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Energy production and consumption in 2013

Energy consumption in the EU down to its early 1990s level

EU energy dependence at 53%

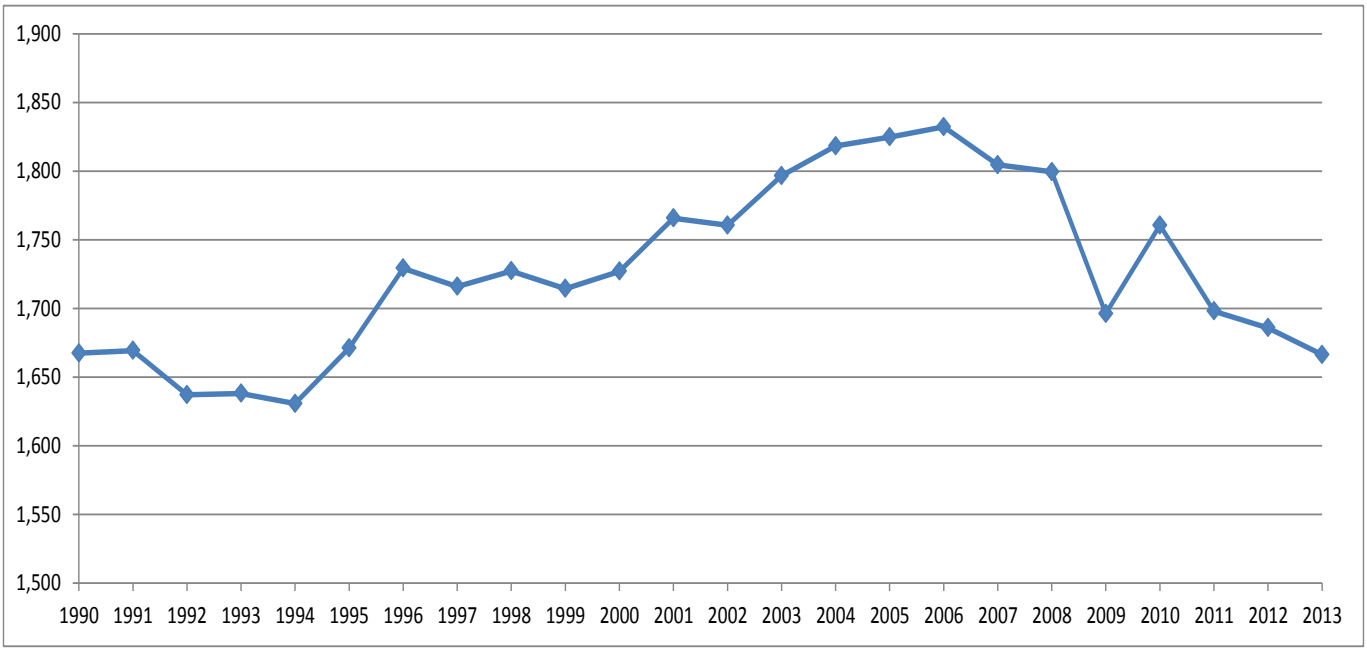
In 2013, gross inland energy consumption[1], which reflects the energy necessary to satisfy inland consumption, amounted in the **European Union** (EU) to 1 666 million tonnes of oil equivalent[2] (Mtoe), back to its early 1990s level and down by 9.1% compared to its peak of 1 832 Mtoe in 2006.

In 2013, nuclear energy (29%) accounted for the largest share of **EU** domestic production of energy, ahead of renewables (24%), solid fuels (20%), gas (17%), oil (9%) and non-renewable wastes (1%). In total, the **EU** produced 790 Mtoe of energy in 2013.

As a result, the **EU** was dependent[3] on energy imports for slightly over a half (53%) of its consumption in 2013.

These figures are issued by **Eurostat, the statistical office of the European Union,** and are complemented with a publication[4] on energy saving in the EU.

Gross inland energy consumption in the EU,
(in million tonnes of oil equivalent, Mtoe)



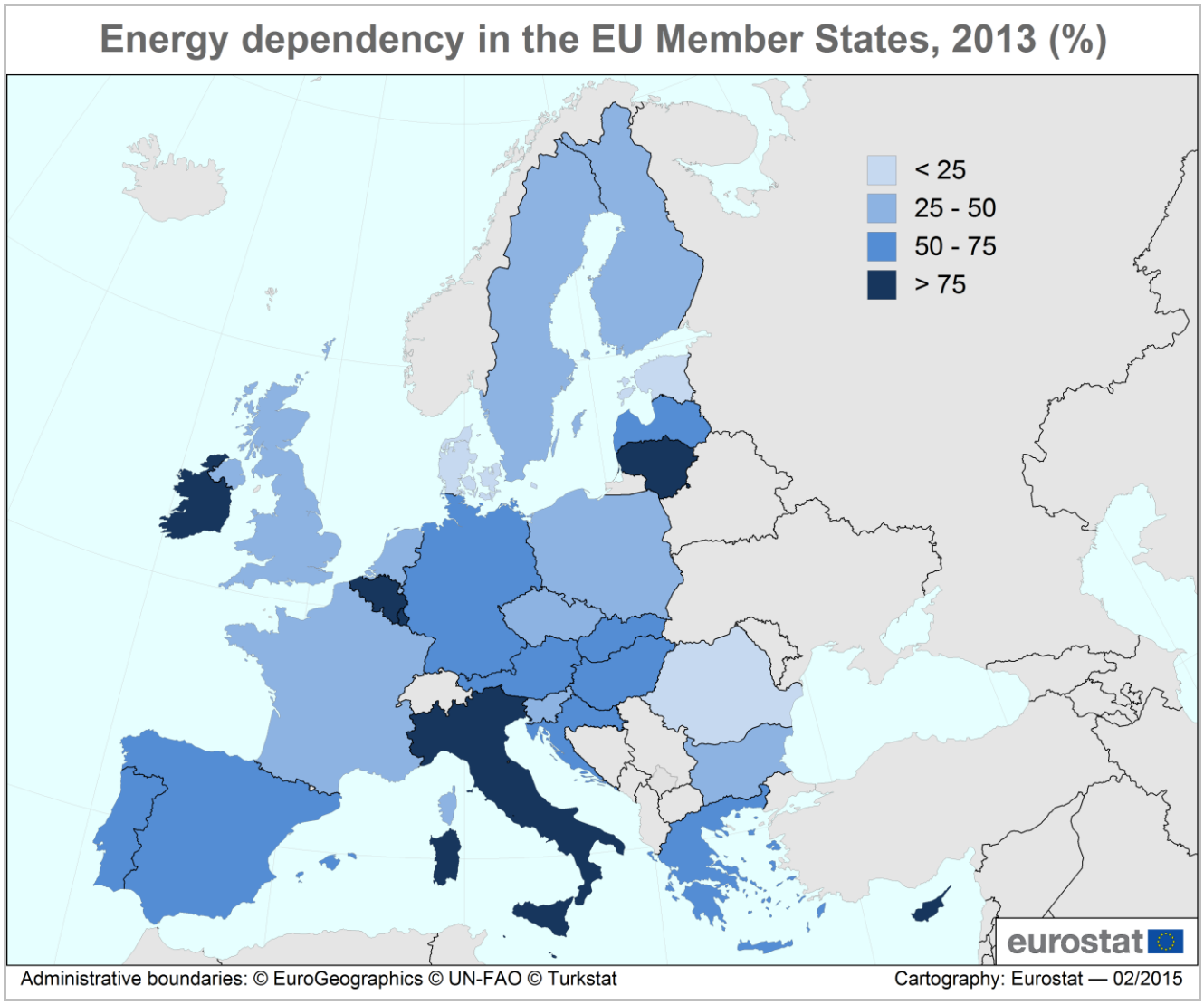
Gross inland energy consumption in the EU

	Gross inland energy consumption, in Mtoe						Energy dependency, 2013
	1990	2000	2006	2011	2012	2013	
EU	**1 667.3**	**1 726.9**	**1 832.2**	**1 698.0**	**1 685.8**	**1 666.2**	**53.2%**
Belgium	48.7	59.3	58.0	57.8	54.8	56.7	77.5%
Bulgaria	27.6	18.5	20.4	19.1	18.2	16.8	37.8%
Czech Republic	49.9	41.1	46.3	43.0	42.8	42.2	27.9%
Denmark	17.9	19.7	21.0	18.6	18.0	18.1	12.3%
Germany	356.3	342.3	351.7	316.7	318.6	324.3	62.7%
Estonia	9.9	5.0	5.5	6.2	6.1	6.7	11.9%
Ireland	10.3	14.4	15.6	13.9	13.8	13.7	89.0%
Greece	22.3	28.3	31.6	27.8	27.7	24.4	62.1%
Spain	90.1	123.6	144.4	128.2	127.7	118.6	70.5%
France	227.8	257.6	273.0	258.0	258.3	259.3	47.9%
Croatia	9.0	7.8	8.9	8.5	8.1	7.8	52.3%
Italy	153.5	174.2	185.3	172.0	166.3	160.0	76.9%
Cyprus	1.6	2.4	2.6	2.7	2.5	2.2	96.4%
Latvia	7.9	3.9	4.8	4.4	4.5	4.5	55.9%
Lithuania	15.9	7.1	8.5	7.0	7.1	6.7	78.3%
Luxembourg	3.5	3.7	4.7	4.6	4.5	4.3	96.9%
Hungary	28.8	25.3	27.5	25.1	23.6	22.7	52.3%
Malta	0.6	0.8	0.9	0.9	1.0	0.8	104.1%
Netherlands	66.7	75.6	79.5	80.2	81.8	81.2	26.0%
Austria	25.0	29.0	34.5	33.6	33.7	33.8	62.3%
Poland	103.3	88.6	96.9	101.0	97.8	98.2	25.8%
Portugal	18.2	25.3	26.2	23.6	22.5	22.6	73.5%
Romania	58.1	36.6	40.6	36.6	35.4	32.3	18.6%
Slovenia	5.7	6.5	7.3	7.3	7.0	6.9	47.0%
Slovakia	21.8	18.3	18.9	17.4	16.7	17.3	59.6%
Finland	28.7	32.5	37.6	35.8	34.7	33.9	48.7%
Sweden	47.4	48.9	49.6	49.7	49.8	49.1	31.6%
United Kingdom	210.6	230.6	230.5	198.0	202.9	201.1	46.4%
Norway	21.4	26.4	27.6	28.5	29.7	33.7	-470.3%
Montenegro	:	:	1.2	1.1	1.1	1.0	26.5%
FYR of Macedonia	2.4	2.7	2.9	3.1	3.0	2.7	47.9%
Albania	2.6	1.8	2.1	2.3	2.1	2.6	25.1%
Serbia	19.6	13.7	16.7	16.2	14.6	15.1	23.5%

Estonia and Denmark, least dependent on energy imports

Energy dependency shows the extent to which an economy relies upon imports in order to meet its energy needs. In 2013, the least dependent Member States were **Estonia** (11.9%), **Denmark** (12.3%), **Romania** (18.6%), **Poland** (25.8%), the **Netherlands** (26.0%) and the **Czech Republic** (27.9%). In contrast, the highest energy dependence rates were registered in **Malta**[3] (104,0%), **Luxembourg** (96.9%), **Cyprus** (96.4%) and **Ireland** (89,1%).

Among the five Member States consuming the largest amounts of energy, the least dependent on energy imports were the **United Kingdom** (46.4%) and **France** (47.9%), in contrast to **Germany** (62.7%), **Spain** (70.5%) and **Italy** (76.9%). At **EU** level, the energy dependence rate was 53.2% in 2013.



France, largest energy producer in the EU

With 135 Mtoe (or 17% of total energy production in the EU), **France** remained in 2013 the main producer of energy in the EU, ahead of **Germany** (121 Mtoe, or 15%), the **United Kingdom** (110 Mtoe, or 14%), **Poland** (71 Mtoe, or 9%) and the **Netherlands** (70 Mtoe or 9%). While producing from different types of fuel, the energy production of these five Member States together accounted for nearly two-thirds of **EU** total primary production of energy in 2013.

Solid fuels predominant in Poland, Estonia and Greece

In thirteen Member States, 70% or more of the energy production come from a single type of fuel. After the two Mediterranean island Member States, **Cyprus** and **Malta** (both 100.0%), the highest shares of energy production from renewable sources were recorded in **Latvia** (99.7%), **Portugal** (97.5%), **Lithuania** (91.1%), **Austria** (78.2%) and **Luxembourg** (76.4%). Solid fuels were largely predominant in **Poland** (80.5%), **Estonia** (78.3%) and **Greece** (72.3%), while **France** (80.9%) and **Belgium** (75.2%) were highly dependent on nuclear energy production. With an 88.7% share, gas represented the main type of energy production only in the **Netherlands**.

Primary production by energy type, 2013

	Total primary production (in Mtoe)	of which (shares):					
		Solid fuels	Oil	Gas	Nuclear	Renewable sources[5]	Wastes (non-renewable)
EU	**789.7**	**19.7%**	**9.1%**	**16.7%**	**28.7%**	**24.3%**	**1.5%**
Belgium	14.6	0.0%	0.0%	0.0%	75.2%	20.0%	4.8%
Bulgaria	10.5	45.4%	0.3%	2.1%	34.8%	17.3%	0.1%
Czech Republic	29.9	59.0%	0.9%	0.7%	26.6%	12.2%	0.7%
Denmark	16.6	0.0%	52.3%	25.8%	0.0%	19.5%	2.4%
Germany	120.6	37.4%	3.1%	7.4%	20.8%	27.9%	3.4%
Estonia	5.7	78.3%	0.0%	0.0%	0.0%	19.9%	1.9%
Ireland	2.3	56.9%	0.0%	6.8%	0.0%	33.7%	2.5%
Greece	9.3	72.3%	0.8%	0.1%	0.0%	26.7%	0.2%
Spain	34.2	5.1%	1.1%	0.1%	42.7%	50.5%	0.4%
France	135.1	0.0%	0.9%	0.2%	80.9%	17.1%	0.9%
Croatia	3.6	0.0%	16.8%	41.6%	0.0%	41.4%	0.2%
Italy	36.9	0.1%	15.9%	17.2%	0.0%	63.7%	3.1%
Cyprus	0.1	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Latvia	2.1	0.1%	0.0%	0.0%	0.0%	99.7%	0.2%
Lithuania	1.4	1.7%	6.2%	0.0%	0.0%	91.1%	1.1%
Luxembourg	0.1	0.0%	0.0%	0.0%	0.0%	76.4%	23.6%
Hungary	10.1	15.9%	8.5%	15.3%	39.3%	20.5%	0.5%
Malta	0.0	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Netherlands	69.7	0.0%	3.1%	88.7%	1.1%	6.2%	0.9%
Austria	12.1	0.0%	7.2%	9.3%	0.0%	78.2%	5.3%
Poland	70.6	80.5%	1.4%	5.4%	0.0%	12.1%	0.6%
Portugal	5.8	0.0%	0.0%	0.0%	0.0%	97.5%	2.5%
Romania	26.1	17.8%	16.3%	32.9%	11.5%	21.3%	0.2%
Slovenia	3.6	30.3%	0.0%	0.1%	38.5%	30.2%	1.0%
Slovakia	6.4	9.1%	0.2%	1.6%	64.1%	22.9%	2.1%
Finland	18.0	9.4%	0.4%	0.0%	33.8%	55.2%	1.2%
Sweden	34.7	0.5%	0.0%	0.0%	49.4%	48.4%	1.7%
United Kingdom	109.5	6.7%	38.3%	30.0%	16.6%	7.7%	0.7%
Norway	193.9	0.6%	43.5%	49.3%	0.0%	6.4%	0.1%
Montenegro	0.8	48.9%	0.0%	0.0%	0.0%	51.1%	0.0%
FYR of Macedonia	1.4	77.9%	0.0%	0.0%	0.0%	22.1%	0.0%
Albania	2.0	0.0%	57.9%	0.7%	0.0%	41.4%	0.0%
Serbia	11.4	67.4%	10.8%	3.7%	0.0%	18.1%	0.0%

Figures may not add up due to rounding.
0.0 is used when the value is less than 0.05 or not applicable.

1. Gross inland energy consumption is defined as primary energy production plus recovered energy products, imports and stock change, less exports and fuel supply to maritime bunkers (for seagoing ships of all flags). It therefore reflects the energy necessary to satisfy inland consumption within the limits of national territory.
2. A tonne of oil equivalent (toe) is a standardised unit defined on the basis of one tonne of oil having a net calorific value of 41.868 Gigajoules. It is a convenient common measure used to sum up the different fuels, based on their energy content. Thus, for example, one GJ of nuclear power will be equivalent to 0.024 tonnes of oil, and one tonne of high grade coal contains the same amount of energy as 0.7 tonnes of oil. Lower grades will contain less energy.

3. The energy dependence rate shows the proportion of energy that an economy must import. It is defined as net energy imports divided by gross inland energy consumption plus fuel supplied to international maritime bunkers, expressed as percentage. A negative dependency rate indicates a net exporter of energy, while a dependency rate in excess of 100% indicates that energy products have been stocked.
4. Eurostat, Statistics Explained article "**Energy saving statistics**" available on the Eurostat website: http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_saving_statistics.
5. Renewable energy production includes biomass, hydropower, geothermal energy, wind energy and solar energy.

Issued by: **Eurostat Press Office**

Vincent BOURGEAIS
Tel: +352-4301-33 444
eurostat-pressoffice@ec.europa.eu

Production of data:

Marek STURC
Tel: +352-4301- 33 474
marek.sturc@ec.europa.eu

Media requests: Eurostat media support / Tel: +352-4301-33 408 / eurostat-media-support@ec.europa.eu

ec.europa.eu/eurostat/ @EU_Eurostat