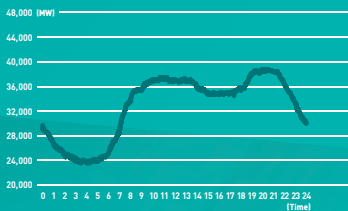


The Spanish Electricity System [2014] Summary



RED
ELÉCTRICA
DE ESPAÑA

Electrical Energy Balance ⁽¹⁾

GWh

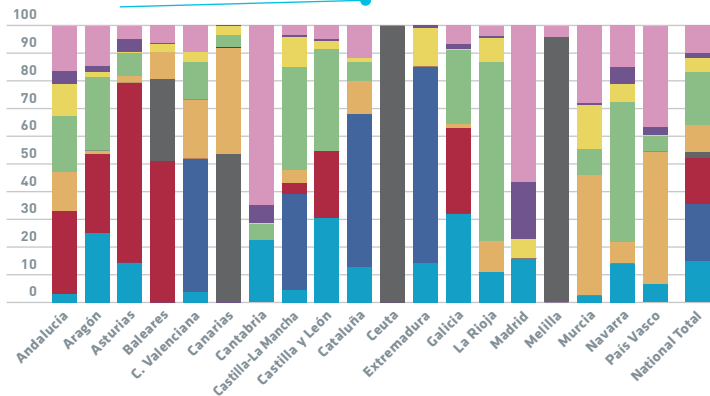
| | Andalucía | Aragón | Asturias | Baleares | Comunidad Valenciana | Canarias | Cantabria | Castilla-La Mancha | Castilla y León | Cataluña |
|--|---------------|---------------|---------------|--------------|----------------------|--------------|--------------|--------------------|-----------------|---------------|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

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

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

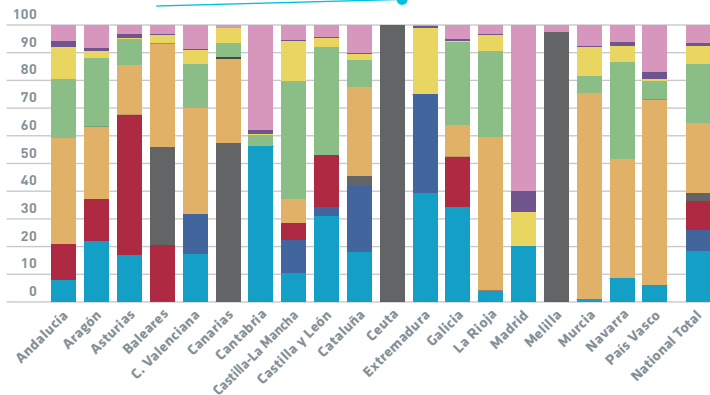
Net Production Structure by Power Station Type

%



Installed Capacity Structure by Power Station

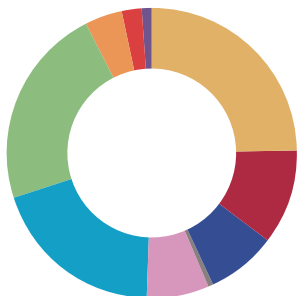
%



■ Hydro
 ■ Nuclear
 ■ Coal
 ■ Fuel/gas
 ■ Combined cycle
 ■ Hydro-wind
 ■ Wind
 ■ Solar (1)
 ■ Renewable thermal
 ■ Cogeneration and others

(1) Includes solar photovoltaic and thermal.

Installed Capacity as at 31.12.2014 Peninsular Electricity System



- Combined cycle **24.8 %**
- Coal **10.7 %**
- Nuclear **7.7 %**
- Fuel/gas **0.5 %**
- Cogeneration and others **7.0 %**
- Hydro **19.5 % (1)**
- Wind **22.3 %**
- Solar photovoltaic **4.3 %**
- Solar Thermal **2.2 %**
- Renewable Thermal **1.0 %**

(1) Includes pure pumped storage (2.517 MW).

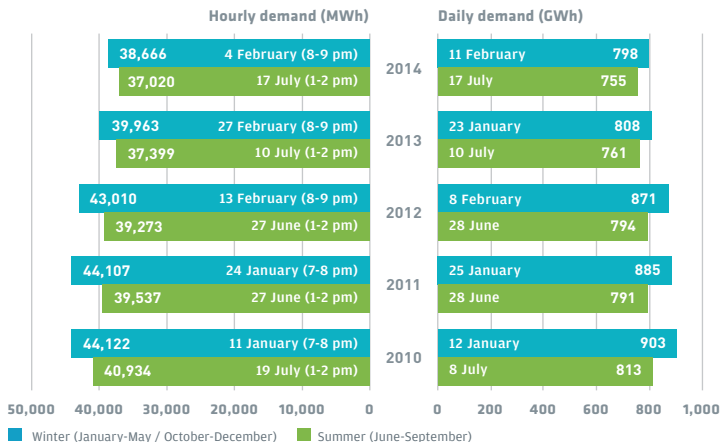
Annual Demand Coverage Peninsular Electricity System



- Combined cycle **8.5 %**
- Coal **16.5 %**
- Nuclear **22.0 %**
- Cogeneration and others **10.2 %**
- Hydro **15.5 % (1)**
- Wind **20.3 %**
- Solar photovoltaic **3.1 %**
- Solar Thermal **2.0 %**
- Renewable Thermal **1.9 %**

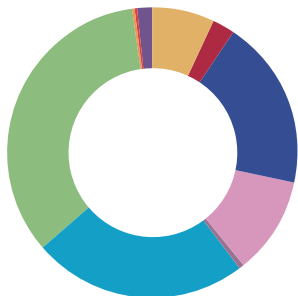
(1) Does not include pumped storage generation.

Maximum Hourly and Daily Demand Peninsular System



Coverage of Maximum Hourly Demand 38,666 MWh - Peninsular System

4 February 2014 (8-9 pm)



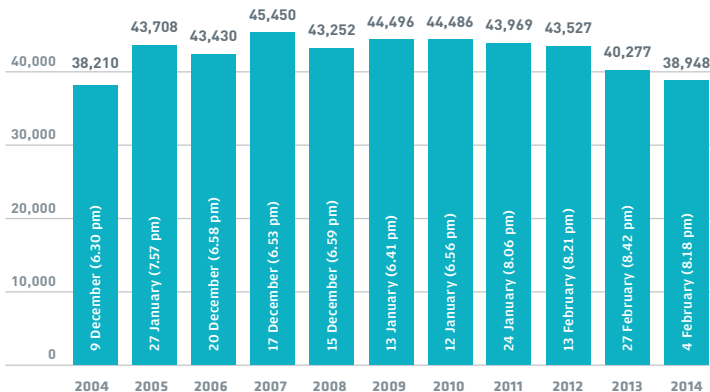
- Combined cycle **7.0 %**
- Coal **2.5 %**
- Nuclear **18.9 %**
- Cogeneration and others **10.8 %**
- Balance of international exchanges **0.6 %**
- Hydro **24.0 %** (1)
- Wind **34.5 %**
- Solar photovoltaic **0.1 %**
- Solar Thermal **0.1 %**
- Renewable Thermal **1.5 %**

(1) Does not include pumped storage generation.

Instantaneous Peak Power Demand Peninsular System

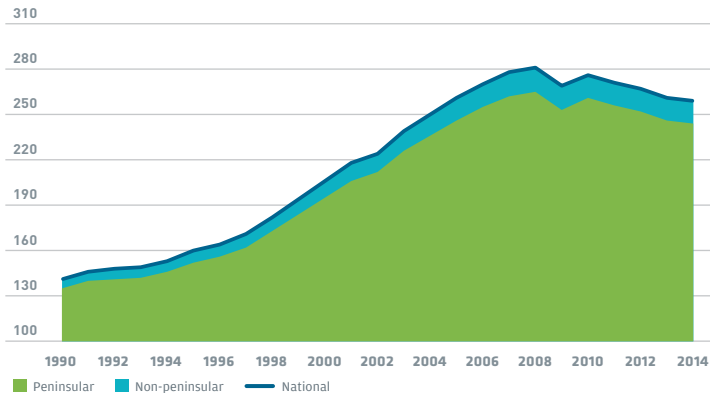
MW

50,000



Evolution of Electrical Energy Demand at b.c. (1)

TWh



Peninsular Non-peninsular National

(1) Demand at power station busbars.

Annual Evolution of Electrical Energy Demand and GDP - Peninsular System

| | Demand | | | GDP (1) |
|-------------|----------------|-------------|----------------------------|------------|
| | GWh | Δ (%) | Δ by Economic Activity (%) | |
| 2010 | 260,527 | 3.1 | 2.7 | 0.0 |
| 2011 | 255,597 | -1.9 | -1.0 | -0.6 |
| 2012 | 252,014 | -1.4 | -1.8 | -2.1 |
| 2013 | 246,368 | -2.2 | -2.2 | -1.2 |
| 2014 | 243,530 | -1.2 | -0.1 | 1.4 |

(Δ) Variation with respect to previous year. (1) Source: INE (Spanish Statistical Office).

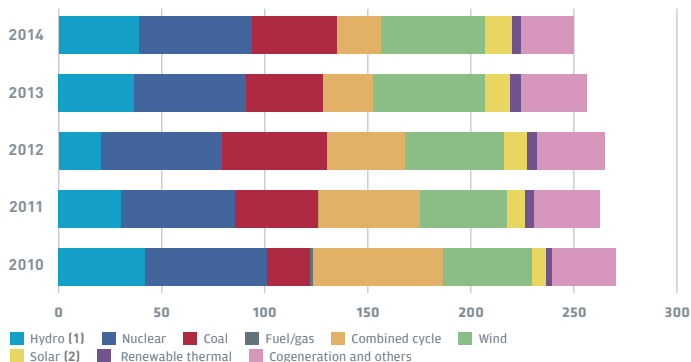
Annual Evolution of Electrical Energy Demand - Non-Peninsular Systems

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

(Δ) Variation with respect to previous year.

Annual Evolution of Net Production Structure - Peninsular System

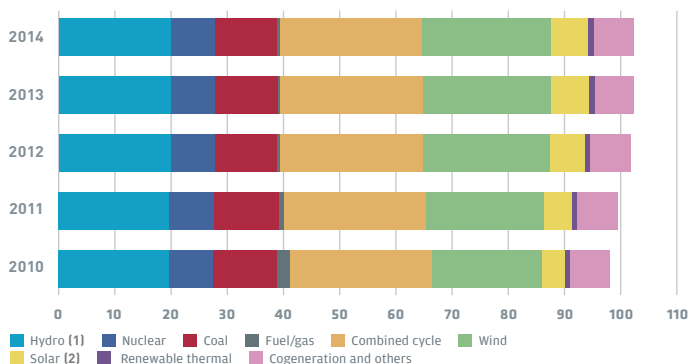
TWh



(1) Does not include pumped storage generation. (2) Includes solar photovoltaic and y solar thermal.

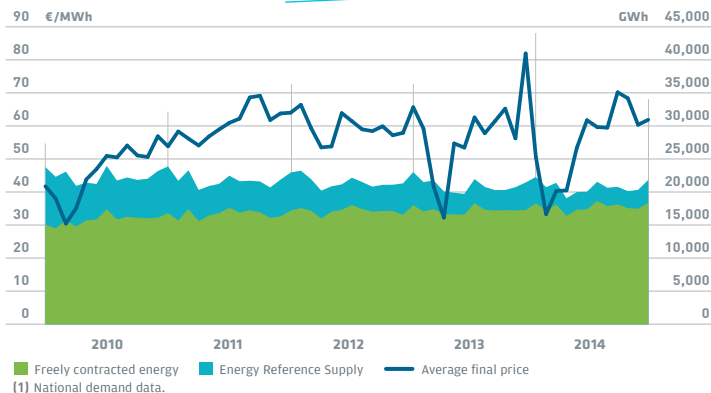
Annual Evolution of Installed Capacity - Peninsular System

GW

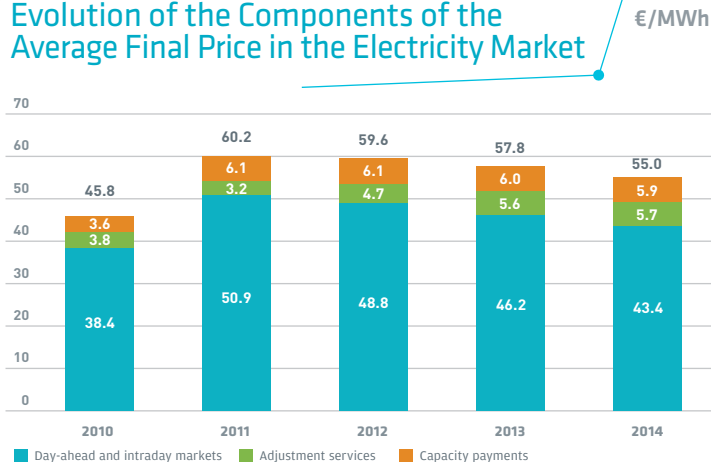


(1) Includes pure pumped storage (2.517 MW). (2) Includes solar photovoltaic and solar thermal.

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



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



Energy Managed in the Peninsular System Adjustment Services ⁽¹⁾

GWh

| | 2013 | | 2014 | | % 14/13 | |
|-------------------------------------|--------|----------|--------|----------|---------|----------|
| | Upward | Downward | Upward | Downward | Upward | Downward |
| Supply guarantee restrictions (2) | 4,085 | - | 3,260 | - | -20.2 | - |
| Technical restrictions (DBFP) (3) | 7,240 | 193 | 9,571 | 110 | 32.2 | -42.9 |
| Additional upward reserve power (4) | 3,003 | - | 4,279 | - | 42.5 | - |
| Secondary control band (5) | 691 | 512 | 677 | 502 | -2.1 | -1.9 |
| Secondary control | 1,806 | 1,070 | 1,746 | 995 | -3.3 | -7.1 |
| Tertiary control | 3,330 | 1,812 | 3,066 | 1,765 | -7.9 | -2.6 |
| Deviation management | 2,347 | 905 | 1,865 | 571 | -20.5 | -36.9 |
| Real-time constraints (6) | 558 | 1,701 | 556 | 1,274 | -0.5 | -25.1 |

(1) Does not include energy associated to cross-border balance services. (2) Increased energy in phase 1 of the supply guarantee restrictions (RD 134/2010 modified by RD 1221/2010) (P.O.3.10). (3) Increased or reduced energy in phase 1 of the technical resolution restrictions of the DBFP (Daily Basic Functioning Program) (P.O.3.2).

(4) Total annual reserve (GW). (5) Average hourly power band (MW). (6) Includes redispatching of energy from the Peninsular power system - Balearic power system interconnection.

Average Weighted Price in the Peninsular System Adjustment Services

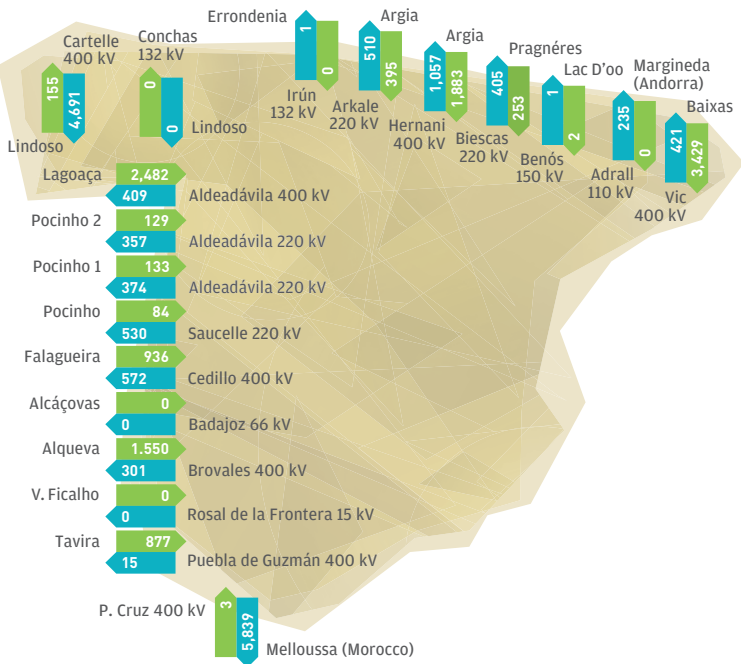
€/MWh

| | 2013 | | 2014 | | % 14/13 | |
|-------------------------------------|--------|----------|--------|----------|---------|----------|
| | Upward | Downward | Upward | Downward | Upward | Downward |
| Supply guarantee restrictions (1) | 81.1 | - | 76.6 | - | -5.6 | - |
| Technical restrictions (DBFP) (2) | 127.6 | 62.9 | 117.6 | 54.3 | -7.8 | -13.8 |
| Additional upward reserve power (3) | 36.9 | - | 34.1 | - | -7.6 | - |
| Secondary control band (3) | | 29.6 | | 23.3 | | -21.3 |
| Secondary control | 50.5 | 28.7 | 45.4 | 31.6 | -10.3 | 10.3 |
| Tertiary control | 62.5 | 16.8 | 58.2 | 11.9 | -6.8 | -29.3 |
| Deviation management | 60.1 | 22.5 | 54.9 | 12.2 | -8.6 | -45.8 |
| Real-time constraints | 231.9 | 8.8 | 196.5 | 13.7 | -15.3 | 55.2 |

(1) Calculated on the basis of the cost for the settlement of supply guarantee restrictions process divided by scheduled energy for supply guarantee restrictions. (2) Increased or reduced energy in phase 1 of the technical resolution restrictions of the DBFP (Daily Basic Functioning Program) (P.O.3.2). (3) Average hourly price (€/MW).

Map of International Physical Energy Exchanges

GWh



International Physical Energy Exchanges by Interconnection

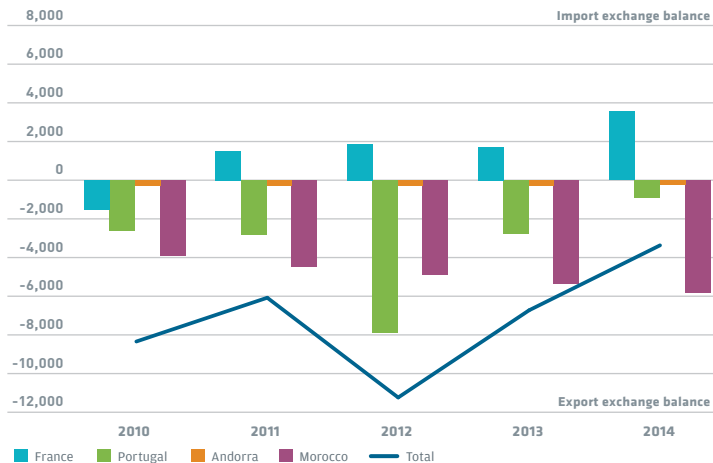
GWh

| | Import | | Export | | Balance (1) | |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| France | 4,879 | 5,963 | 3,171 | 2,395 | 1,708 | 3,567 |
| Portugal | 5,323 | 6,345 | 8,100 | 7,247 | -2,777 | -903 |
| Andorra | 0 | 0 | 287 | 235 | -287 | -235 |
| Morocco | 1 | 3 | 5,377 | 5,839 | -5,376 | -5,836 |
| Total | 10,204 | 12,310 | 16,936 | 15,716 | -6,732 | -3,406 |

(1) Positive values indicate an import exchange balance and negative values indicate an export exchange balance.

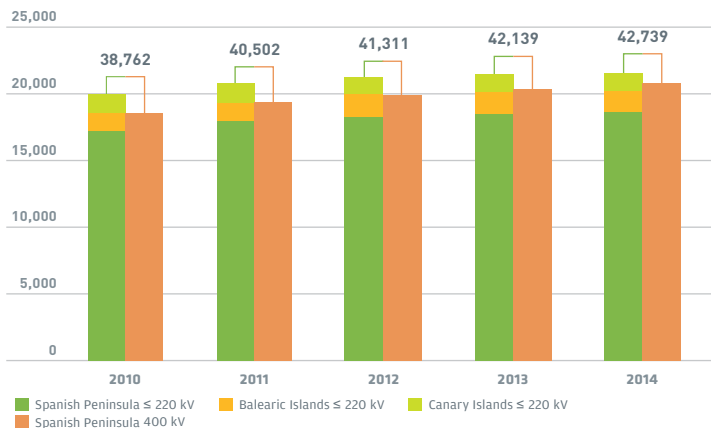
Evolution of the International Physical Energy Exchanges Balance

GWh



Evolution of the Transmission Grid in Spain

km of circuit



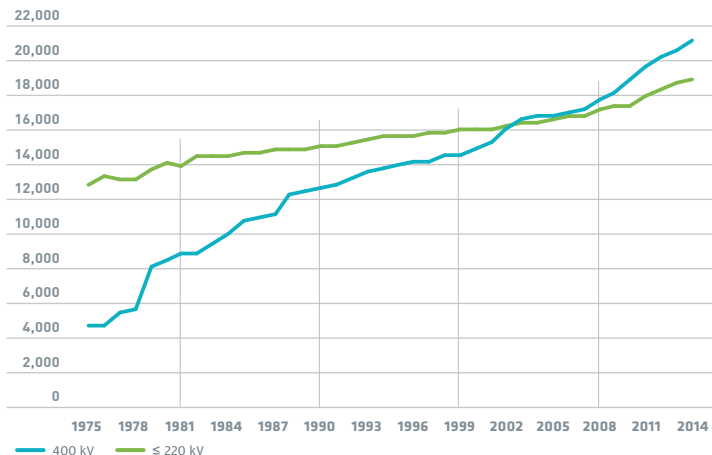
Transmission Grid Facilities in Spain

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

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

Graph Showing the Evolution of the Peninsular 400 KV and ≤ 220 KV Transmission Grid

km of circuit



Transmission Grid Quality

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

ENS: Energy not supplied. **AIT:** Average Interruption Time.

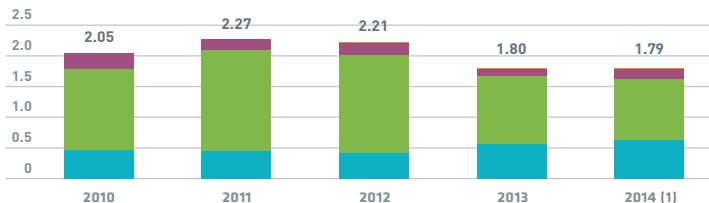
Average interruption time (AIT) = Energy not supplied (ENS) / Average power of the system.

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

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

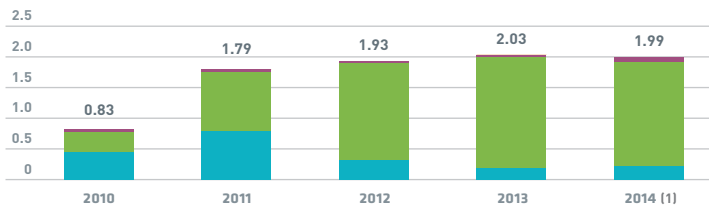
Non-Availability Rate of the Peninsular Transmission Grid

%



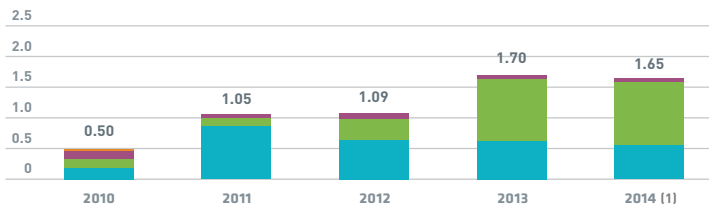
Non-Availability Rate of the Balearic Islands' Transmission Grid

%



Non-Availability Rate of the Canary Islands' Transmission Grid

%



■ Programmable for causes not due to maintenance.
 ■ Programmable for predictive and preventative maintenance.
 ■ Non-programmable due to corrective maintenance.
 ■ Non-programmable due to fortuitous circumstances.

Note: Classification in accordance with RD 1955/2000.

The total non-availability rate of the transmission grid does not include the non-availabilities due to causes of force majeure or third party actions. (1) Provisional data pending audit (currently underway).

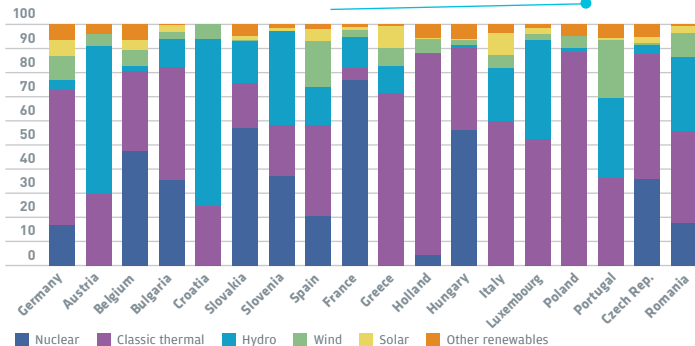
Electrical Energy Demand and Consumption Per Capita of the Countries of the European Union Members of the Continental Europe (ENTSO-E)

| | Demand (TWh) | | Consumption per capita (KWh/Hab.) | |
|----------------|----------------|-------------|-----------------------------------|-------------|
| | 2014 | % 14/13 | 2014 | % 14/13 |
| Germany | 504.9 | -4.8 | 6,251 | -5.1 |
| Austria | 69.3 | -0.5 | 8,146 | -1.1 |
| Belgium | 83.7 | -2.9 | 7,473 | -3.3 |
| Bulgaria | 31.2 | -3.0 | 4,309 | -2.5 |
| Croatia | 16.4 | -3.9 | 3,863 | -3.5 |
| Slovakia | 26.1 | -1.9 | 4,827 | -2.0 |
| Slovenia | 13.2 | 4.0 | 6,395 | 3.9 |
| Spain | 258.1 | -1.1 | 5,549 | -0.7 |
| France | 465.7 | -6.0 | 7,284 | -6.4 |
| Greece | 49.3 | -0.6 | 4,518 | 0.2 |
| Holland | 110.9 | 0.4 | 6,592 | 0.1 |
| Hungary | 37.6 | -3.7 | 3,805 | -3.4 |
| Italy | 308.4 | -2.4 | 5,074 | -4.1 |
| Luxembourg | 6.3 | 1.0 | 11,378 | -1.3 |
| Poland | 146.9 | 1.0 | 3,864 | 1.1 |
| Portugal | 48.8 | -0.7 | 4,680 | -0.1 |
| Czech Republic | 62.0 | -1.1 | 5,898 | -1.1 |
| Romania | 53.3 | 1.9 | 2,672 | 2.3 |
| Total | 2,292.1 | -3.0 | 5,621 | -3.3 |

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

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

%



Legend: Nuclear (dark blue), Classic thermal (purple), Hydro (teal), Wind (light green), Solar (yellow), Other renewables (orange)

Source: ENTSO-E, Spain: Red Eléctrica de España



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