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## Energy consumption and production

# EU27 energy dependence rate at 54% in 2006

## Energy consumption stable

In the **EU27**, gross inland energy consumption<sup>1</sup> was 1 825 million tonnes of oil equivalent<sup>2</sup> (toe) in 2006, stable compared with 2005, while energy production decreased by 2.3% to 871 mn toe. As a result, net imports<sup>3</sup> increased by 2.4% in 2006 and the energy dependence rate<sup>4</sup> rose to 54% from 53% in 2005.

Between 1997 and 2006, **EU27** energy production fell by 9%, consumption rose by 7% and net imports rose by 29%. In 1997 the energy dependence rate stood at 45%.

These figures are published by **Eurostat, the Statistical Office of the European Communities**.

## Energy dependency more than 90% in Cyprus, Malta, Luxembourg and Ireland

The highest increase in energy consumption between 2005 and 2006 was recorded in **Finland** (+9.1%), and the largest decrease in **Malta** (-6.4%). For the five largest energy consumers, which together accounted for nearly two thirds of total consumption in the **EU27**, the change in consumption was +0.5% in **Germany**, -1.2% in **France**, -1.6% in the **United Kingdom**, -0.6% in **Italy** and -0.5% in **Spain**.

In 2006, the highest energy dependence rates were found in **Cyprus** (102%<sup>4</sup>), **Malta** (100%), **Luxembourg** (99%) and **Ireland** (91%). The Member States the least dependent on energy imports were **Poland** (20%), the **United Kingdom** (20%), the **Czech Republic** (28%) and **Romania** (29%). **Denmark** is a net exporter of energy and therefore has a negative energy dependence rate (-37%).

In 2006, **EU27** net imports of energy rose by 2.4% to 1 010 mn toe. Energy imports were dominated by oil and gas, accounting for around 60% and 26% respectively of the **EU27**'s net imports. The most important extra-EU27 suppliers of crude oil and natural gas were **Russia** (33% of oil imports and 40% of gas imports in 2006) and **Norway** (16% and 23% respectively).

## Nuclear power and solid fuels made up half of EU27 energy production

In 2006, **EU27** energy production decreased by 2.3%. The four main energy producers in the **EU27** were the **United Kingdom** (184 mn toe, -9.2% compared with 2005), **Germany** (137 mn toe, +0.9%), **France** (136 mn toe, +0.1%) and **Poland** (77 mn toe, -1.1%), which together accounted for more than 60% of total production in the **EU27**. The largest decrease in energy production between 2005 and 2006 was registered in **Lithuania** (-11.9%), while the largest increase was recorded in **Portugal** (+20.7%).

**EU27** energy production in 2006 came from nuclear power (29% of total production), solid fuels (22%), gas (20%), renewables<sup>5</sup> (15%) and crude oil (14%).

### Energy consumption, net imports and dependence rate, 2006

	Gross inland energy consumption		Net imports		Energy dependence rate <sup>4</sup> (%)
	Mio. toe	% change 2006/2005	Mio. toe	% change 2006/2005	
<b>EU27</b>	<b>1 825.2</b>	<b>0.0</b>	<b>1 010.1</b>	<b>2.4</b>	<b>53.8</b>
Belgium	60.4	-1.2	53.5	-0.5	77.9
Bulgaria	20.5	2.8	9.5	0.3	46.2
Czech Republic	46.2	2.0	12.9	0.3	28.0
Denmark	20.9	6.1	-8.1	-22.5	-36.8
Germany	349.0	0.5	215.5	0.1	61.3
Estonia	5.4	-2.5	1.9	28.1	33.5
Ireland	15.5	2.6	14.2	4.1	90.9
Greece	31.5	0.5	24.9	6.0	71.9
Spain	143.9	-0.5	123.8	-0.1	81.4
France	273.1	-1.2	141.7	-1.8	51.4
Italy	186.1	-0.6	164.6	2.2	86.8
Cyprus	2.6	5.8	3.0	5.5	102.5
Latvia	4.6	3.0	3.2	5.8	65.7
Lithuania	8.4	-2.2	5.5	7.1	64.0
Luxembourg	4.7	0.0	4.7	0.9	98.9
Hungary	27.8	-0.8	17.3	-1.0	62.5
Malta	0.9	-6.4	0.9	-6.4	100.0
Netherlands	80.5	-2.3	37.2	-3.0	38.0
Austria	34.1	-0.1	24.9	0.8	72.9
Poland	98.3	4.7	19.6	16.2	19.9
Portugal	25.3	-6.3	21.6	-11.7	83.1
Romania	40.9	4.2	11.9	9.9	29.1
Slovenia	7.3	0.6	3.8	0.4	52.1
Slovakia	18.8	-1.2	12.0	-3.5	64.0
Finland	37.8	9.1	20.9	8.5	54.6
Sweden	50.8	-1.7	19.8	-1.9	37.4
United Kingdom	229.5	-1.6	49.3	52.7	21.3

## Production by energy type, 2006, in million toe

	Total production		Of which:				
	Million toe	% change 2006/2005	Solid fuels	Crude oil	Gas	Nuclear	Renewable sources
<b>EU27*</b>	<b>871.2</b>	<b>-2.3</b>	<b>190.4</b>	<b>118.7</b>	<b>179.4</b>	<b>255.3</b>	<b>127.4</b>
<b>Belgium</b>	13.4	-0.6	-	-	-	12.0	1.3
<b>Bulgaria</b>	10.9	3.4	4.3	0.0	0.4	5.0	1.2
<b>Czech Republic</b>	33.1	2.0	23.7	0.3	0.1	6.7	2.2
<b>Denmark</b>	29.5	-5.6	-	17.2	9.3	-	3.0
<b>Germany</b>	136.8	0.9	53.3	5.2	14.1	43.1	21.2
<b>Estonia</b>	3.9	-8.4	3.1	0.1	-	-	0.6
<b>Ireland</b>	1.6	-1.2	0.8	-	0.4	-	0.4
<b>Greece</b>	10.1	-2.3	8.1	0.1	0.0	-	1.8
<b>Spain</b>	31.2	3.5	6.0	0.1	0.1	15.5	9.4
<b>France</b>	135.6	0.1	-	1.1	1.1	116.1	17.3
<b>Italy</b>	27.1	-2.2	0.0	5.8	9.0	-	12.2
<b>Cyprus</b>	0.0	4.4	-	-	-	-	0.0
<b>Latvia</b>	1.8	-0.8	0.0	-	-	-	1.8
<b>Lithuania</b>	3.2	-11.9	0.0	0.2	-	2.2	0.8
<b>Luxembourg</b>	0.1	7.6	-	-	-	-	0.1
<b>Hungary</b>	10.3	-0.5	1.8	1.4	2.4	3.5	1.3
<b>Malta</b>	:	:	-	-	-	-	:
<b>Netherlands</b>	60.8	-1.8	-	2.1	55.4	0.9	2.4
<b>Austria</b>	9.6	2.7	-	1.0	1.6	-	7.0
<b>Poland</b>	76.8	-1.1	67.1	0.8	3.9	-	5.1
<b>Portugal</b>	4.3	20.7	-	-	-	-	4.3
<b>Romania</b>	27.4	-0.1	6.5	5.1	9.6	1.5	4.8
<b>Slovenia</b>	3.4	-1.8	1.2	-	0.0	1.4	0.8
<b>Slovakia</b>	6.3	0.8	0.6	0.0	0.2	4.6	0.9
<b>Finland</b>	17.8	9.7	3.2	-	-	5.9	8.7
<b>Sweden</b>	32.3	-5.5	0.2	-	-	17.3	14.8
<b>United Kingdom</b>	183.9	-9.2	10.4	78.0	72.0	19.5	4.0

\* EU27 excludes Malta for which no data are available.  
 0.0 is used when the value is less than 0.05, but greater than zero  
 - Not applicable  
 : Data not available

1. Gross inland consumption is defined as primary production plus imports, recovered products 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. Net imports are imports minus exports.
4. The energy dependence rate is defined as net imports divided by gross consumption, expressed as a percentage. Gross consumption is equal to gross inland consumption plus the fuel (oil) supplied to international marine bunkers. A negative dependency rate indicates a net exporter of energy. A value greater than 100% occurs when net imports exceed gross consumption. In this case, energy products are placed in stocks and not used in the year of import.
5. Renewable energy production includes biomass, hydropower, geothermal energy, wind energy and solar energy.

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