (RU)	2,121	9,154	-7,033	
Serbia (RS)	4,659	7,417	-2,758	
Sweden (SE)	15,154	24,698	-9,544	
Switzerland (CH)	29,386	30,710	-1,324	
Turkey (TR)	4,761	805	3,956	
Ukraine (UA)	2,113	7,497	-5,384	

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





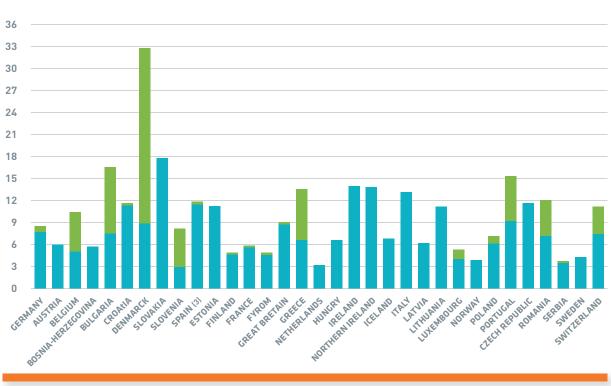
MAP OF INTERNATIONAL PHYSICAL ENERGY EXCHANGES IN _____ GWh ENTSO-E MEMBER COUNTRIES AND NEIGHBOURING COUNTRIES (*)



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







TRANSMISSION TARIFFS IN COUNTRIES BELONGING TO ENTSO-E (*) _____€/MWh

Tarifa de transporte (1)
 Otros costes (2)

(*) 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.
 (1) Costs related to activities pertinent to the TSO: infrastructure (capital and operation costs), losses and system services.
 (2) Other charges not directly related to TSO costs (e.g.: fostering of renewable energy).
 (3) 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 2013.







GLOSSARY OF TERMS

GT



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 (from annual to intraday).

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

CLOSED - CYCLE PUMPED STORAGE

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

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

COMMERCIAL EXCHANGE CAPACITY.

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

CONGESTION RENTS. Revenues derived from the management of the interconnection capacity between electricity systems.

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

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

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

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

DAILY BASE OPERATING SCHEDULE

(PDBF). Is the daily energy schedule, broken-down in scheduled periods for the different energy generation selling and purchasing agents/units within the Spanish





peninsular electricity system. This schedule is established by the System Operator based on the schedule resulting from matching the day-ahead market and the data regarding the execution of bilateral contracts with physical dispatch of energy.

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

DEMAND (MEASURED AT POWER

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

DEMAND IN REGULATED MARKET FOR LAST RESORT SUPPLY. Electricity demand of the consumers on the 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

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 which have the function of distributing electricity, as well as to construct, maintain and operate the distribution facilities required to transfer and distribute the energy 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. Hyperannual regime reservoirs are those in which the total drainage time takes more than one year.

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 management tool managed by Red Eléctrica as system operator and is used to provide an efficient and rapid response to the needs of the electricity system. The concept of interruptibility has changed into that of demandside management in which large consumers who acquire energy through the electricity market can take part and can establish the corresponding service level contracts with the system operator. These companies obtain discounts on their invoices in exchange for a reduction in their electrical consumption, upon demand, and under special circumstances as determined by the system operator. In any case, the reductions of consumption to which these consumers must agree to are typified in the regulation and have as fundamental variables, the notice period, its duration and the number of times it can happen in an electrical year (November 1 - October 31).

INTRADAY MARKET. The objective is to manage the adjustments occurring in the

generation and demand of energy which may be produced after having fixed the day-ahead market.

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

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 generation market and uses as its criteria the economic efficiency of the spare capacity between the electricity systems. In the case of congestion between the systems, the market splits into zones of differing price. In the contrary case, an overall unique price for the market exists.

MEASURED DEVIATION. Difference between the energy measured at the power station busbars and the energy scheduled in the market.

MEASURED DOWNWARD DEVIATIONS.

Measured downward deviations are those which result when the production measured at the power station busbars is 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.

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

PRODUCIBLE HYDROELECTRIC INDEX.

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

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

PRODUCTION (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. 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.



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 THERMOELECTRIC. Heat produced by solar radiation that can be taken advantage

of for the production of mechanical energy and, subsequently, electricity.

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

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

SURPLUS/DEFICIT OF DEVIATIONS.

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

SYSTEM ADJUSTMENT SERVICES. Services

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 OPERATION PROCESSES.

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

SYSTEM OPERATOR. A mercantile 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 particpants of the Iberian Electricity Market under the principles of transparency, objectivity and independence. Under the current Spanish model, the system operator is also the manager of the transmission grid.

TECHNICAL CONSTRAINTS PDBF.

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 which has been used. This is done by means of the adaptation of the operating schedules of the programming units corresponding to generation stations and pumped storage consumption facilities. The tertiary reserve is defined as the maximum variation of power generation that a generation unit can carry out within a maximum of 15 minutes, and which can be maintained for at least 2 hours.

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

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

TRANSMISSION GRID AVAILABILITY

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





TRANSMISSION GRID TECHNICAL

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.

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

UNAVAILABILITY OF THE PRODUCTION

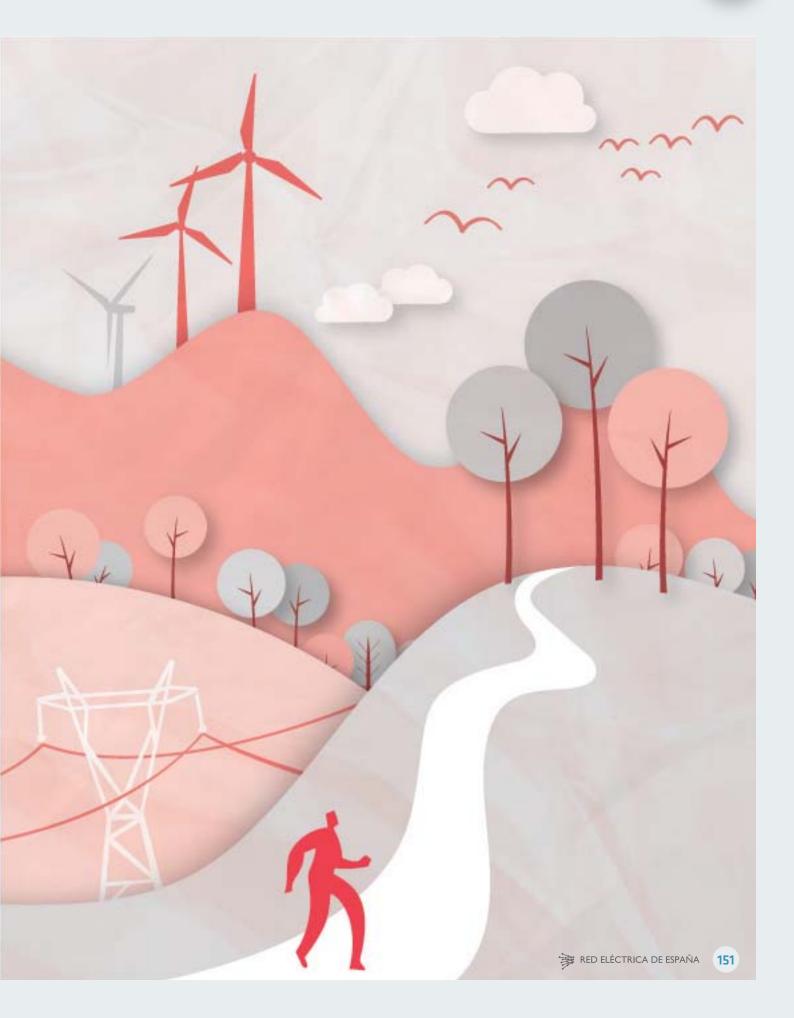
UNITS. A production unit is completely available if it can participate in production without any limitation in generation capacity or, when

applicable, pumped storage consumption. Otherwise, it is considered unavailable, such unavailability being of a partial or total nature. The net unavailable power of a generation unit is determined by the difference between the installed net power at the power station busbars and the net power truly available.

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







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