THE SPANISH ELECTRICITY SYSTEM

PRELIMINARY REPORT 2016

RED ELÉCTRICA DE ESPAÑA

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ELECTRICITY BALANCE, INSTALLED POWER CAPACITY AND TRANSMISSION GRID

Demand for electrical energy in Spain increased again in 2016, although at a lower rate than the previous year.

This preliminary report presents the **provisional** statistics regarding the behaviour of the Spanish electricity system during 2016. Close of year conducted with estimated data as at 14 December 2016.

The **demand for electricity** in Spain, with data estimated at year end, experienced a slight growth of 0.8% in 2016 compared to the previous year. On the other hand, generation registered a fall of 1.9% with respect to 2015, affecting mainly coal-fired generation whose production fell 29.8%. In terms of international exchanges, imports surpassed exports by 7,313 GWh, which is the first import balance recorded since 2003.

2016
NATIONAL DEMAND

265.3 TWh

2015
COMPARISON

0.8 % ↑

ANNUAL ELECTRICAL ENERGY BALANCE [1]

	Peninsular system		Non-peninsular system		National total	
	GWh	% 16/15	GWh	% 16/15	GWh	% 16/15
Hydro	39,049	25.1	4	-1.7	39,053	25.1
Nuclear	55,546	1.4	-	-	55,546	1.4
Coal	34,740	-31.8	2,298	23.2	37,038	-29.8
Fuel/gas [2]	-	-	6,748	3.9	6,748	3.9
Combined cycle [3]	26,186	3.6	3,601	-10.5	29,787	1.7
Hydro-wind	-	-	19	117.3	19	117.3
Wind	48,507	1.7	420	4.6	48,927	1.7
Solar photovoltaic	7,570	-3.5	409	2.6	7,979	-3.2
Solar thermoelectric	5,102	0.3	-	-	5,102	0.3
Other renewables [4]	3,440	8.4	11	4.8	3,451	8.4
Cogeneration	25,843	1.7	35	10.2	25,878	1.7
Waste	3,049	2.1	275	-11.6	3,324	0.8
Production	**249,031**	**-2.1**	**13,819**	**2.0**	**262,850**	**-1.9**
Pumped storage consumption	-4,846	7.2	-	-	-4,846	7.2
Peninsula-Balearic Islands' link [5]	-1,232	-7.8	1,232	-7.8	0	-
International exchange balance [6]	7,313	-	-	-	7,313	-
Demand (b.c.-at power station busbars)	**250,266**	**0.8**	**15,050**	**1.1**	**265,317**	**0.8**

[1] Allocation of generation units based on primary fuel. [2] Generation from auxiliary generation units is included in the Balearic Islands' electricity system. [3] Includes operation in open cycle mode. Diesel is used as primary fuel in the Canary Islands' electricity system. [4] Includes biogas, biomass, marine energy and geothermal. [5] Positive value: incoming energy; negative value: outgoing energy. [6] Positive value: importer balance; negative value: exporter balance. The increment values are not calculated when the balances of the exchanges have different signs (+/-).

The balance of international exchanges has turned out to be as Importer for the first time since 2003

The total number of electricity **generating facilities** in Spain declined in 2016, following a long period of continued growth. Specifically, it registered a decrease of 0.9% with respect to the previous year, due to the closure of several coal-fired power stations which together totalled 932.2 MW. The remainder of the technologies of the total set of generating facilities has not experienced any variation, with the only exception being solar photovoltaic - that registered a slight increase of 0.3%.

INSTALLED POWER CAPACITY 2016

105,308 MW

2015 COMPARISON

0.9 % ↓

INSTALLED POWER CAPACITY AS AT 31 DECEMBER

	Peninsular system		Non-peninsular system		National total	
	MW	% 16/15	MW	% 16/15	MW	% 16/15
Hydro	20,353	0.0	1	0.0	20,354	0.0
Nuclear	7,573	0.0	-	-	7,573	0.0
Coal	9,536	-8.9	468	0.0	10,004	-8.5
Fuel/gas	0	-	2,490	0.0	2,490	0.0
Combined cycle	24,948	0.0	1,722	0.0	26,670	0.0
Hydro-wind	-	-	11	0.0	11	0.0
Wind	22,864	0.0	156	0.0	23,020	0.0
Solar photovoltaic	4,425	0.3	244	0.3	4,669	0.3
Solar thermoelectric	2,300	0.0	-	-	2,300	0.0
Other renewables (1)	743	0.0	5	0.0	748	0.0
Cogeneration	6,670	0.0	44	0.0	6,714	0.0
Waste	677	0.0	77	0.0	754	0.0
Total	**100,088**	**-0.9**	**5,220**	**0.0**	**105,308**	**-0.9**

(1) Includes biogas, biomass, marine energy and geothermal. // Source: National Commission for Markets and Competition (CNMC) on data regarding power from: non-Hydro Management Unit (UGH), wind, solar photovoltaic, solar thermal, other renewables, cogeneration and waste.

In 2016, **the development of the transmission grid** experienced a new impetus with the coming into service of 674 new circuit km and 600 MVA of transformer capacity which both have helped on one hand to enhance reliability, the degree of the grid meshing and the connections between islands and on the other to enable the electricity system to incorporate a greater amount of renewable energy.

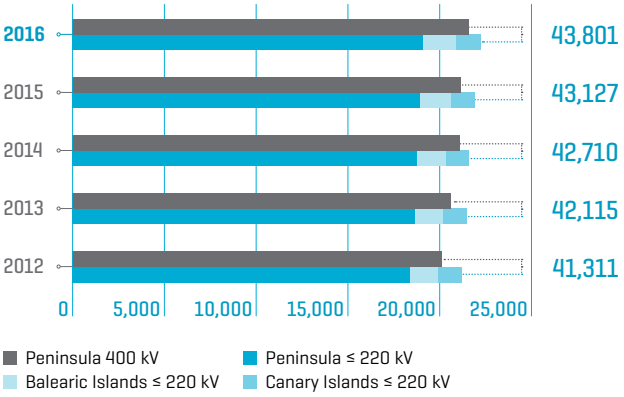
TRANSMISSION GRID

674 km

of new circuit have been commissioned

EVOLUTION OF THE ELECTRICAL ENERGY TRANSMISSION GRID IN SPAIN

km of circuit



FACILITIES IN THE SPANISH ELECTRICAL ENERGY TRANSMISSION GRID

	400 kV	≤ 220 kV			
	Peninsula	Peninsula	Balearic Isl.	Canary Isl.	TOTAL
Total lines (km)	**21,620**	**19,027**	**1,800**	**1,354**	**43,801**
Overhead lines (km)	21,503	18,260	1,089	1,080	41,932
Submarine cable (km)	29	236	540	30	835
Underground cable (km)	88	532	171	244	1,034
Transformer capacity (MVA)	**79,808**	**63**	**3,273**	**2,000**	**85,144**

Data relating to km of circuit and transformer capacity as at 31 December 2016.

PENINSULAR SYSTEM

Peninsular electricity demand has grown for the second consecutive year and more than 40 % of total generation has been covered by renewable energies.

EVOLUTION OF ELECTRICITY DEMAND

Year	GWh	Δ Annual (%)	Δ Adjusted (1) annual (%)
2012	252,014	-1.4	-1.8
2013	246,368	-2.2	-2.2
2014	243,544	-1.1	-0.1
2015	248,398	2.0	1.7
2016	**250,266**	**0.8**	**0.0**

(1) Adjusted as a result of factoring in the effect of seasonal and working patterns.

MONTHLY VARIATION IN ELECTRICITY DEMAND (2016)

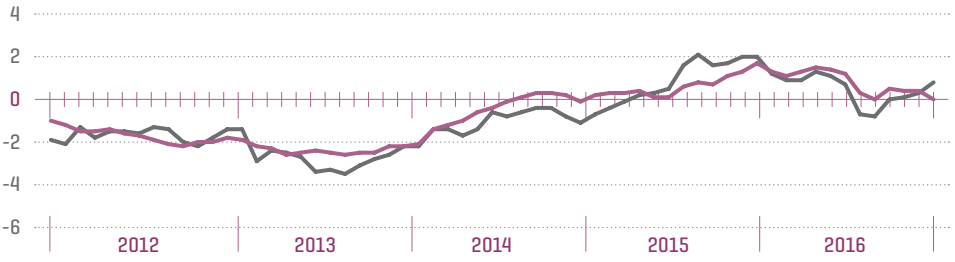
%

	J	F	M	A	M	J	J	A	S	O	N	D
Monthly	-5.4	-0.8	1.5	5.7	-0.5	-0.7	-5.3	2.7	6.7	0.8	3.6	2.9
Cummulative	-5.4	-3.2	-1.7	0.0	-0.1	-0.2	-1.0	-0.6	0.2	0.3	0.6	0.8

Variations as compared to same month of previous year.

ANNUAL VARIATION IN ELECTRICITY DEMAND (ROLLING YEAR)

%



The **peninsular demand for electrical energy,** according to data estimated at year end, finished 2016 at 250,266 GWh, a value 0.8 % higher than that of the previous year. After factoring in the seasonal and working patterns, it is estimated that demand is at the same level as in 2015.

MILD TEMPERA-TURES

Contributed to contain the demand

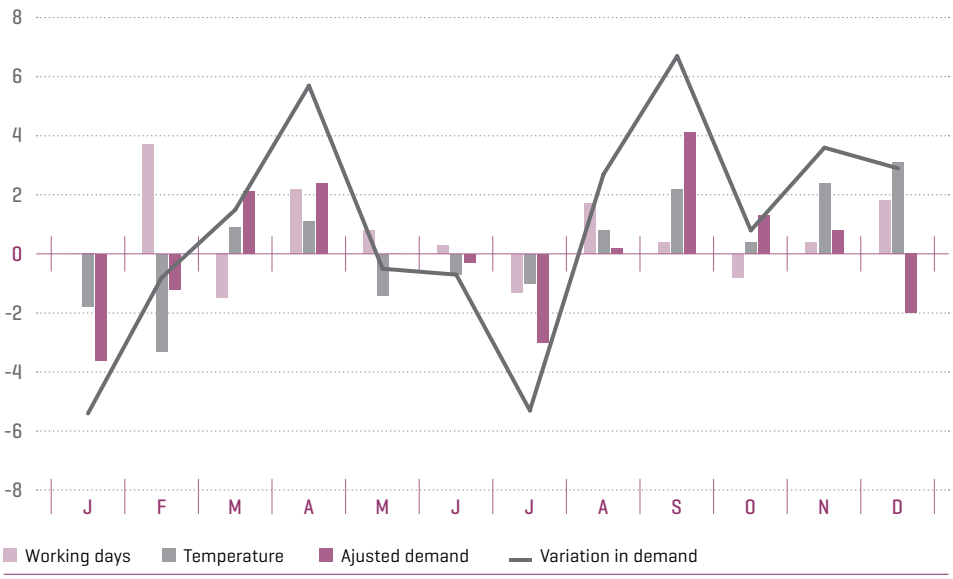
PENINSULAR DEMAND 2016

250.3 TWh

2015 COMPARISON

0.8 %

COMPONENTS OF THE MONTHLY VARIATION IN ELECTRICITY DEMAND (2016)



The maximum **instantaneous power,** at the time of drafting this report, occurred for the first time ever during the summer period, specifically on 6 September at 1:32 pm when it reached 40,489 MW, a value just 0.6 % below the previous year's maximum registered in February and 10.9 % below the all-time high reached on 17 December 2007. The maximum hourly demand was also registered on 6 September (between 1:00 pm and 2:00 pm) when it reached 40,144 MWh, a value just 0.4 % lower than the maximum registered in 2015.

2016 MAXIMUM INSTANTANEOUS POWER ON THE PENINSULA

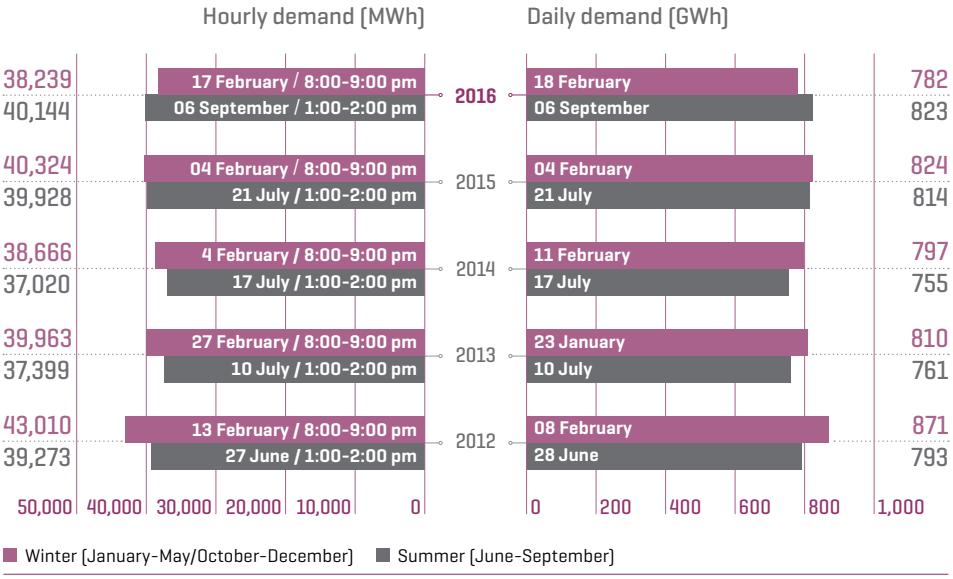
40,489 MW

6-SEP
1:32 pm

2007 ALL-TIME HIGH COMPARISON

-10.9 %

MAXIMUM HOURLY AND DAILY DEMAND



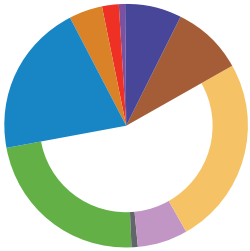
Regarding demand coverage, noteworthy was the decline in the contribution of coal (13.7% compared to 20.3% the previous year), the increase in hydro (14.1% compared to 11.2% in 2015) and, for the first time since 2003, part of the demand (2.9% to be specific) has been covered with the resulting import balance of international exchanges. As for the technologies that have contributed most to the demand, nuclear has again ranked first with 22.0%, followed by wind with 19.2%.

INSTALLED POWER CAPACITY AS AT 31 DIC 2016

100,088 MW

%

Nuclear	7.6	Wind	22.8
Coal	9.5	Hydro (1)	20.3
Combined cycle	24.9	Solar photovoltaic	4.4
Cogeneration	6.8	Solar thermoelectric	2.3
Waste	0.7	Other renewables	0.7

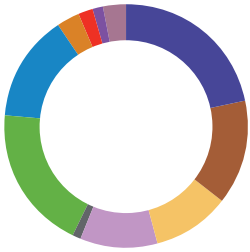


(1) Includes pure pumped storage (3,329 MW).

ELECTRICITY DEMAND COVERAGE (2016)

%

Nuclear	22.0	Wind	19.2
Coal	13.7	Hydro (1)	14.1
Combined cycle	10.4	Solar photovoltaic	3.0
Cogeneration	10.1	Solar thermoelectric	2.0
Waste	1.2	Other renewables	1.4
		Importer balance regarding international exchanges	2.9



(1) Pumped storage not included.

MAXIMUM HOURLY ELECTRICITY DEMAND COVERAGE

40,144 MW / 06-Sept 2016 (1:00-2:00 pm)

%

Nuclear	16.7	Wind	2.8
Coal	17.2	Hydro (1)	13.7
Combined cycle	18.6	Solar photovoltaic	7.2
Cogeneration	7.6	Solar thermoelectric	4.7
Waste	0.9	Other renewables	1.1
		Importer balance regarding international exchanges	9.5

(1) Pumped storage not included.

Renewable energies increased their share in the electricity generation mix to 41.1% compared to 36.9% in the previous year, helped mainly by an increase of 25.1% in hydroelectric production with regard to 2015. Wind power generation grew 1.7% and placed second in the generation mix in 2016. In addition, it was the technology that contributed most to the total generation mix in the months of January, February and March.

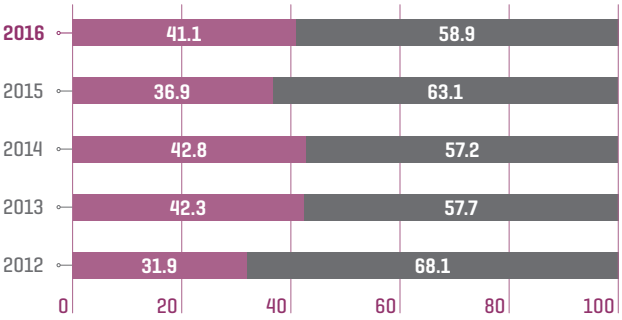
PERCENTAGE OVER TOTAL ELECTRICITY GENERATION ON THE PENINSULA

RENEW-ABLES

41.1%

EVOLUTION OF RENEWABLE AND NON-RENEWABLE ELECTRICITY GENERATION

%

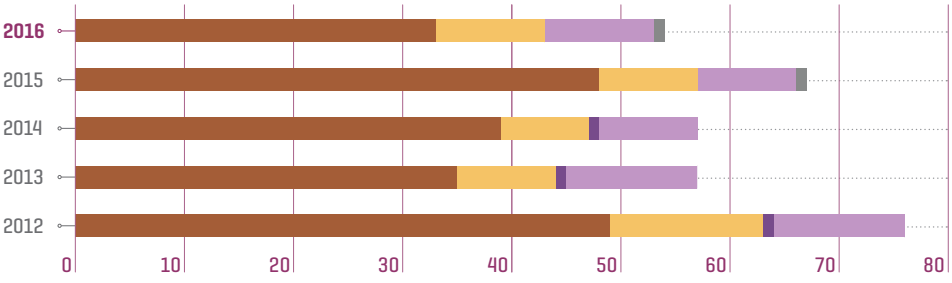


Renewable: hydro, wind, solar photovoltaic, solar thermal, other renewables and 50% obtained using urban solid waste. Pumped storage not included.

Non-renewable: nuclear, coal, fuel/gas, combined cycle, cogeneration and waste.

EVOLUTION OF CO_2 EMISSIONS ASSOCIATED TO ELECTRICITY GENERATION ON THE PENINSULA

Mt CO_2



Decrease in CO_2 emissions from electricity generation thanks to the greater contribution of renewable energies

EVOLUTION 2016

RENEW-ABLES

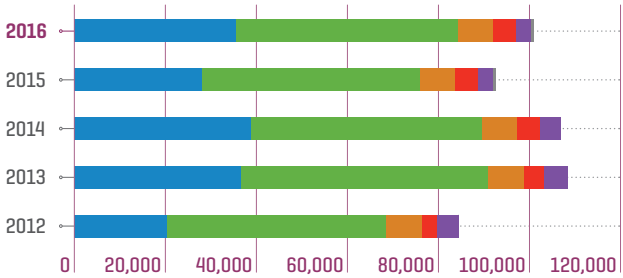
NON-RENEW-ABLES

WIND

Second source of electricity generation

EVOLUTION OF PRODUCTION FROM RENEWABLE ENERGY SOURCES

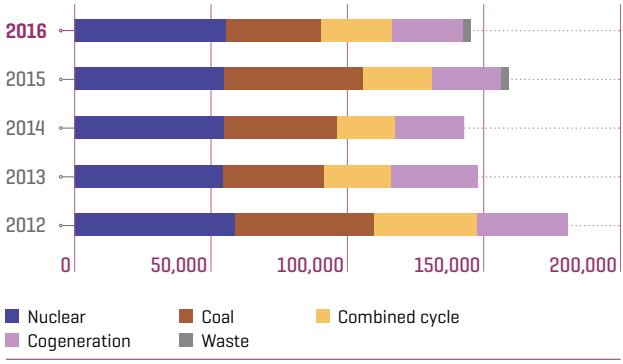
GWh



(1) Pumped storage not included. (2) 50 % of generation obtained using urban solid waste is considered as renewable.

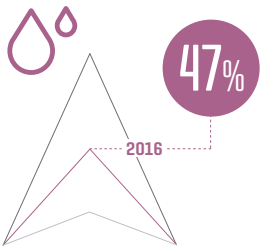
EVOLUTION OF PRODUCTION FROM NON-RENEWABLE ENERGY SOURCES

GWh



Producible hydroelectric registered a high level with a generation of 35,719 GWh, 16% up on the average historical value and 43.6% higher than in 2015.
Hydroelectric reserves, for the complete set of reservoirs, ended 2016 with a fill level close to 47% of their total capacity, a value very similar to the previous year.

HYDRO-ELECTRIC RESERVES

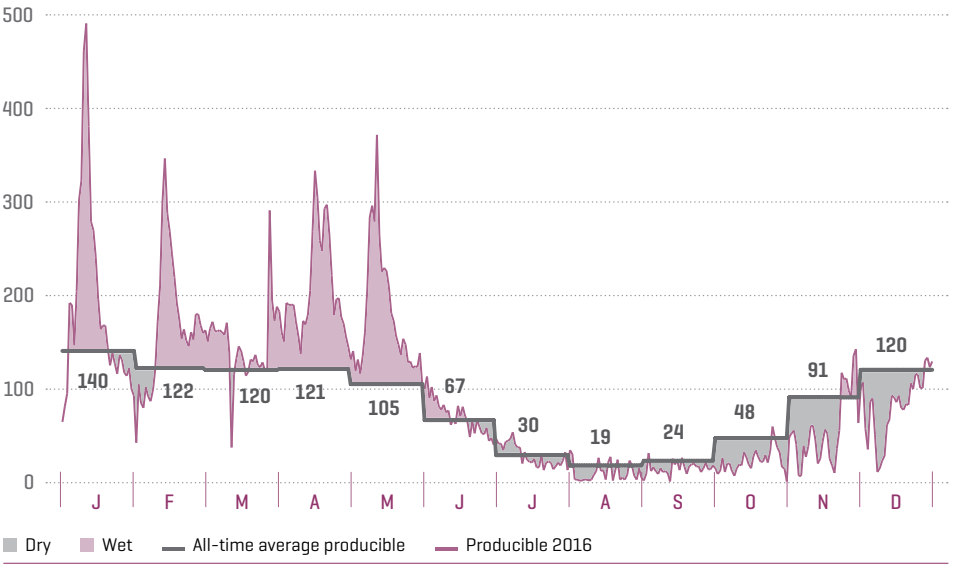


ANUAL PRODUCIBLE HYDROELECTRIC ENERGY

Year	GWh	Index	Probability of being exceeded (%)
2012	17,697	0.60	97
2013	40,093	1.38	10
2014	39,956	1.34	15
2015	24,872	0.81	80
2016	**35,719**	**1.16**	**31**

DAILY PRODUCIBLE HYDROELECTRIC ENERGY COMPARED WITH THE HISTORICAL AVERAGE PRODUCIBLE

GWh



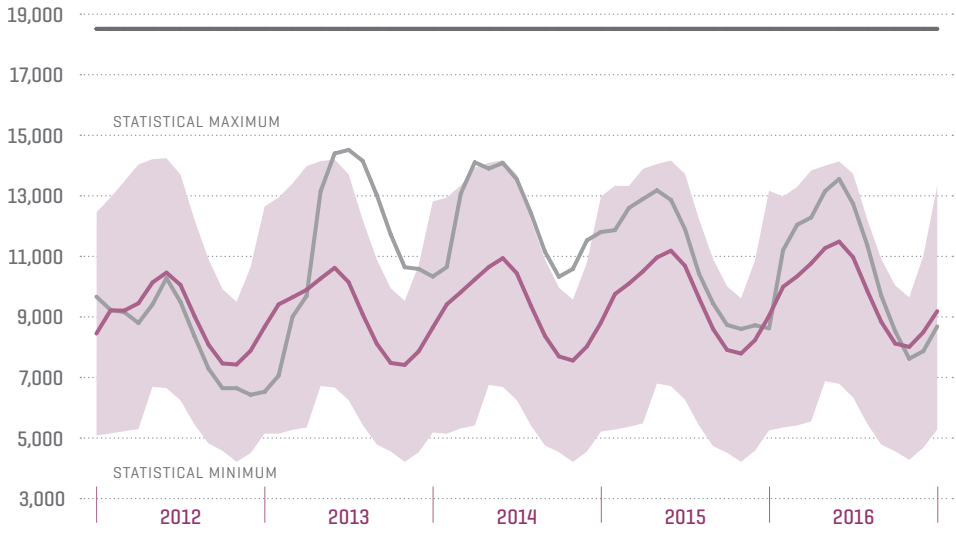
The producible hydroelectric registered a value 16% higher than the average historical value

HYDROELECTRIC RESERVES AS AT 31 DECEMBER

		2015		2016	
	Capacity	GWh	% Fill level	GWh	% Fill level
Annual regime	8,967	3,837	42.8	3,836	42.8
Hyper-annual regime	9,571	4,807	50.2	4,869	50.9
Overall	**18,538**	**8,644**	**46.6**	**8,706**	**47.0**

EVOLUTION OF THE HYDROELECTRIC RESERVES

GWh



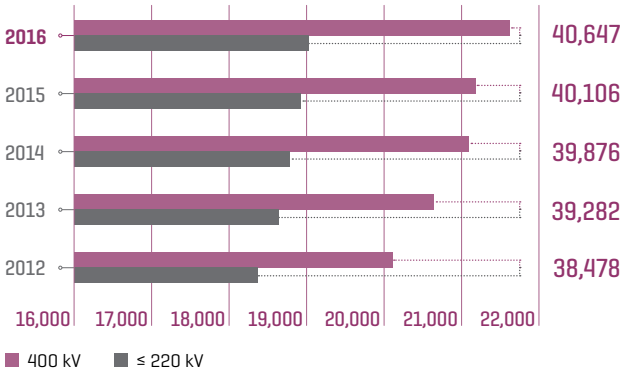
Statistical maximum and minimum: average of the maximum and minimum values of the last 20 years.

New kilometres of electricity lines for safe and efficient supply

During 2016, 541 km of new circuit was commissioned in the peninsular system (436 km of 400 kV and 105 km of 220 kV), bringing the total km of circuit in the peninsular transmission grid at the end of the year to 40,647 km.

541 km
of new circuit in the peninsular grid system

EVOLUTION OF THE PENINSULAR TRANSMISSION GRID



FACILITES IN THE PENINSULAR ELECTRICAL ENERGY TRANSMISSION GRID

	2012	2013	2014	2015	2016
Km of 400 kV circuit	20,109	20,639	21,094	21,184	**21,620**
Km of ≤ 220 kV circuit	18,370	18,643	18,782	18,922	**19,027**
Transformer capacity (MVA)	74,596	76,871	79,271	79,271	**79,871**

Accumulated data for kilometres of circuit and on transformer capacity as at 31 December, 2016.

BALANCE OF INTERNATIONAL PHYSICAL ELECTRICAL ENERGY EXCHANGES

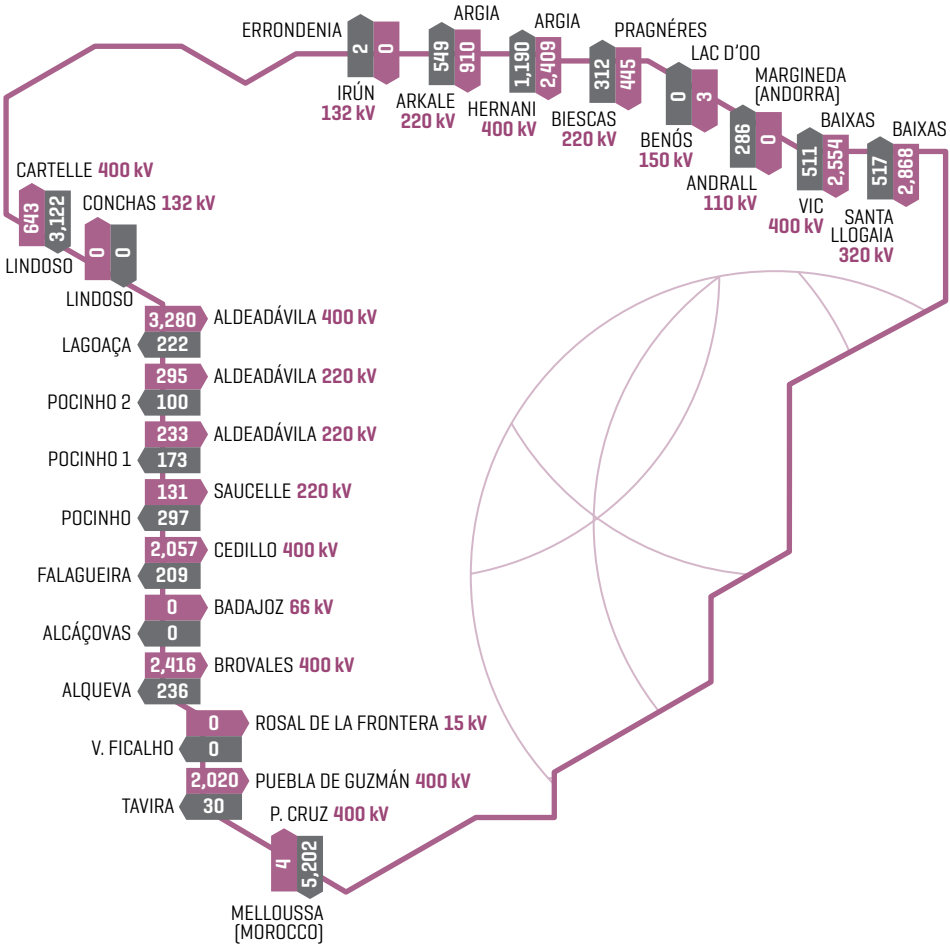
GWh

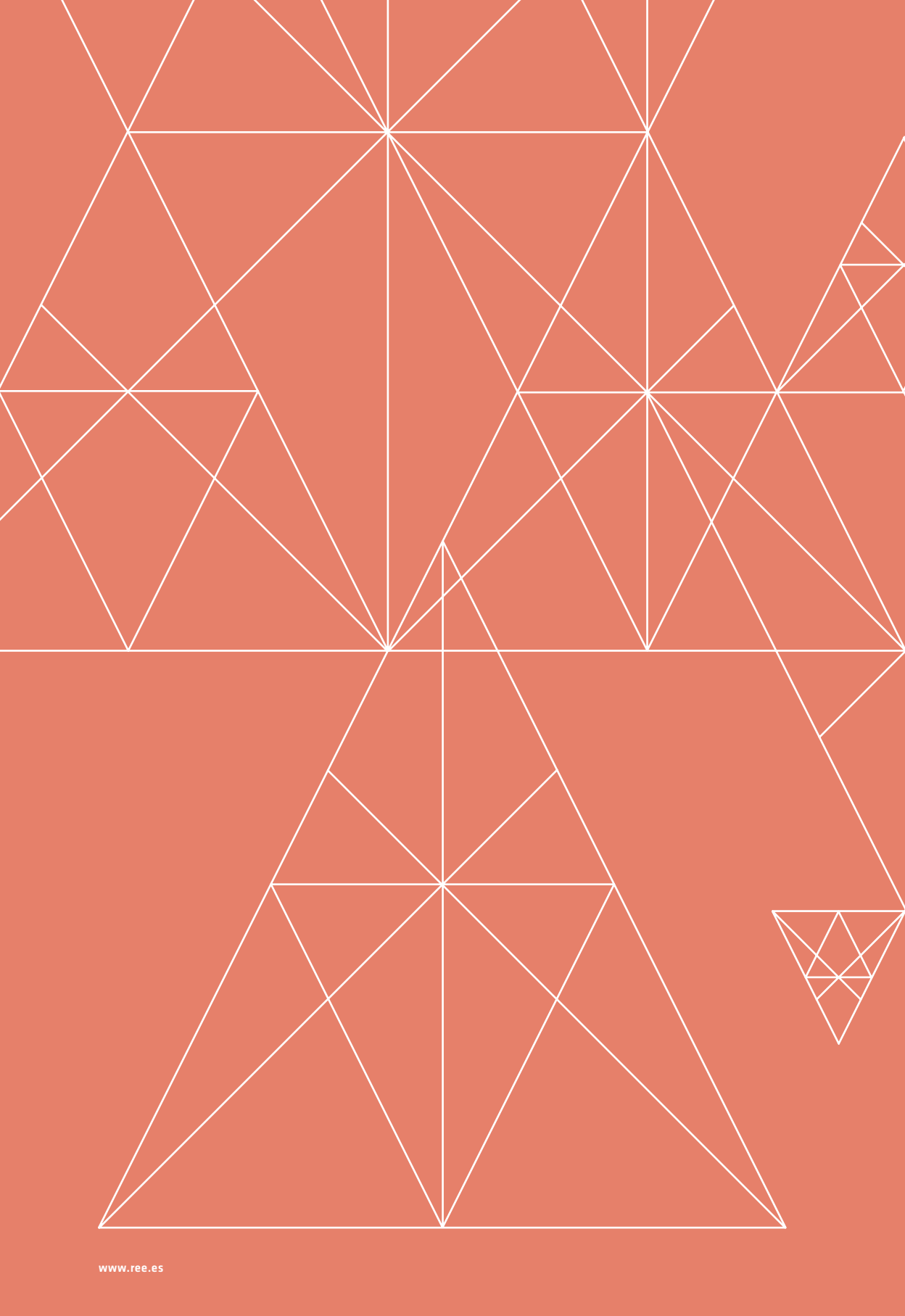
	France	Portugal	Andorra	Morocco	Total
2012	1,883	-7,897	-286	-4,900	-11,200
2013	1,708	-2,777	-287	-5,376	-6,732
2014	3,567	-903	-235	-5,836	-3,406
2015	7,324	-2,266	-264	-4,927	-133
2016	**6,110**	**6,688**	**-286**	**-5,199**	**7,313**

Positive value: importer balance; Negative value: exporter balance.

INTERNATIONAL PHYSICAL ELECTRICAL ENERGY EXCHANGES

GWh





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NON-PENINSULAR SYSTEMS

The growth in the demand for electricity continues in non-peninsular systems and the project for the second link between Majorca and Ibiza has been completed.

Annual demand for electricity in the set of **non-peninsular systems** closed 2016 at 15,050 GWh, representing a growth of 1.1% compared to the previous year. The demand by system was as follows: Balearic Islands, Canary Islands and Ceuta grew 1.0%, 1.2% and 2.8% respectively, while in Melilla there was a fall of 1.7%.

ANNUAL ELECTRICITY DEMAND IN NON-PENINSULAR SYSTEMS

15,050 GWh

2015 COMPARISON

1.1 % ↑

ANNUAL ELECTRICAL ENERGY BALANCE (1)

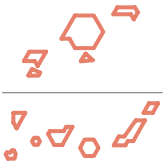
	Balearic Islands		Canary Islands		Ceuta		Melilla	
	GWh	% 16/15	GWh	% 16/15	GWh	% 16/15	GWh	% 16/15
Hydro	-	-	4	-1.7	-	-	-	-
Coal	2,298	23.2	-	-	-	-	-	-
Diesel engines	976	33.8	2,232	1.1	211	3.2	200	-2.0
Gas turbines	349	-40.0	267	-19.3	0	-85.1	0	-59.4
Steam turbines	-	-	2,502	12.4	-	-	-	-
Fuel / gas	1,325	1.0	5,001	5.0	211	2.8	200	-2.2
Combined cycle (2)	560	-30.8	3,041	-5.4	-	-	-	-
Auxiliary generation (3)	10	-4.6	-	-	-	-	-	-
Wind-hydro	-	-	19	117.3	-	-	-	-
Wind	6	6.5	415	4.5	-	-	-	-
Solar photovoltaic	124	1.0	285	3.3	-	-	0.1	-7.7
Other renewable (4)	1	-39.0	9	15.5	-	-	-	-
Cogeneration	35	10.2	0	-	-	-	-	-
Waste	265	-12.2	-	-	-	-	10	10.8
Production	**4,625**	**3.7**	**8,773**	**1.2**	**211**	**2.8**	**210**	**-1.7**
Peninsula-Balearic Islands' link (5)	1,232	-7.8	-	-	-	-	-	-
Demand (b.c.- at power station busbars)	**5,857**	**1.0**	**8,773**	**1.2**	**211**	**2.8**	**210**	**-1.7**

(1) Allocation of generation units based on primary fuel. (2) Includes operation in open cycle mode. Diesel used as primary fuel in the Canary Islands' electricity system. (3) Emergency generator units installed temporarily in specific zones to cover a deficit in generation. (4) Includes biogas and biomass. (5) Positive value: incoming energy; negative value: outgoing energy.

Installed power capacity in non-peninsular systems remains practically unchanged regarding the previous year

INSTALLED POWER CAPACITY
IN NON-PENINSULAR SYSTEMS

5,220 MW



INSTALLED POWER CAPACITY
AS AT 31 DECEMBER

	Balearic Islands		Canary Islands		Ceuta		Melilla	
	MW	% 16/15	MW	% 16/15	MW	% 16/15	MW	% 16/15
Hydro	-	-	1	0.0	-	-	-	-
Coal	468	0.0	-	-	-	-	-	-
Diesel engines	182	0.0	496	0.0	78	0.0	65	0.0
Gas turbines	605	0.0	557	0.0	13	0.0	12	0.0
Steam turbines	-	-	483	0.0	-	-	-	-
Fuel / gas	787	0.0	1,536	0.0	91	0.0	76	0.0
Combined cycle	858	0.0	864	0.0	-	-	-	-
Auxiliary generation (1)	-	-	-	-	-	-	-	-
Hydro	-	-	11	0.0	-	-	-	-
Wind	4	0.0	153	0.0	-	-	-	-
Solar photovoltaic	78	0.0	166	0.4	-	-	0.1	0.0
Other renewable (2)	2	0.0	3	0.0	-	-	-	-
Cogeneration	11	0.0	33	0.0	-	-	-	-
Waste	75	0.0	0	-	-	-	2	0.0
Total	**2,283**	**0.0**	**2,768**	**0.0**	**91**	**0.0**	**78**	**0.0**

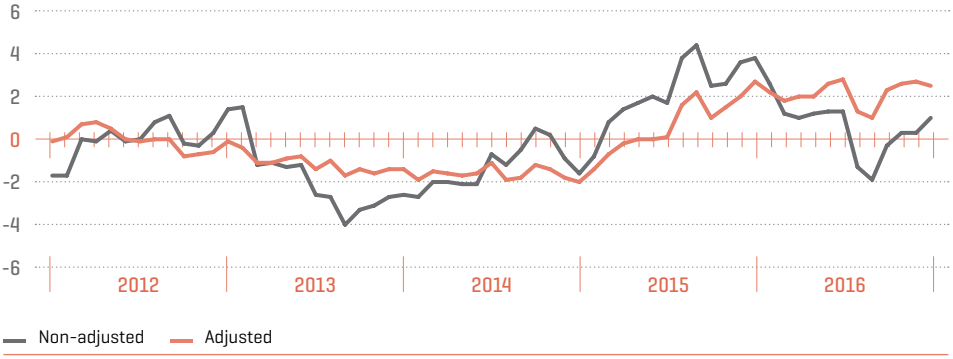
(1) Emergency generator units installed temporarily in specific zones to cover a deficit in generation. (2) Includes biogas and biomass. // Source: National Commission for Markets and Competition (CNMC) on data regarding power from: non-Hydro Management Unit (UGH), wind, solar photovoltaic, other renewables, cogeneration and waste.

EVOLUTION OF ELECTRICITY DEMAND

	Balearic Islands		Canary Islands		Ceuta		Melilla	
	GWh	Δ Annual (%)	GWh	Δ Annual (%)	GWh	Δ Annual (%)	GWh	Δ Annual (%)
2012	5,823	1.4	8,893	0.3	212	4.5	217	1.1
2013	5,674	-2.6	8,624	-3.0	202	-4.8	210	-3.5
2014	5,585	-1.6	8,580	-0.5	212	5.1	210	0.1
2015	5,796	3.8	8,669	1.0	205	-3.2	213	1.7
2016	**5,857**	**1.0**	**8,773**	**1.2**	**211**	**2.8**	**210**	**-1.7**

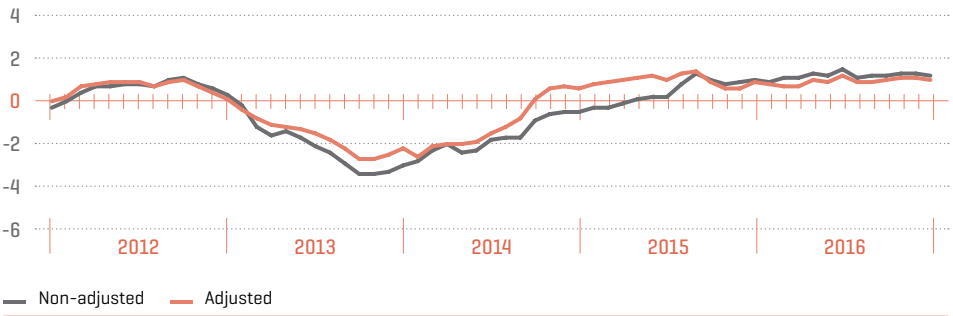
ANNUAL VARIATION OF THE ELECTRICITY DEMAND
BALEARIC ISLANDS (ROLLING YEAR)

%



ANNUAL VARIATION OF THE ELECTRICITY DEMAND
CANARY ISLANDS (ROLLING YEAR)

%



21% of the demand of the Balearic Islands has been covered with energy transferred from the Peninsula

Electrical energy demand in the Balearic Islands, with data estimated at year end, stood at 5,857 GWh at the end of 2016, which represents a slight growth of 1.0% compared to 2015. After factoring in the seasonal and working patterns, the growth in demand stood at 2.5%.

2015 COMPARISON

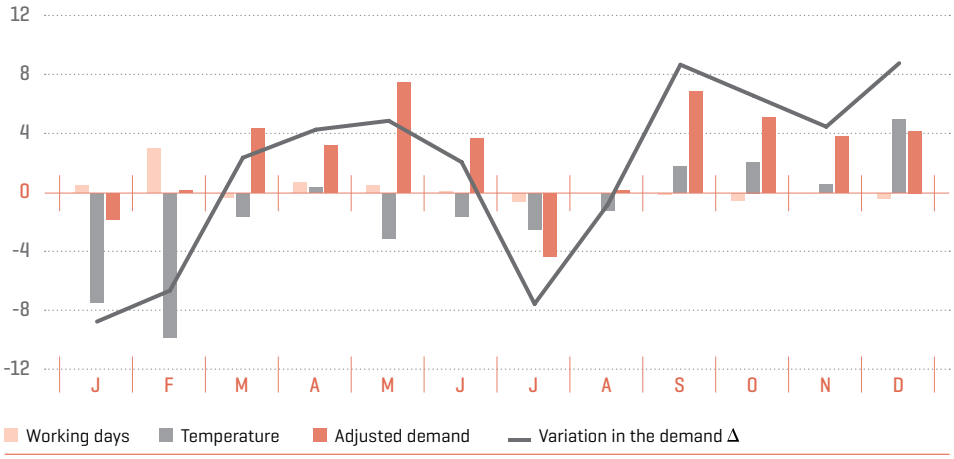
1.0 %

ELECTRICAL ENERGY DEMAND BALEARIC ISLANDS 2016

5,857 GWh

COMPONENTS OF THE VARIATION IN ELECTRICITY DEMAND 2016
BALEARIC ISLANDS

%



Electrical energy demand in the Canary Islands, with data estimated at year end, stood at 8,773 GWh at the end of 2016, which represents a growth of 1.2 % compared to 2015. After factoring in the seasonal and working patterns, the growth in demand stood at 1.0 %.

2015 COMPARISON

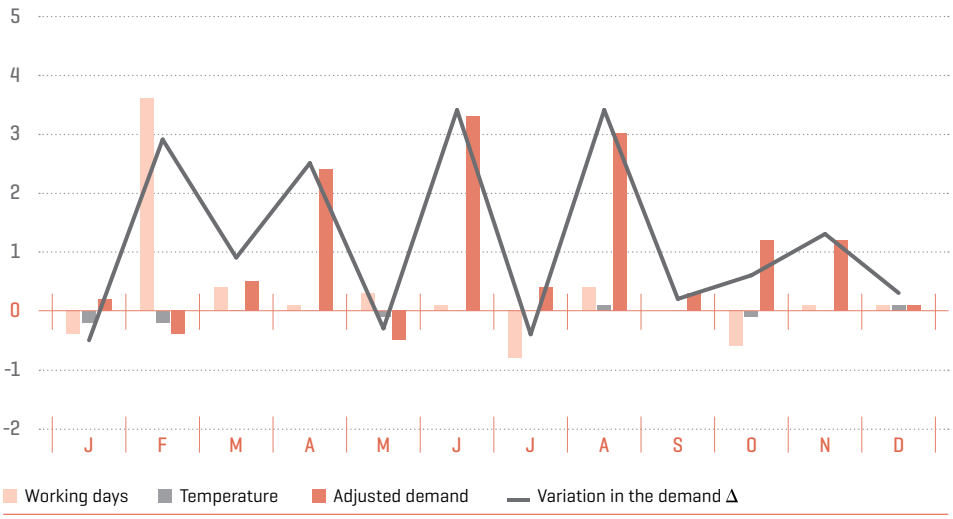
1.2 %

ELECTRICAL ENERGY DEMAND CANARY ISLANDS 2016

8,773 GWh

COMPONENTS OF THE VARIATION IN ELECTRICITY DEMAND 2016
CANARY ISLANDS

%



The maximum hourly demand in the Balearic Islands occurred on 4 August, between 9:00 pm and 10:00 pm, when it reached 1,148 MWh, a value 4.7% lower than the 2015 maximum recorded on 29 July between 1:00 pm and 2:00 pm. The maximum hourly demand in the Canary Islands occurred on 18 October, between 8:00 pm and 9:00 pm, when it reached 1,387 MWh, a value similar to the 2015 maximum of 1,400 MWh also registered on the 5 October at the same time.

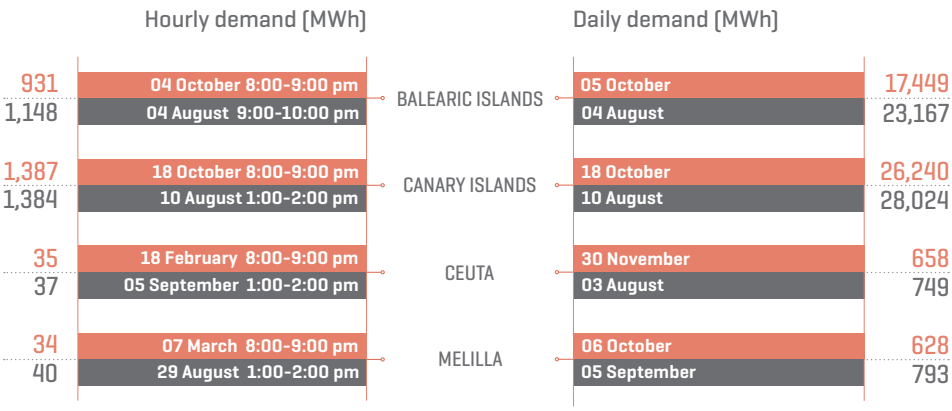
MONTHLY VARIATION OF THE ELECTRICITY DEMAND 2016

%

	J	F	M	A	M	J	J	A	S	O	N	D
Balearic Islands	-8.7	-6.6	2.4	4.3	4.9	2.1	-7.5	-0.8	8.7	6.6	4.5	8.1
Canary Islands	-0.5	2.9	0.9	2.5	-0.3	3.4	-0.4	3.4	0.2	0.6	1.3	0.4
Ceuta	-9.1	4.6	0.8	9.0	-0.3	0.4	-4.5	3.1	9.8	5.3	10.2	8.4
Melilla	-7.6	-4.5	-4.8	2.5	-1.6	0.7	-13.4	-3.3	5.4	1.2	4.9	4.7

Variation regarding the same month the previous year.

MAXIMUM HOURLY AND DAILY DEMAND 2016



Installed power capacity of non-peninsular systems maintains a structure almost identical to that of 2015. Regarding **demand coverage,** the most significant difference with respect to the previous year is the increased share of coal-fired generation in the Balearic Islands (almost 7% up on 2015). In the Canary Islands, renewable energy has covered slightly over 8% of the demand, a value that is quite significant for an isolated electricity system.

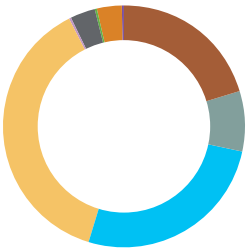
INSTALLED POWER CAPACITY AND DEMAND COVERAGE AS AT 31 DEC 2016

%

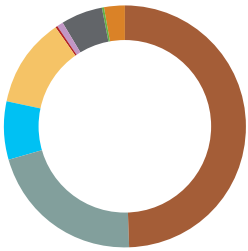
BALEARIC ISLANDS

	POWER	COVERAGE
Coal	20.4	39.2
Diesel engines	8.0	16.7
Gas turbines	26.5	6.0
Combined cycle	37.6	9.6
Auxiliary generation	0.0	0.2
Cogeneration	0.5	0.6
Waste	3.3	4.5
Wind	0.2	0.1
Solar photovoltaic	3.4	2.1
Other renewables	0.1	0.0
Peninsula-B. Islands' link	-	21.0

INSTALLED POWER CAPACITY
2,283 MW



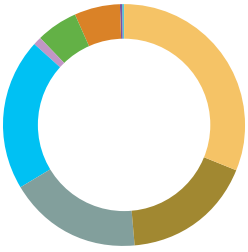
DEMAND COVERAGE



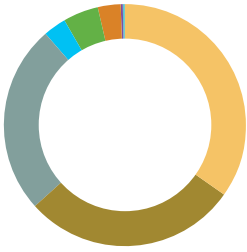
CANARY ISLANDS

	POWER	COVERAGE
Combined cycle	31.4	34.9
Steam turbines	17.4	28.5
Diesel engines	17.9	25.4
Gas turbines	20.1	3.0
Cogeneration	1.2	0.0
Wind	5.5	4.7
Solar photovoltaic	6.0	3.2
Other renewables	0.1	0.1
Hydro-wind	0.4	0.2
Hydro	0.0	0.0

INSTALLED POWER CAPACITY
2,768 MW



DEMAND COVERAGE



The Majorca-Ibiza submarine link completed in 2016 eliminates the electrical isolation of the islands of Ibiza and Formentera

134 km

of new circuit in the non-peninsular grid systems

During 2016, 134 km of new circuit has been commissioned in the non-peninsular systems. Noteworthy is the second link that connects the islands of Majorca and Ibiza through a submarine cable of 117 km in length along with 8 km of underground cable, that together with the first link commissioned in 2015, has enabled the two electricity systems in the Balearic archipelago, Mallorca-Menorca and Ibiza-Formentera, to be linked up and form a single electricity system.

ELECTRICAL ENERGY TRANSMISSION GRID FACILITIES

		2012	2013	2014	2015	2016
Km of 220 kV circuit	Balearic Islands	430	430	431	431	432
	Canary Islands	163	163	163	216	220
	Total	**594**	**594**	**594**	**647**	**652**
Km of 132 kV circuit	Balearic Islands	220	220	220	346	472
	Canary Islands	-	-	-	-	-
	Total	**220**	**220**	**220**	**346**	**472**
Km of < 132 kV circuit	Balearic Islands	893	893	894	896	896
	Canary Islands	1,126	1,126	1,126	1,131	1,134
	Total	**2,019**	**2,019**	**2,019**	**2,027**	**2,030**
Transformer Capacity (MVA)	Balearic Islands	2,408	2,793	2,793	3,273	3,273
	Canary Islands	1,625	1,625	1,875	2,000	2,000
	Total	**4,033**	**4,418**	**4,668**	**5,273**	**5,273**

Accumulated data for kilometres of circuit and on transformer capacity as at 31 December, 2016.

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TERMINOLOGY INDEX

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.

HYDRO UNIT (UGH)
Each set of hydroelectric power stations belonging to the same catchment basin and to the same individual holder.

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

NON-RENEWABLE ENERGIES
Includes nuclear, coal, fuel/gas, combined cycle, cogeneration and waste.

PHYSICAL ELECTRICITY EXCHANGES (INTL.)
The movements of energy which have taken place via international interconnection lines during a given period of time. It includes the loop flow of energy as a consequence of the grid design.

PRODUCIBLE HYDROELECTRIC ENERGY

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.

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.

PUMPED STORAGE CONSUMPTION

Electrical energy that the pumped storage hydroelectric power stations use to elevate water from the lower reservoir to the upper in order to generate electricity.

RENEWABLE ENERGIES

Includes hydro, hydro-wind, wind, solar photovoltaic, solar thermal, biogas, biomass, marine energy, geothermal and 50% of urban solid waste.

TRANSMISSION GRID

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

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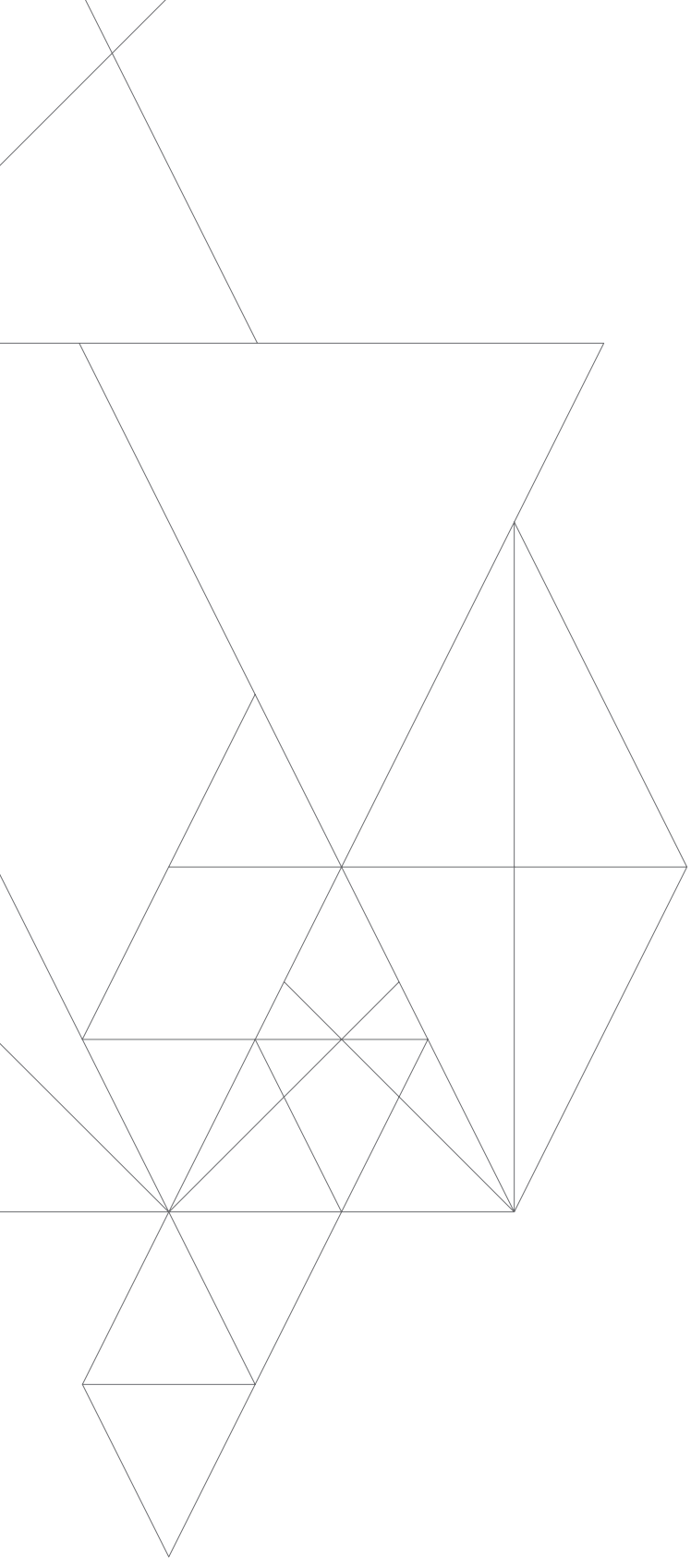

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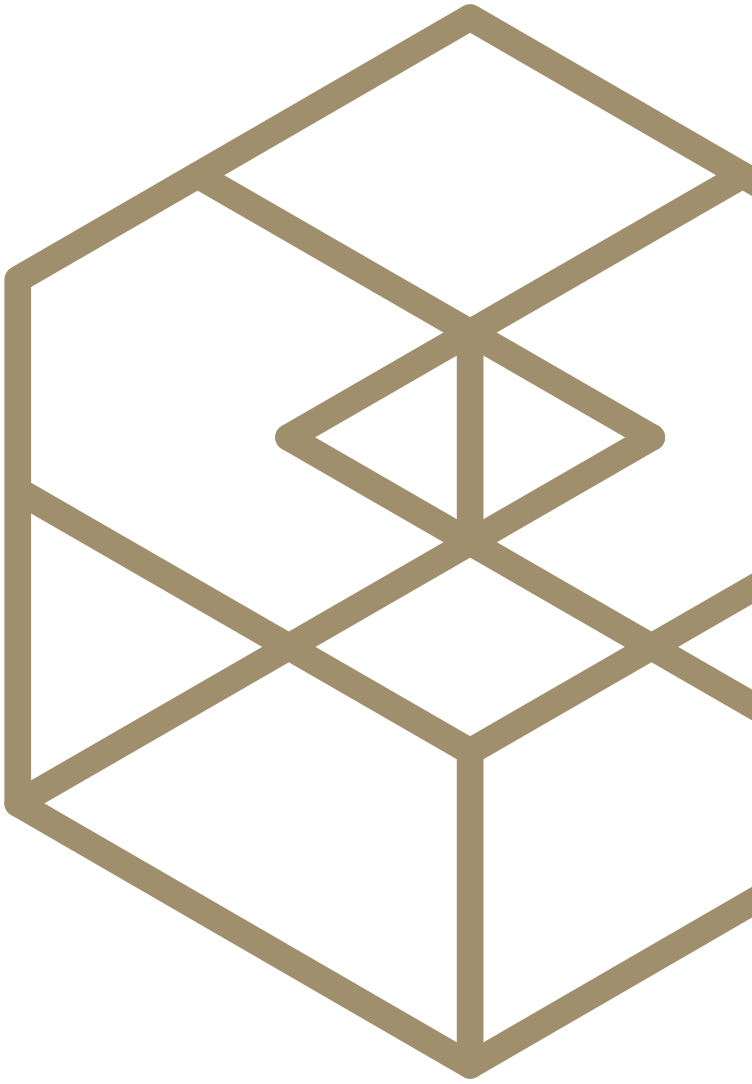

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