

“Statistical Data on Electricity in Italy - 2014”

Summary note

DROP IN DEMAND FOR ELECTRICITY IN 2014: -2.5%

The final data of the 2014 Electricity Report registered a **2.5%** drop in consumption over 2013. The total energy demand required in Italy amounted to **310.5** billion kWh.

- ✓ Consumption: overall, consumption decreased by 2.1%, with a decrease of 1.9% for the industrial sector, 4.1% for the domestic sector, 0.8% for the tertiary sector and 5.4% for the agricultural sector.
- ✓ Generation: the share of renewable energies increased to 38.9% (35.1% in 2013). Gross production of electricity from renewable sources increased by 7.7% reaching 120.7 billion kWh. Photovoltaic energy production continued to grow (+3.3%) and a significant rise in renewable energies was recorded (hydroelectric power (+10.9%) and bioenergy (+9.6%). Natural gas was the most used, at 54.5% of overall thermoelectric production.
- ✓ Power stations: total power fell by 2.2% compared to 2013. This decrease was due to the reduction in thermoelectric plants, which recorded a decrease of 3,446 MW compared to 2013 (-4.6%), while the increase in the solar energy sector continued with +2.3% compared to 2013.
- ✓ Regions: 12 out of 20 recorded a production deficit compared with consumption.

• **Consumption**

Overall drop in consumption (demand net of grid losses) of 2.1%.

The distribution of electricity consumption by economic sector registered a negative consumption trend in industry (see Annex 1), -1.9% on 2013, showing less decline in comparison with the previous two years (the decline was 4.5% between 2012 and 2013). With a consumption of 122.5 billion kWh, the industrial sector accounted for 42.1% of total Italian electricity consumption in 2014 (42.0% in 2013). A decrease of 4.1% and 5.4% were recorded for the domestic sector and the agricultural sector respectively. In addition, a negative change was recorded for tertiary consumption compared to 2013, albeit less than during the previous two years: 99.0 billion kWh in 2014 (-0.8% compared to 2013).

• **Production**

Renewable energies continued to grow (+7.7%), while natural gas ranked once again at the top in thermoelectric production (54.5%). An all-time high for gross production from hydroelectric generation that reached 60.3 billion kWh.

In 2014, 85.9% of electricity demand was met by national production, equivalent to 266.8 billion kWh, down 3.4% over 2013. The remaining part of this demand was covered by net imports from other countries, amounting to 43.7 billion kWh, a increase of 3.7% on the previous year (see Annex 1).

With specific regard to national production, **2014 registered a rise in renewable energy sources** (hydroelectric power, wind power, photovoltaic, geothermal and bioenergy) out of gross domestic electricity consumption of **7.7%**: Gross wind power production reached 15.2 billion kWh (+1.9%), gross photovoltaic reached 22.3 billion kWh (+3.3%), and gross bioenergy production reached 18.7 billion kWh (+9.6%).

Hydroelectric power and thermal power generation accounted for 22.1% and 62.1% of net national production respectively, namely +10.2% for hydroelectric power and -8.9% for thermoelectric power compared to last year. Of the fuels employed for thermoelectric production, **natural gas was the most used**: the electricity generated using natural gas amounted to 91.1 billion kWh, equivalent to **54.5% of total thermoelectric production** (down by 14.1% over 2013). It was followed by coal at 22.8% (39.4 billion kWh, down by 3.4% over 2013) (see Annex 2).

- **Power**

Power decreased over 2013, falling by 2,753 MW (-2.2%).

- ✓ In 2014, in terms of installed power, net efficient power generation was 121,762 MW (-2.2% on 2013), **a decrease of 2,753 MW**. The fall is due to disposals in thermoelectric power amounting to **3,446 MW** (-4.6% over the thermoelectric power plant total in 2013). Conversely, an increase in the solar power sector **was equivalent to +424 MW**, up by **2.3%** over 2013. In this regard it is to be noted that the number of plants and the power relative to the photovoltaic sector have been the subject of joint alignment of the data present in the GAUDI' system managed by Terna, and the archives used by GSE.

Peak demand: 51,550 MW

Peak demand in 2014 was registered at noon on June 12, when the "electricity meter" reached 51,550 MW, -4.4% compared to the 2013 peak (53,942 MW) and below the record level of 56,822 MW reached on 12 December 2007.

- **Regions**

12 out of 20 recorded a production deficit

In 2014 **12 out of 20 Italian regions (same as in the previous three years)** recorded a production **deficit** compared with demand. In percentage terms, **Marche** had the largest deficit (**68.5%**), followed by **Campania (54.7%)** and **Umbria (43.0%)** (see Annex 3).

Among the **8 regions with a surplus**, **Valle d'Aosta** registered **218.2%**, **Trentino Alto-Adige 129.7%** and **Puglia 91.4%**.

Of the overall demand of 310.5 billion kWh, the **North accounted for 55.6%**, the **Centre for 18.1%** and the **South for 26.3%**. In absolute terms, **Lombardy** was the region with the highest electricity demand in 2014: 66 billion kWh (**21.3% of the total**); it was followed by the **Veneto** (29.6 billion kWh, equivalent to 9.5% of the total) and **Emilia Romagna** (28 billion kWh, equivalent to 9% of the total). The **electricity consumption per capita** amounted to 4,790 kWh in 2014 (vs. 4,967 kWh in 2013), of which 1,057 kWh for domestic use. Per-capita consumption was highest in northern Italy (5,935 kWh/inh.) compared to central Italy (4,326 kWh/inh.) and southern Italy (3,537 kWh/inh.).

For more details and information, please refer to the full version of the annual report “Statistical data on electricity in Italy - 2014”, available at www.terna.it and www.ternareteitalia.it, under “ELECTRIC SYSTEM – STATISTICAL DATA AND FORECASTS – Statistical Data”.

Annex 1

Annual Report on Electricity in Italy - 2014

GWh*	2013	2014	2014/2013
Net production	278,832.6	269,147.9	-3.5%
- Hydropower	54,068.4	59,574.9	10.2%
- Thermoelectric	183,403.9	167,080.2	-8.9%
- Geothermal	5,320.1	5,566.6	4.6%
- Wind power	14,811.6	15,088.6	1.9%
- Photovoltaic	21,228.7	21,837.5	2.9%
For pumping	2,495.2	2,329.1	-6.7%
Production for consumption	276,337.4	266,818.8	-3.4%
Electricity imported	44,337.9	46,747.5	5.4%
Electricity exported	2,200.2	3,031.1	37.8%
DEMAND	318,475.1	310,535.2	-2.5%
Grid losses	21,187.5	19,451.7	-8.2%
CONSUMPTION	297,287.5	291,083.5	-2.1%
Agriculture	5,677.1	5,372.1	-5.4%
Industry	124,870.8	122,505.0	-1.9%
Tertiary	99,756.5	98,951.4	-0.8%
Domestic	66,983.2	64,255.0	-4.1%

*1 GWh = 1 million kWh

Attachment 2

Many energy sources by net thermoelectric production (GWh *)

	2013	2014	2014/2013
Solids (coal, lignite)	40,811.0	39,428.6	-3.4%
Natural gas (methane)	106,003.3	91,066.8	-14.1%
Petroleum (heating oil, etc...)	4,898.6	4,271.8	-12.8%
Derived gas (blast furnace gas, etc.)	3,191.0	2,897.6	-9.2%
Other fuels (Syngas, USW, biomass, etc.)	20,831.4	21,119.5	1.4%
Other fuels (biogas, etc.)	6,947.7	7,660.3	10.3%
Other energy sources	720.9	635.7	-11.8%

*** 1 GWh = 1 million kWh**