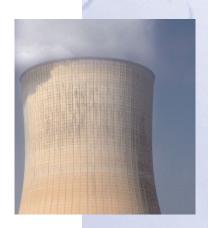
IN THE SPOTLIGHT — ENERGY





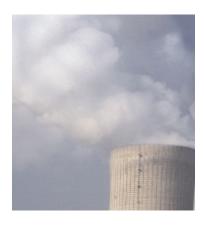


Primary energy production and imports

Electricity generation

Consumption of energy

Prices







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IN THE SPOTLIGHT — ENERGY

There are very few aspects of daily life which are not in one way or another accompanied by the use of energy: for example, making a cup of tea or coffee for breakfast, the journey to school or work, using a computer in the workplace, listening to music at home, or heating water for a shower, all make use of energy in a variety of forms, either as power or heat.

The evolution of the EU is closely linked to energy preoccupations of the Member States as demonstrated by the early ECSC (European Coal and Steel Community) and Euratom treaties. In those days of cheap imported oil, Member States' efforts concentrated on the peaceful use and promotion of nuclear energy as well as on coal, along with the primary user of this commodity, the steel industry. The oil price shocks in the early seventies and eighties demonstrated the vulnerability of the Union and it's Member States as regards imported oil (in particular from the Middle-East). As a result of this, the Member States and the Union promoted numerous policies and measures to diversify their fuel mix and decouple economic growth from energy demand in an attempt to curb oil dependency. In the nineties, a period of relatively low oil prices, environmental considerations (in particular, greenhouse gas (GHG) emissions the Kyoto protocol) and the creation of single, competitive electricity and gas markets across the EU have been the major drivers in shaping EU energy policy. The more recent oil price volatility, along with disruptions in supply via pipelines of Russian gas have made energy re-emerge as a major preoccupation of the EU and it's Member States. In response to this, the Commission published a Green paper on energy (2) where sustainability, competitiveness and security of supplies are defined as the three dimensions of energy strategy. The key challenges for EU energy policy are:

- completing the internal market, with the creation of a competitive energy supply across the EU and ensuring that distribution and transmission systems allow equal access to third parties;
- diversification of the fuel mix in electricity generation to foster sustainability, with the promotion of combined heat and power plants (CHP) and renewable energy sources;
- promotion of energy efficiency in energy end use;
- promotion of biofuels in transport with a beneficial effect on security of supplies and emissions.

(2) 'A European Strategy for Sustainable, Competitive and Secure Energy', COM(2006) 105 final (see http://ec.europa.eu/energy/greenpaper-energy/index_en.htm).

Eurostat has a wide range of data within this area, including:

- annual data on crude oil, oil products, natural gas, electricity, solid fuels and renewables, covering the full energy balance from the supply of energy, through transformation to final energy consumption by sector and by fuel type;
- monthly data on crude oil, oil products, natural gas, electricity and solid fuels, covering mainly the supply side;
- a range of information on the flow of imports of various energy products into the European Union;
- information on the share of electricity generated from renewables;
- half-yearly data on electricity and natural gas prices both for industrial end-users and for households;
- at-the-pump prices of premium unleaded gasoline 95 RON and diesel oil.





In order to meet the increasing requirements of policymakers for energy monitoring, Eurostat has developed a coherent and harmonised system of energy statistics. Annual data collection covers the 25 Member States of the European Union, as well as the acceding countries of Bulgaria and Romania (which become EU Member States on 1 January 2007), the candidate countries of Croatia and Turkey, and the European Economic Area countries of Iceland and Norway; time-series run back to 1985 for some countries, but are more generally available from 1990. Although not presented in this yearbook, monthly data are also available; these have, in principle, the same geographical coverage as the annual data.

PRIMARY ENERGY PRODUCTION AND IMPORTS

Energy commodities extracted or captured directly from natural resources are called primary energy sources. All energy commodities which are produced from primary sources in transformation plants are called derived products. Thus, crude oil extracted from oil fields is a primary energy source, while petroleum products produced in a refinery (transformation plant) are derived products.

Primary energy commodities may also be divided into fossil fuels and renewable energy sources. While fossil fuels are extracted from natural deposits, renewable energy sources (with the exception of geothermal energy) are essentially the direct or indirect capture of solar energy.

Primary energy production covers the national production of primary energy sources in a country over a period of time. Whenever the demand exceeds the primary production, importing primary and/or derived products becomes necessary. This energy dependency of the Member States and the Union, in particular on oil, has formed a major axis of policy considerations at national and EU level over the last 30 years.

Total production of primary energy in the EU-25 totalled 882 million tonnes of oil equivalent (toe) in 2004. Production was dominated by the United Kingdom with a 25 % share, while France and Germany were the only other Member States to report production in excess of 100 million toe.

Primary energy production in the EU-25 in 2004 was concentrated among nuclear energy, natural gas and solid fuels, with crude oil and renewable energies playing a less important role. However, the pace at which the primary production of renewable energy was growing exceeded that of the other energy types, with particularly strong growth from 2000 onwards.



Among renewable energies, the most important was biomass and waste, representing almost 72 million toe of primary production in the EU-25 in 2004. Hydro was the only other significant contributor to the renewable energy mix (26 million toe), and was the only type of renewable energy to report growth during the last decade that was below the renewables' average. There was a particularly rapid expansion in the production of wind energy (although from a very low base level).

The EU-25 imported some 907 million toe of primary energy in 2004, slightly higher than the EU-25's indigenous production of 882 million toe. The largest importers of primary energy were usually the largest Member States, with the exception of the United Kingdom and Poland (both of whom are endowed with natural resources in the form of oil and coal).

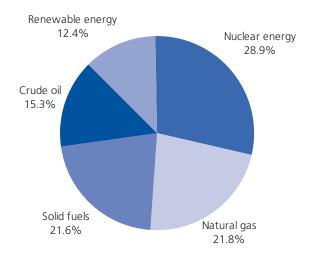
There has been a marked switch in energy imports during the last decade, as natural gas has taken up most of the extra demand for energy, although there was a slight increase in the level of crude oil and petroleum imports too. Despite the rapid growth in imports of natural gas, imports of crude oil and petroleum remain more than double the level of natural gas imports. Net imports of solid fuels were third in order of importance; these have also grown over the last 10 years, from 10 % of the total in 1994 to 13 % by 2004.

The EU-25 was dependent for 50.5 % of its energy on imports from non-member countries in 2004. Energy dependency ratios were highest for crude oil and petroleum (over 80 %), although the dependency on foreign supplies of solid fuels or natural gas grew at a faster pace in the last decade than the dependency on oil (which already stood at more than 75 % in 1994). Among the Member States in 2004, energy dependency ratios varied from lows in the United Kingdom and Poland to upwards of 80 % in Portugal, Italy, Ireland, Cyprus, Luxembourg and Malta; Denmark, which produces more energy than it needs, was the only net exporter of energy among the Member States.

Figure SP.1: Production of primary energy, EU-25, 2004

(% of total, based on 1 000 tonnes of oil equivalent)

TEN00076 TEN00077 TEN00078 TEN00079 TEN00080 TEN00081



Primary production of nuclear energy: the heat produced in a reactor as a result of nuclear fission is regarded as primary production of nuclear heat, or in other words nuclear energy, it is either the actual heat produced or calculated on the basis of reported gross electricity generation and the thermal efficiency of the nuclear plant.

Primary production of natural gas: dry marketable production, measured after purification and extraction of natural gas liquids (NGLs) and sulphur is considered as primary production; it does not include quantities re-injected, extraction losses, or quantities vented and flared; it includes quantities used within the natural gas industry, in gas extraction, pipeline systems and processing plants.

Primary production of solid fuels: it consists of quantities of fuels extracted or produced, calculated after any operation for removal of inert matter; in general, primary production includes the quantities consumed by the producer in the production process (e.g. for heating or operation of equipment and auxiliaries) as well as supplies to other on-site producers of energy for transformation or other uses.

Primary production of crude oil: primary production within national boundaries including offshore production is covered; production should only include marketable production, excluding volumes returned to formation; such production should include all crude oil, NGLs, condensates and oil from shale and tar sands, etc.

Primary production of renewable energy: primary production of biomass, hydropower, geothermal energy, wind and solar energy are included in renewable energies.





Table SP.1: Total production of primary energy

(million tonnes of oil equivalent)

TEN00076

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
EU-25	0.088	897.2	925.5	918.7	898.0	903.8	892.0	894.2	894.0	886.5	882.3
EU-15	723.1	738.0	765.2	757.7	751.5	765.6	756.0	755.2	753.5	744.2	741.5
Euro area	438.7	442.0	454.6	443.8	429.2	431.8	430.0	436.6	438.9	441.9	453.5
Belgium	10.7	10.9	11.3	12.6	12.0	13.3	13.1	12.7	12.9	13.1	13.2
Czech Republic	32.5	31.4	32.2	32.3	30.4	27.6	29.4	30.1	30.3	32.5	32.3
Denmark	15.0	15.5	17.6	20.2	20.3	23.7	27.6	27.0	28.4	28.3	30.9
Germany	141.2	140.5	138.5	138.4	131.6	134.5	132.1	133.0	133.8	134.3	135.3
Estonia	3.5	3.4	3.7	3.6	3.2	3.0	3.2	3.4	3.6	4.1	4.0
Greece	9.1	9.7	10.1	9.9	10.0	9.5	9.9	9.9	10.5	9.9	10.3
Spain	31.9	31.2	32.0	30.7	31.3	30.3	31.2	32.9	31.6	33.1	32.4
France	122.4	126.0	130.3	127.3	124.2	126.3	130.6	131.6	133.1	134.6	135.6
Ireland	3.6	4.2	3.6	2.8	2.5	2.6	2.1	1.7	1.5	1.8	1.9
Italy	29.6	29.2	30.1	30.2	30.1	29.0	26.8	25.6	26.3	27.3	28.0
Cyprus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Latvia	1.3	1.5	1.5	1.7	1.9	1.8	1.5	1.7	1.8	2.0	2.1
Lithuania	2.6	3.7	4.3	3.9	4.4	3.5	3.2	4.1	4.8	5.1	5.0
Luxembourg	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1
Hungary	12.9	13.5	13.1	12.8	11.9	11.5	11.2	10.8	11.1	10.4	10.1
Malta	-	-	-	-	-	-	-	-	-	-	-
Netherlands	66.1	65.9	73.7	65.5	62.7	59.2	56.9	60.6	60.1	58.4	67.9
Austria	8.2	8.5	8.4	8.5	8.6	9.3	9.4	9.4	9.6	9.4	9.5
Poland	96.1	97.9	97.8	99.1	86.8	82.8	78.4	79.4	79.1	78.7	77.9
Portugal	2.8	2.6	3.2	3.0	3.0	2.7	3.1	3.9	3.6	4.3	3.9
Slovenia	3.0	3.0	3.0	3.0	3.0	2.9	3.1	3.1	3.4	3.2	3.4
Slovakia	5.0	4.8	4.7	4.6	4.7	5.2	6.0	6.4	6.5	6.3	5.8
Finland	13.0	13.2	13.4	14.8	13.1	15.2	14.8	15.1	15.7	15.6	15.5
Sweden	30.9	31.5	31.6	32.2	33.2	33.3	30.1	33.7	31.8	31.2	34.5
United Kingdom	238.5	248.9	261.3	261.5	268.8	276.9	268.2	258.0	254.3	242.8	222.6
Bulgaria	9.3	10.2	10.6	9.8	10.2	9.0	9.8	10.3	10.5	10.1	10.2
Croatia	4.0	4.1	4.2	4.1	4.0	3.6	3.6	3.7	3.7	3.7	3.9
Romania	31.9	32.1	35.3	31.6	29.1	28.0	28.6	27.6	27.1	28.2	28.4
Turkey	26.3	26.5	27.2	28.0	29.1	27.5	26.7	25.1	24.6	23.9	24.2
Iceland	1.4	1.4	1.6	1.7	1.8	2.2	2.3	2.5	2.5	2.5	2.5
Norway	170.1	181.6	207.6	212.2	206.1	209.1	224.5	228.4	233.1	235.5	238.0

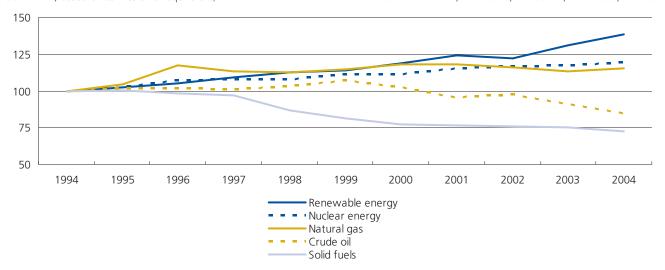
Any kind of extraction of energy products from natural sources to a usable form is called primary production; primary production takes place when the natural sources are exploited, for example in coal mines, crude oil fields, hydro power plants or fabrication of biofuels; transformation of energy from one form to another, like electricity or heat generation in thermal power plants or coke production in coke ovens, is not primary production.



Figure SP.2: Relative change in the production of primary energy (by fuel type), EU-25

(1994 = 100, based on tonnes of oil equivalent)

TEN00076 TEN00077, TEN00078, TEN00079, TEN00080, TEN00081



Primary production of nuclear energy: the heat produced in a reactor as a result of nuclear fission is regarded as primary production of nuclear heat or, in other words nuclear energy; it is either the actual heat produced or calculated on the basis of reported gross electricity generation and the thermal efficiency of the nuclear plant.

Primary production of natural gas: dry marketable production, measured after purification and extraction of natural gas liquids (NGLs) and sulphur is considered as primary production; it does not include quantities re-injected, extraction losses or quantities vented and flared; it includes quantities used within the natural gas industry, in gas extraction, pipeline systems and processing plants.

Primary production of solid fuels: this consists of quantities of fuels extracted or produced, calculated after any operation for removal of inert matter; in general, primary production includes the quantities consumed by the producer in the production process (e.g. for heating or operation of equipment and auxiliaries) as well as supplies to other on-site producers of energy for transformation or other uses.

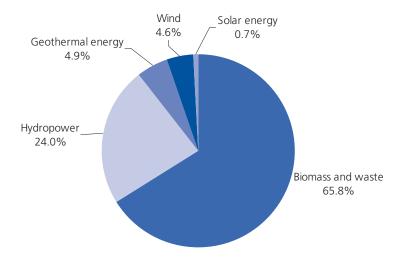
Primary production of crude oil: primary production within national boundaries including offshore production is covered; production should only include marketable production, excluding volumes returned to formation; such production should include all crude oil, natural gas liquids (NGLs), condensates and oil from shale and tar sands, etc.

Primary production of renewable energy: primary production of biomass, hydropower, geothermal energy, wind and solar energy are included in renewable energies.

Figure SP.3: Primary production of renewable energy, EU-25, 2004

(% of total, based on 1 000 tonnes of oil equivalent)

TEN00082



Primary production: biomass (heat content of the produced biofuels or biogas; heat produced after combustion during incineration of renewable wastes); hydropower covers potential and kinetic energy of water converted into electricity in hydroelectric plants (the electricity generated in pumped storage plants is not included); geothermal energy comprises energy available as heat emitted from within the earth's crust, usually in the form of hot water or steam; wind energy covers the kinetic energy of wind converted into electricity in wind turbines; solar energy covers the solar radiation exploited for solar heat (hot water) and electricity production.

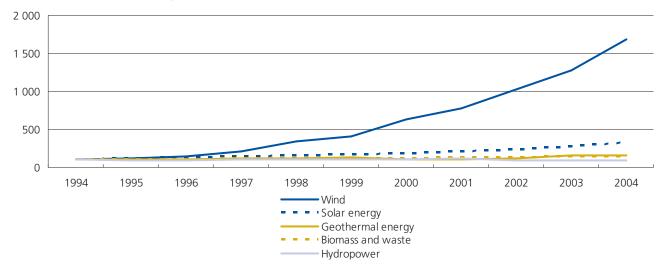




Figure SP.4: Relative change in the primary production of renewable energy (by fuel type), EU-25



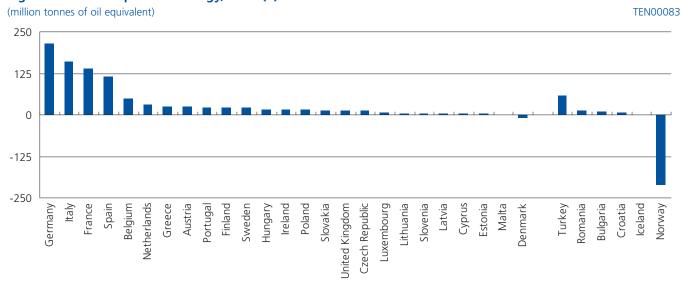
TEN00082



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Figure SP.5: Net imports of energy, 2004 (1)



(1) EU-25, 907.3 million toe; EU-15, 838.1 million toe; euro area, 815.9 million toe.

Net imports are calculated as imports minus exports; imports represent all entries into the national territory excluding transit quantities (notably via gas and oil pipelines); electrical energy is an exception and its transit is always recorded under foreign trade; exports similarly cover all quantities exported from the national territory.

Figure SP.6: Relative change in net imports of energy (by fuel type), EU-25

(1994 = 100, based on tonnes of oil equivalent)

TEN00083 TEN00084 TEN00085

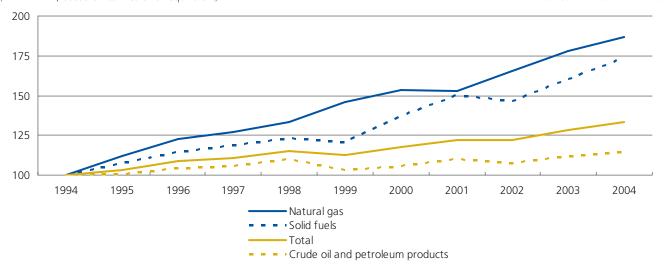


Figure SP.7: Net imports of energy, EU-25, 2004

(% of total, based on 1 000 tonnes of oil equivalent)

TEN00083 TEN00084 TEN00085

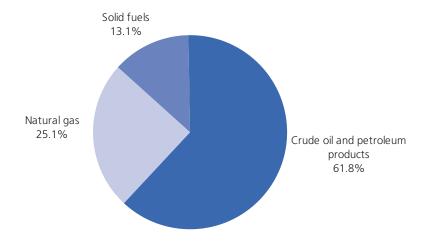


Table SP.2: Energy dependency rate, EU-25

(% of net imports in gross inland consumption and bunkers, based on tonnes of oil equivalent)

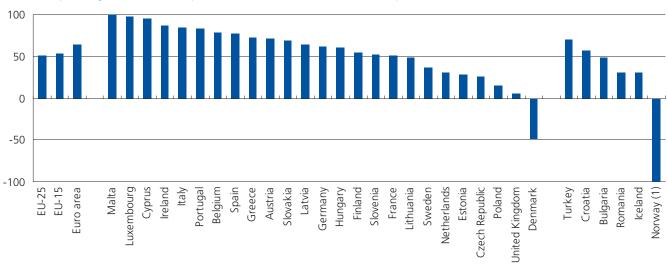
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	43.1	43.5	44.2	45.1	46.4	45.5	47.3	47.8	47.9	49.3	50.5
Solid fuels	19.6	21.4	22.9	24.6	26.4	27.7	30.9	33.7	33.0	35.2	38.2
Crude oil and petroleum products	75.4	74.7	75.9	76.1	77.4	73.3	76.3	77.6	76.4	78.9	80.2
Natural gas	42.7	43.9	43.5	45.5	46.0	48.6	49.7	47.9	51.7	53.0	54.5

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 energy (oil) supplied to international marine bunkers; a negative dependency rate indicates a net exporter of energy; values greater than 100 % occur when net imports exceed gross consumption; in this case, energy products are placed in stocks and not used in the year of import.



Figure SP.8: Energy dependency rate — all products, 2004

(% of net imports in gross inland consumption and bunkers, based on tonnes of oil equivalent)



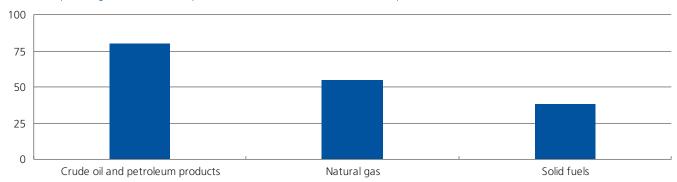
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(1) Broken y-axis, -746.7 %.

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 energy (oil) supplied to international marine bunkers; a negative dependency rate indicates a net exporter of energy; values greater than 100 % occur when net imports exceed gross consumption; in this case, energy products are placed in stocks and not used in the year of import.

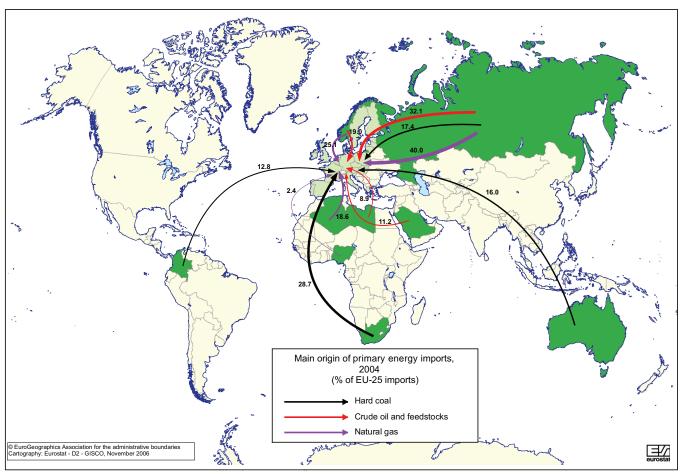
Figure SP.9: Energy dependency rate, 2004

(% of net imports in gross inland consumption and bunkers, based on tonnes of oil equivalent)



Map SP.1: Main origin of primary energy imports, 2004

(% of EU-25 imports)



Hard coal covers coal with a gross calorific value equal to or greater than 23 865 kJ/kg (or 5 700 kcal/kg) on an ash-free but moist basis and with a mean random reflectance of vitrinite of at least 0.6; hard coal comprises coking coal (with a quality that allows the production of a coke suitable to support a blast furnace charge) and steam coal (used for steam raising and space heating purposes including all anthracite coals and bituminous coals not included under coking coal); also included is sub-bituminous coal, with a gross calorific value between 17 435 kJ/kg (4 165 kcal/kg) and 23 865 kJ/kg (5 700 kcal/kg) containing more than 31 % volatile matter on a dry-mineral-matter-free basis.

Crude oil is a mineral oil of natural origin comprising a mixture of hydrocarbons and associated impurities such as sulphur; it exists in the liquid phase under normal surface temperature and pressure and its physical characteristics (density, viscosity, etc.) are highly variable; crude oil also includes field or lease condensate recovered from associated and non-associated gas where it is commingled with the commercial crude oil stream; feedstocks consist of processed oil destined for further processing (e.g. straight run fuel oil or vacuum gas oil), excluding blending; with further processing, it will be transformed into one or more components and/or finished products; returns from the petrochemical industry to the refining industry are also included.

Natural gas comprises gases occurring in underground deposits, whether liquefied or gaseous, consisting mainly of methane. Natural gas includes 'non-associated' gas originating from fields producing hydrocarbons only in gaseous form and 'associated' gas produced in association with crude oil, as well as methane recovered from coal mines (colliery gas).



ELECTRICITY GENERATION

Generation is one of the main components in the cost of electricity. There have been moves within the European Union to liberalise the electricity market since February 1999. The electricity directive (3) concerning common rules for the internal market in electricity gave deadlines for market opening: 1 July 2004 for all business customers and 1 July 2007 for household consumers. Certain countries anticipated the liberalisation process, while others are slower in adopting the necessary measures.

Cross border flows of electricity in 2004 stood at around 11 % of total consumption which is an increase of around 2 percentage points compared with 2000. There are 10 Member States that have already fully opened-up their markets: only three Member States have markets with less than 50 % opening in the electricity sector. Apart from Cyprus and Malta, where competition and market liberalisation is difficult due to the inherent country characteristics (limited market, island), there are still six Member States with only one single retailer of considerable size.

Directive 2005/89/EC (4) deals with measures to safeguard security of electricity supply and infrastructure investment; it has to be implemented by the Member States by 24 February 2008 at the latest.

Total gross electricity generation in the EU-25 was 3.2 million GWh in 2004. Germany and France were the principal electricity generators in the EU-25, with shares of 19 % and 18 % respectively, while the United Kingdom was the only other Member State to report a proportion above 10 %.

Looking at the evolution of electricity generation within the Member States, each country reported that generation levels increased between 1994 and 2004. Denmark, Hungary, Latvia and Sweden had limited average growth of less than 1 % per annum over the last decade.

There was further evidence of the gradual switch from oil to gas in the latest data from 1994 to 2004, which showed the fastest growth among fuels used for electricity generation was registered for natural gas-fired power plants (averaging almost 11 % per annum), while the only fuel to record a reduction in its use was oil. The largest share of the EU-25's electricity is generated within nuclear power stations, which accounted for 31 % of the total in 2004, while oil-powered stations generated about 5 % of the total.



The evolution of primary production by energy type was largely reflected in the evolution of electricity generation by fuel, although the level of electricity generated from oil-powered stations fell considerably, suggesting that oil was being diverted to the transport sector and other uses, as its overall level of primary production continued to rise.

The fastest growth was recorded for electricity generated from wind turbines, biomass, and from power stations powered by natural gas. The share of EU-25 electricity generated from renewable sources relative to gross national electricity consumption stood at almost 14 % in 2004. Several of the Member States had much higher ratios, in particular Austria (59 %) and Sweden (46 %).

One measure that can be used to monitor the success of liberalisation within electricity markets is the market share of the largest generator. While the small island nations of Cyprus and Malta continued to report a complete monopoly, with 100 % of their electricity being generated by the largest generator, the proportion fell to below 30 % in Finland, the United Kingdom and Poland.



⁽³⁾ Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC (OJ L 176, 15.7.2003, p. 37) (http://eur-lex.europa.eu/LexUriServ/site/en/oj/2003/l_176/ I_17620030715en00370055.pdf).

⁽⁴⁾ Directive 2005/89/EC concerning measures to safeguard security of electricity supply and infrastructure investment (OJ L 33, 4.2.2006, p. 22) (http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_033/ I_03320060204en00220027.pdf).

Table SP.3: Total gross electricity generation

(1 000 GWh) TEN00087

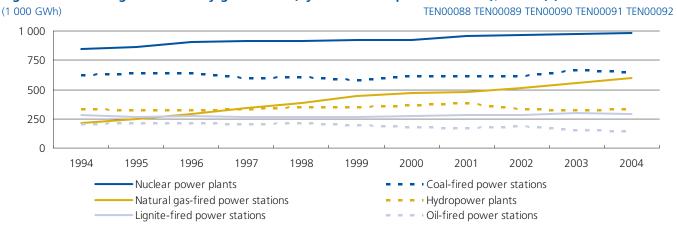
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
EU-25	2 561.3	2 631.3	2 726.5	2 740.2	2 813.7	2 849.4	2 928.5	3 010.8	3 019.6	3 117.2	3 179.1
EU-15	2 268.4	2 327.7	2 411.4	2 426.7	2 492.8	2 533.0	2 601.0	2 674.5	2 679.8	2 763.3	2 820.5
Euro area	1 759.3	1 808.5	1 869.8	1 887.6	1 931.4	1 970.5	2 042.1	2 090.5	2 106.3	2 183.0	2 232.4
Belgium	72.2	74.4	76.1	78.9	83.2	84.5	83.9	79.7	82.1	84.6	85.4
Czech Republic	58.7	60.8	64.3	64.6	65.1	64.7	73.5	74.6	76.3	83.2	84.3
Denmark	40.1	36.8	53.6	44.3	41.1	38.9	36.0	37.7	39.3	46.1	40.5
Germany	527.7	536.2	555.0	551.6	556.7	555.5	571.6	586.3	571.6	599.5	606.6
Estonia	9.2	8.7	9.1	9.2	8.5	8.3	8.5	8.5	8.5	10.2	10.3
Greece	40.6	41.6	42.6	43.5	46.3	49.9	53.8	53.7	54.6	58.5	59.3
Spain	161.8	167.3	174.2	190.2	195.1	209.0	225.1	238.0	246.1	262.9	280.0
France	476.9	493.9	513.1	504.5	511.0	524.0	540.7	550.5	559.2	566.9	572.2
Ireland	17.1	17.9	19.2	20.0	21.2	22.1	24.0	25.0	25.2	25.2	25.6
Italy	231.5	241.1	244.1	250.8	259.1	265.0	276.6	279.0	284.4	293.9	303.3
Cyprus	2.7	2.5	2.6	2.7	3.0	3.1	3.4	3.6	3.8	4.0	4.2
Latvia	4.4	4.0	4.4	4.5	5.8	4.1	4.1	4.3	4.0	4.0	4.7
Lithuania	10.0	13.9	16.8	14.9	17.6	13.5	11.4	14.7	17.7	19.5	19.3
Luxembourg	1.2	1.2	1.3	1.3	1.3	1.0	1.2	1.2	3.7	3.6	4.1
Hungary	33.6	34.1	35.2	35.4	37.2	37.7	35.2	36.4	36.2	34.1	33.7
Malta	1.5	1.6	1.7	1.7	1.7	1.8	1.9	2.0	2.1	2.2	2.2
Netherlands	79.9	81.1	85.3	86.7	90.9	86.4	89.6	93.7	96.0	96.8	100.7
Austria	53.3	56.6	54.9	56.9	57.5	60.5	61.8	62.4	62.5	60.1	64.1
Poland	135.3	139.0	143.2	142.8	142.8	142.1	145.2	145.6	144.1	151.6	154.2
Portugal	31.4	33.3	34.5	34.2	39.0	43.3	43.8	46.5	46.1	46.9	45.1
Slovenia	12.6	12.7	12.8	13.2	13.7	13.3	13.6	14.5	14.7	13.8	15.3
Slovakia	24.8	26.3	25.3	24.5	25.5	27.7	30.7	32.0	32.4	31.2	30.6
Finland	65.6	63.9	69.4	69.2	70.2	69.4	70.0	74.5	74.9	84.2	85.8
Sweden	143.6	148.4	140.6	149.4	158.3	155.2	145.6	161.6	146.7	135.4	151.7
United Kingdom	325.4	334.0	347.4	345.4	362.0	368.4	377.3	384.7	387.5	398.7	395.9
Bulgaria	38.1	41.8	42.7	42.8	41.7	38.2	40.9	44.0	42.7	42.6	41.6
Croatia	8.3	8.9	10.5	9.7	10.9	12.2	10.7	12.2	12.3	12.7	13.3
Romania	55.1	59.3	61.4	57.1	53.5	50.7	51.9	53.9	54.9	56.6	56.5
Turkey	78.3	86.2	94.9	103.3	111.0	116.4	124.9	122.7	129.4	140.6	150.7
Iceland	4.8	5.0	5.1	5.6	6.3	7.2	7.7	8.0	8.4	8.5	8.6
Norway	113.2	123.0	104.7	111.7	117.0	122.7	143.0	121.9	130.7	107.3	110.5

Total gross electricity generation covers gross electricity generation in all types of power plants; gross electricity generation at the plant level is defined as the electricity measured at the outlet of the main transformers, i.e. the consumption of electricity in the plant auxiliaries and in transformers are included.



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Figure SP.10: Total gross electricity generation (by fuel used in power stations), EU-25 (1)



⁽¹⁾ Only the six most important categories, in terms of GWh of electricity generated in 2004, are shown. Total gross electricity generation covers gross electricity generation in all types of power plants; gross electricity generation at the plant level is defined as the electricity measured at the outlet of the main transformers, i.e. the consumption of electricity in the plant auxiliaries and in transformers are included.

Figure SP.11: Electricity generation by fuel used in power stations, EU-25, 2004

(% of total, based on GWh)

TEN00088 TEN00089 TEN00090 TEN00091 TEN00092 TEN00093

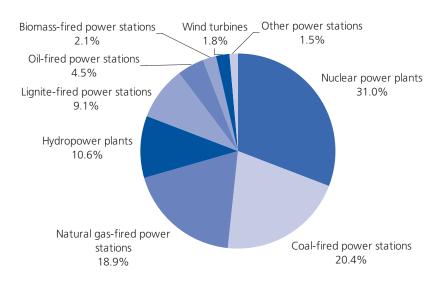


Figure SP.12: Relative change in electricity generation by fuel used in power stations, EU-25

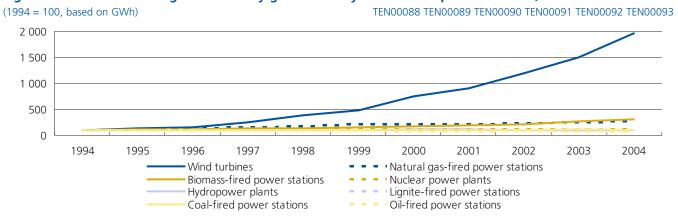
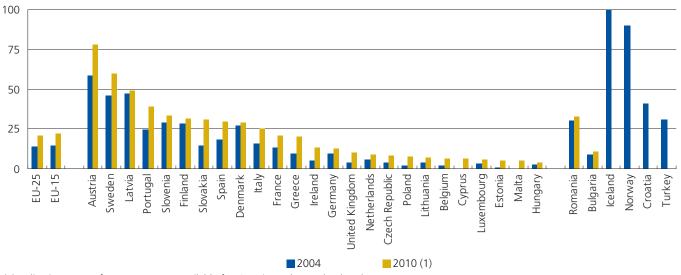


Figure SP.13: Proportion of electricity generated from renewable energy sources

(% of gross electricity consumption)



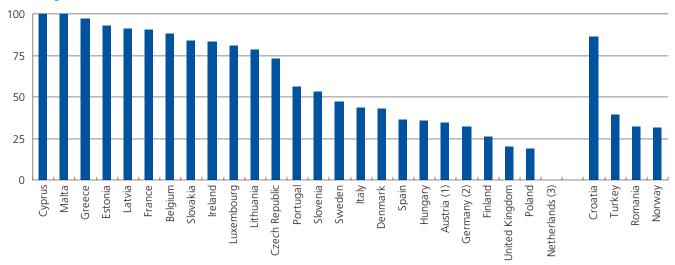
(1) Indicative targets for 2010 are not available for Croatia, Turkey, Iceland and Norway.

This indicator is the ratio between the electricity produced from renewable energy sources and the gross national electricity consumption for a given calendar year; it measures the contribution of electricity produced from renewable energy sources to the national electricity consumption; electricity produced from renewable energy sources comprises the electricity generation from hydro plants (excluding pumping), wind, solar, geothermal and electricity from biomass/wastes; gross national electricity consumption comprises the total gross national electricity generation from all fuels (including autoproduction), plus electricity imports, minus exports.

Figure SP.14: Market share of the largest generator in the electricity market, 2004

7

(% of total generation)



- (1) 2001.
- (2) 2003.
- (3) Not available.

The indicator shows the market share of the largest electricity generator in each country; to calculate this indicator, the total net electricity production during each reference year is taken into account; this means that the electricity used by generators for their own consumption is not taken into account; the net production of each generator during the same year is considered in order to calculate the corresponding market shares; only the largest market share is reported under this indicator.



CONSUMPTION OF ENERGY

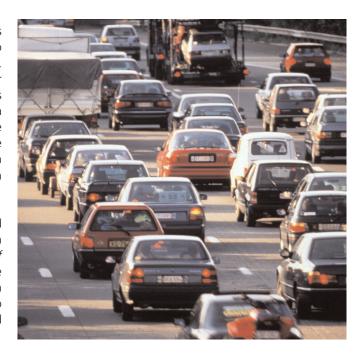
The gross inland consumption expresses the total energy needs of a country. It covers energy used for fuel transformation into electricity and heat and petroleum products, distribution losses, and final energy consumption in industry, transport and other sectors such as households, services, agriculture, etc. The gross inland consumption of each Member State is composed of a mixture of conventional and renewable fuels depending on the structure of the energy system of each country and the availability of natural resources. The actual fuel mix for each country remains under the competence of the Member State in question.

Numerous Commission policies aim to reduce energy demand and decouple it from the growth in economic activity. The Green paper entitled 'Towards a European strategy for the security of energy supply' (5), set a goal of doubling the share of renewable energies in gross inland consumption from 6 % of the total in 2000 to 12 % by 2010; it presented a timetable for actions to achieve this objective. The document proposed a strategy based on controlling demand.

In April 2006, Directive (6) 2006/32/EC of the European Parliament and of the Council on energy end-use efficiency and energy services was adopted, requesting Member States to adopt indicative energy saving targets of 9 % by its ninth year of application, through specific energy efficiency improvement measures. Several other instruments and implementing measures exist in this field, including: a directive on the promotion of co-generation (7), aimed at consolidating and, where feasible, promoting new high-efficiency co-generation installations in the internal energy market; a directive on the energy performance of buildings (8), designed to improve the energy efficiency of private and public buildings; and a range of legislative measures for labelling schemes and minimum efficiency requirements in the domestic sector.



⁽⁶⁾ Directive 2006/32/EC of 5 April 2006 of the European Parliament and of the Council on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC (http://eur-lex.europa.eu/ LexUriServ/site/en/oj/2006/l_114/l_11420060427en00640085.pdf).



Gross inland consumption of energy within the EU-25 in 2004 was 1 747 million toe, which marked an average increase of 1.2 % per annum when compared with the level of consumption in 1994. The fastest growth during this period for gross inland consumption was recorded for natural gas and for renewable energies, while the consumption of solid fuels declined. However, crude oil and petroleum remained the most important source of energy in terms of inland consumption, with a 37 % share.

Final energy consumption per capita averaged 2.5 toe in the EU-25 in 2004. Per capita energy consumption varies greatly from one Member State to another reflecting in particular economic development and consumption patterns, the degree of industrialisation, and climatic conditions. Excluding Luxembourg (9.7 toe/capita), where energy consumption data are skewed by petrol purchases by residents of neighbouring countries, Finland, at 5.1 toe/capita, recorded the highest energy consumption per capita, followed by Sweden and Belgium. At the other end of the scale, consumption per capita was 1.5 toe or less in Poland, Lithuania and Malta.

The most important end-use of energy is for transport (private and public use), with almost 31 % of final energy consumption, just ahead of industry and households. The growth of energy consumption within the transport sector was at a more rapid pace than for the other categories of energy use, with average growth of 1.9 % per annum between 1994 and 2004.

⁽⁷⁾ Directive 2004/8/EC of the European Parliament and of the Council on the promotion of co-generation based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC, of 11 February 2004 (http://eur-lex.europa.eu/LexUriServ/site/en/oj/2004/ l_052/l_05220040221en00500060.pdf).

⁽⁸⁾ Directive 2002/91/EC of the European Parliament and of the Council on the energy performance of buildings, of 16 December 2002 (http://eur-lex.europa.eu/LexUriServ/site/en/oj/2003/l_001/ I_00120030104en00650071.pdf).



The energy intensity of an economy can be measured by the amount of energy consumed to produce one unit of GDP (the same ratio is also referred to as energy efficiency of the economy). The most energy-efficient countries in the EU-25, according to this measure, were Denmark, Austria and Ireland. The most energy-intensive countries were Estonia and Lithuania, using more than seven times as much energy (as Denmark,

Austria or Ireland) to produce a unit of GDP. The same ratio shows that to produce the same unit of GDP in the EU-25, there was an overall reduction of nearly 15 % in the use of energy between 1995 and 2004. This is not to say that the consumption of energy is falling. Rather, energy consumption continues to rise, although there is a more efficient use of the energy that is consumed.

Table SP.4: Gross inland consumption of energy

(million tonnes of oil equivalent) TEN00086

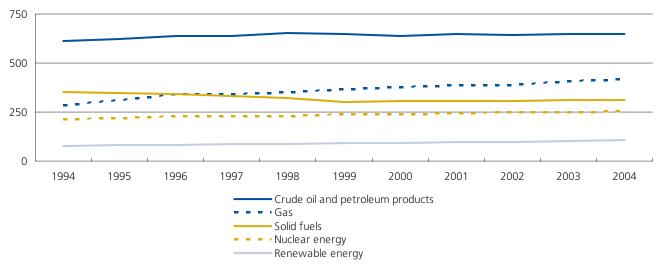
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
EU-25	1 544.8	1 579.3	1 636.2	1 626.5	1 647.7	1 642.9	1 654.5	1 693.8	1 686.7	1 727.1	1 746.8
EU-15	1 338.4	1 367.5	1 417.5	1 409.8	1 439.1	1 441.9	1 455.6	1 490.4	1 483.2	1 517.3	1 536.5
Euro area	1 049.5	1 078.8	1 114.8	1 115.4	1 137.0	1 142.1	1 157.7	1 186.9	1 185.5	1 215.1	1 231.2
Belgium	49.8	50.5	54.0	55.1	56.2	56.9	57.2	55.7	52.6	55.8	54.8
Czech Republic	40.3	40.6	41.9	42.4	40.9	37.9	40.3	41.2	41.4	43.5	43.6
Denmark	20.3	20.2	22.8	21.3	21.0	20.2	19.6	20.2	19.8	20.6	20.0
Germany	335.5	338.0	349.1	345.5	344.5	338.4	340.2	352.2	344.9	346.8	347.7
Estonia	5.5	5.3	5.6	5.5	5.2	4.9	4.6	5.1	5.0	5.4	5.6
Greece	23.6	24.1	25.4	25.6	26.9	26.8	28.1	28.9	29.7	30.2	30.6
Spain	97.1	102.2	100.8	106.1	111.1	117.6	122.7	126.2	129.9	134.3	140.2
France	230.8	239.9	254.1	247.0	254.5	254.2	258.5	266.2	266.2	270.4	273.7
Ireland	10.9	11.0	11.7	12.3	13.0	13.8	14.2	14.8	15.1	14.9	15.7
Italy	152.7	161.3	161.1	163.6	168.3	171.2	172.5	173.1	173.4	182.9	184.8
Cyprus	2.1	2.0	2.1	2.1	2.2	2.3	2.4	2.4	2.4	2.6	2.5
Latvia	5.1	4.8	4.8	4.5	4.5	4.1	3.9	4.2	4.2	4.4	4.6
Lithuania	8.0	8.7	9.3	8.9	9.3	7.9	7.2	8.0	8.6	9.0	9.2
Luxembourg	3.8	3.3	3.4	3.4	3.3	3.4	3.6	3.8	4.0	4.2	4.7
Hungary	25.1	25.9	26.3	25.8	25.6	25.5	25.0	25.5	25.9	26.6	26.2
Malta	0.7	8.0	8.0	0.9	0.8	0.9	0.8	0.7	0.9	0.9	0.9
Netherlands	70.6	73.4	76.3	75.1	75.0	74.5	75.7	77.6	78.2	80.5	82.3
Austria	25.6	26.7	28.4	28.4	28.7	28.6	28.5	30.4	30.4	32.6	32.7
Poland	96.8	100.0	103.7	102.5	96.2	93.7	90.8	90.8	89.4	91.8	92.5
Portugal	18.6	19.6	19.6	20.7	22.2	23.9	24.1	24.8	26.0	25.4	26.2
Slovenia	5.7	6.1	6.4	6.5	6.4	6.4	6.4	6.7	6.9	6.9	7.1
Slovakia	17.1	17.7	17.8	17.8	17.6	17.4	17.5	18.7	18.8	18.7	18.2
Finland	30.6	28.8	30.9	32.8	33.2	32.8	32.5	33.3	35.2	37.2	37.7
Sweden	49.7	50.4	51.7	50.4	50.8	50.9	47.9	51.6	51.5	51.1	53.1
United Kingdom	218.9	218.0	228.2	222.7	230.3	228.8	230.3	231.7	226.4	230.5	232.1
Bulgaria	21.4	23.3	23.1	20.5	20.1	18.1	18.6	19.3	19.0	19.4	18.9
Croatia	6.9	7.1	7.3	7.8	8.0	8.0	7.8	8.0	8.2	8.8	8.8
Romania	43.6	47.1	50.5	45.4	41.3	36.9	37.1	36.8	37.5	40.3	39.6
Turkey	56.7	62.0	67.4	71.0	72.3	71.0	77.4	71.4	75.3	79.3	81.9
Iceland	2.1	2.1	2.5	2.5	2.7	3.1	3.2	3.3	3.4	3.4	3.5
Norway	23.5	23.7	23.2	24.4	25.5	26.7	26.1	26.9	24.3	27.2	27.6

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.

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Figure SP.15: Gross inland consumption of energy, EU-25

(million tonnes of oil equivalent)



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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.

Figure SP.16: Gross inland consumption of energy, EU-25, 2004

(% of total, based on tonnes of oil equivalent)

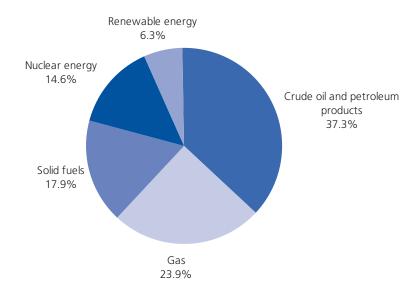


Table SP.5: Final energy consumption

(million tonnes of oil equivalent)

TEN00095

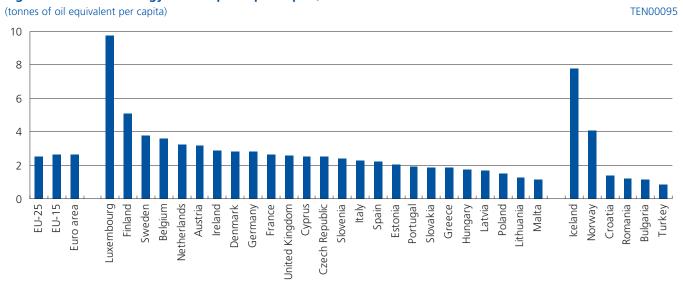
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
EU-25	1 007.2	1 026.8	1 069.4	1 061.4	1 070.4	1 071.0	1 086.8	1 112.5	1 100.5	1 129.4	1 142.0
EU-15	877.1	896.0	933.7	926.3	942.5	947.9	966.5	989.9	977.4	1 003.0	1 013.9
Euro area	687.4	705.1	733.8	729.9	744.9	747.8	766.2	788.8	780.5	803.3	811.7
Belgium	34.0	34.5	36.4	36.5	37.1	36.9	36.9	37.2	35.8	37.9	37.4
Czech Republic	24.6	24.1	25.8	25.7	24.4	21.7	22.4	22.5	23.4	25.2	25.8
Denmark	14.4	14.8	15.4	15.0	15.0	14.9	14.6	15.0	14.7	15.0	15.2
Germany	217.1	222.4	230.9	226.2	224.5	219.9	228.7	232.3	227.0	230.1	229.9
Estonia	2.8	2.5	2.9	3.0	2.6	2.4	2.4	2.5	2.6	2.7	2.7
Greece	15.3	15.8	16.9	17.3	18.2	18.2	18.5	19.1	19.5	20.5	20.2
Spain	62.3	63.5	65.3	68.0	71.8	74.3	79.4	83.3	85.4	90.3	94.3
France	138.2	141.2	148.6	145.7	150.8	150.7	151.6	158.8	154.4	158.0	157.9
Ireland	7.7	7.9	8.2	8.7	9.3	9.8	10.5	10.9	11.0	11.3	11.5
Italy	108.9	113.7	114.5	115.5	118.7	123.3	123.3	126.0	125.1	130.0	131.2
Cyprus	1.3	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9
Latvia	4.1	3.8	3.5	3.8	3.7	3.4	3.2	3.6	3.6	3.7	3.9
Lithuania	4.7	4.6	4.5	4.5	4.5	4.1	3.7	3.9	4.0	4.1	4.3
Luxembourg	3.6	3.2	3.3	3.2	3.2	3.3	3.5	3.7	3.7	4.0	4.4
Hungary	15.5	15.7	16.3	15.6	15.6	15.9	15.8	16.3	16.9	17.5	17.4
Malta	0.4	0.5	0.4	0.6	0.4	0.4	0.4	0.4	0.5	0.5	0.5
Netherlands	46.0	47.6	51.6	49.4	49.6	48.8	50.1	50.7	50.5	51.5	52.5
Austria	19.3	20.3	22.0	21.5	22.2	21.9	22.1	23.9	24.1	25.5	25.7
Poland	62.1	63.5	65.7	65.2	60.3	58.9	55.7	56.4	54.5	55.8	56.9
Portugal	12.8	13.0	13.9	14.6	15.4	16.0	16.9	18.1	18.3	18.3	20.1
Slovenia	3.8	3.9	4.4	4.5	4.3	4.4	4.4	4.6	4.6	4.7	4.8
Slovakia	10.7	10.8	10.8	10.8	10.7	10.4	10.7	10.8	11.3	10.4	10.0
Finland	22.3	22.0	22.3	23.5	24.2	24.6	24.5	24.7	25.5	26.0	26.5
Sweden	33.0	33.7	34.6	34.0	34.2	34.1	34.6	33.2	33.7	34.1	34.0
United Kingdom	142.3	142.4	149.9	147.4	148.4	151.0	151.2	153.0	148.5	150.6	153.0
Bulgaria	10.8	11.4	11.5	9.3	9.9	8.8	8.6	8.6	8.7	9.4	9.0
Croatia	4.4	4.5	4.7	5.1	5.2	5.4	5.3	5.5	5.6	5.9	6.1
Romania	24.9	26.3	29.5	28.6	26.1	22.3	22.2	23.0	23.0	24.2	26.1
Turkey	40.3	44.6	48.7	50.3	49.8	49.2	54.1	48.6	53.1	56.7	58.1
Iceland	1.7	1.7	1.7	1.8	1.8	2.0	2.1	2.1	2.2	2.2	2.3
Norway	16.7	16.9	17.7	17.5	18.2	18.7	18.1	18.6	18.3	18.0	18.6

Final energy consumption includes all energy delivered to the final consumer's door (in the industry, transport, household and other sectors) for all energy uses; it excludes deliveries for transformation and/or own use of the energy producing industries, as well as network losses.





Figure SP.17: Final energy consumption per capita, 2004



Final energy consumption includes all energy delivered to the final consumer's door (in the industry, transport, household and other sectors) for all energy uses; it excludes deliveries for transformation and/or own use of the energy producing industries, as well as network losses.

Figure SP.18: Final energy consumption per capita, EU-25

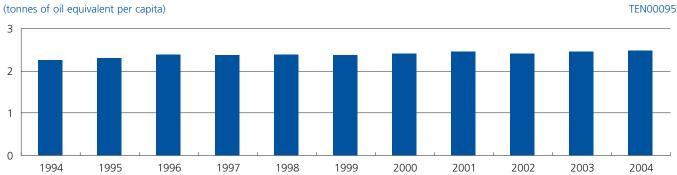


Figure SP.19: Final energy consumption, EU-25, 2004

(million tonnes of oil equivalent)

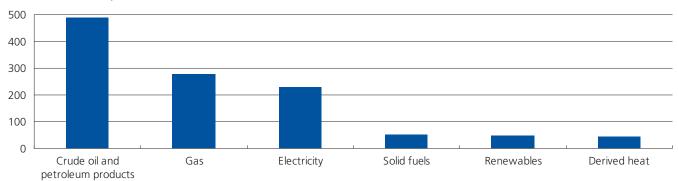
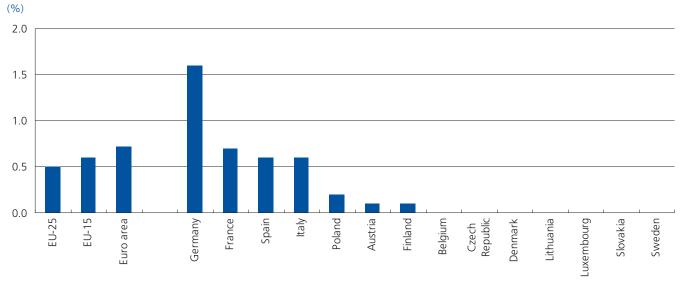


Figure SP.20: Share of biofuels in total fuel consumption of transport, 2004 (1)



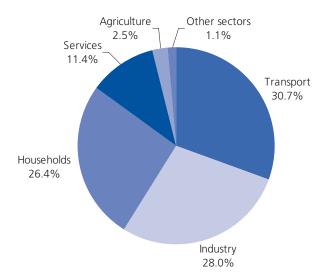
(1) No data available for those Member States not presented in the graph. *Liquid biofuels cover biogasoline and biodiesels:*

— biogasoline: this category includes bioethanol (ethanol produced from biomass and/or the biodegradable fraction of waste), biomethanol (methanol produced from biomass and/or the biodegradable fraction of waste), bioETBE (ethyl-tertio-butyl-ether produced on the basis of bioethanol — the percentage by volume of bioETBE that is calculated as biofuel is 47 %) and bioMTBE (methyl-tertio-butyl-ether produced on the basis of biomethanol — the percentage by volume of bioMTBE that is calculated as biofuel is 36 %).

— biodiesels: this category includes biodiesel (a methyl-ester produced from vegetable or animal oil, of diesel quality), biodimethylether (dimethylether produced from biomass), Fischer Tropsch (Fischer Tropsch produced from biomass), cold pressed biooil (oil produced from oil seed through mechanical processing only) and all other liquid biofuels which are added to, blended with or used straight as transport diesel. Transport consumption refers here to fuels used in all transport activities irrespective of the economic sector in which the activity occurs, i.e. fuels consumed in the following NACE categories: land transport, transport via pipelines (Division 60), water transport (61), and air transport (62).

Figure SP.21: Final energy consumption, EU-25, 2004 (1)

(% of total, based on tonnes of oil equivalent)



(1) Figures do not sum to 100 % due to rounding.

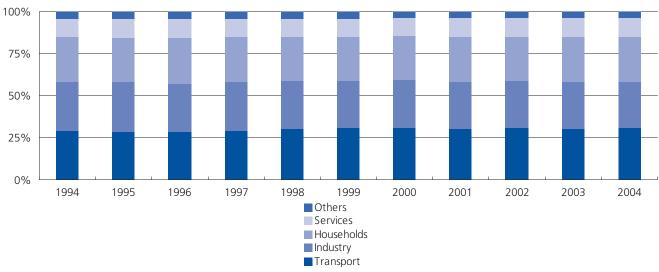
This indicator expresses the sum of the energy supplied to the final consumer's door for all energy uses; it is the sum of final energy consumption in industry, transport, households, services, agriculture, etc.; final energy consumption in industry covers the consumption in all industrial sectors with the exception of the energy sector; the fuel quantities transformed in the electrical power stations of industrial autoproducers and the quantities of coke transformed into blast-furnace gas are not part of the overall industrial consumption but of the transformation sector; final energy consumption in transport covers the consumption in all types of transportation, i.e. rail, road, air transport and inland navigation; final energy consumption in households, services, etc. covers quantities consumed by private households, commerce, public administration, services, agriculture and fisheries.





Figure SP.22: Final energy consumption, EU-25

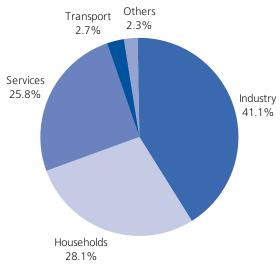
(%, based on tonnes of oil equivalent)



This indicator expresses the sum of the energy supplied to the final consumer's door for all energy uses; it is the sum of final energy consumption in industry, transport, households, services, agriculture, etc.; final energy consumption in industry covers the consumption in all industrial sectors with the exception of the energy sector; the fuel quantities transformed in the electrical power stations of industrial autoproducers and the quantities of coke transformed into blast-furnace gas are not part of the overall industrial consumption but of the transformation sector; final energy consumption in transport covers the consumption in all types of transportation, i.e. rail, road, air transport and inland navigation; final energy consumption in households, services, etc. covers quantities consumed by private households, commerce, public administration, services, agriculture and fisheries.

Figure SP.23: Final consumption of electricity, EU-25, 2004 (1)

(%, based on GWh) TEN00094



(1) Figures do not sum to 100 % due to rounding.

This consumption stands for final energy consumption; this means that the consumption in industry covers all industrial sectors with the exception of the energy sector, like power stations, oil refineries, coke ovens and all other installations transforming energy products into another form; final energy consumption in transport covers mainly the consumption by railways and electrified urban transport systems; final energy consumption in households/services covers quantities consumed by private households, small-scale industry, crafts, commerce, administrative bodies, services with the exception of transportation, agriculture and fishing.



Table SP.6: Final consumption of electricity

(1 000 GWh)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
EU-25	2 131.6	2 184.3	2 245.7	2 286.4	2 337.2	2 379.4	2 457.8	2 530.5	2 540.5	2 604.6	2 651.7
EU-15	1 924.7	1 969.1	2 021.4	2 060.9	2 113.1	2 157.3	2 229.6	2 297.1	2 306.4	2 364.2	2 405.3
Euro area	1 487.0	1 519.3	1 557.6	1 594.4	1 638.9	1 675.7	1 738.9	1 798.8	1 809.2	1 865.0	1 901.9
Belgium	66.4	68.4	69.9	71.8	74.0	74.5	77.5	78.1	78.4	79.7	80.6
Czech Republic	44.9	48.0	50.2	49.6	48.8	48.1	49.4	50.9	50.8	52.4	53.8
Denmark	31.0	31.2	32.2	31.9	32.1	32.2	32.5	32.6	32.5	32.4	33.0
Germany	445.7	452.6	458.0	461.8	466.5	467.5	482.6	505.3	498.8	509.3	513.3
Estonia	4.7	4.5	4.8	5.1	5.1	4.8	5.0	5.1	5.3	5.6	5.9
Greece	32.7	34.1	35.6	37.1	39.3	40.9	43.2	44.5	46.6	48.6	49.7
Spain	137.0	140.9	147.2	159.0	166.0	177.3	188.5	201.0	206.5	220.0	230.7
France	337.2	342.6	355.5	355.2	367.2	374.7	385.1	395.5	393.2	408.2	415.9
Ireland	14.2	14.8	15.8	16.7	17.7	18.8	20.2	20.9	21.8	22.5	23.0
Italy	230.9	237.7	240.2	247.8	254.7	261.0	272.5	277.3	282.3	291.0	295.0
Cyprus	2.4	2.2	2.3	2.4	2.6	2.8	3.0	3.1	3.4	3.6	3.7
Latvia	4.4	4.4	4.1	4.2	4.5	4.4	4.4	4.5	4.8	5.2	5.4
Lithuania	6.5	6.3	6.5	6.7	6.7	6.5	6.2	6.4	6.7	7.1	7.6
Luxembourg	4.7	5.0	4.9	5.1	5.3	5.5	5.7	5.6	5.7	6.0	6.4
Hungary	27.6	27.7	28.7	28.8	29.0	28.9	29.4	30.5	31.5	31.4	31.8
Malta	1.2	1.3	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.8
Netherlands	81.3	83.1	86.2	89.5	92.7	94.7	97.9	99.4	99.7	100.5	103.1
Austria	44.9	46.0	47.5	48.1	48.9	50.5	51.8	53.9	54.9	55.2	56.4
Poland	85.2	89.6	93.3	94.6	94.8	92.1	96.7	96.9	95.5	98.2	99.8
Portugal	27.0	28.8	30.2	31.9	33.8	36.1	38.4	39.9	41.5	43.2	44.7
Slovenia	9.3	9.4	9.5	9.9	10.1	10.4	10.5	10.9	11.8	12.0	12.6
Slovakia	20.7	21.7	23.5	22.8	21.0	22.7	22.0	23.5	22.7	23.0	24.0
Finland	65.1	65.3	66.5	70.4	72.8	74.2	75.4	77.3	79.7	80.9	83.1
Sweden	122.5	124.6	126.0	125.4	126.4	126.6	128.7	132.7	131.3	129.4	130.4
United Kingdom	284.3	293.9	305.7	309.3	315.6	322.8	329.5	333.0	333.3	337.4	340.0
Bulgaria	26.5	28.7	29.9	26.6	25.9	23.7	24.1	24.5	24.0	25.1	24.9
Croatia	9.6	9.9	10.3	11.0	11.1	11.7	11.8	12.0	12.7	12.9	13.6
Romania	34.2	36.4	39.7	38.4	36.6	33.9	33.9	36.3	35.6	37.5	38.7
Turkey	59.0	65.1	71.4	79.7	85.8	89.2	95.9	95.3	101.5	110.4	119.5
Iceland	4.2	4.3	4.3	4.7	5.5	6.4	6.9	7.2	7.5	7.5	7.8
Norway	101.8	103.8	103.1	103.9	109.1	109.3	109.5	112.2	109.1	103.2	109.9





Map SP.2: Final consumption of electricity per capita, 2004

(GWh per 1 000 inhabitants)

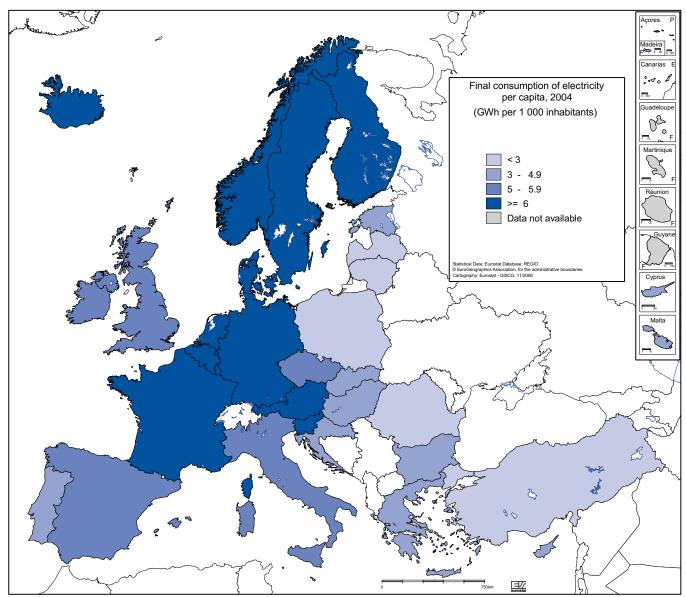
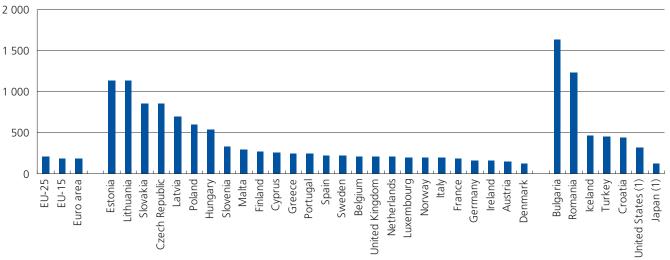






Figure SP.24: Energy intensity of the economy, 2004

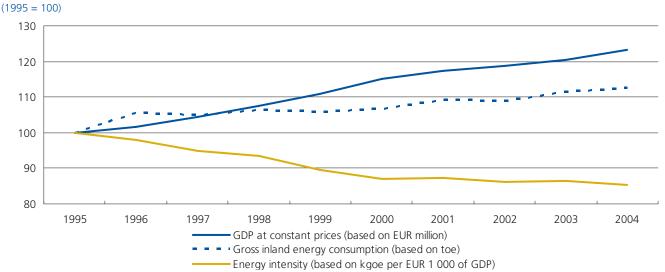
(kgoe per EUR 1 000 of GDP)



(1) 2003.

This indicator is the ratio between the gross inland consumption of energy and the gross domestic product (GDP) for a given calendar year; it measures the energy consumption of an economy and its overall energy efficiency; the gross inland consumption of energy is calculated as the sum of the gross inland consumption of five energy types: coal, electricity, oil, natural gas and renewable energy sources; the GDP figures are taken at constant prices to avoid the impact of inflation, base year 1995; the energy intensity ratio is determined by dividing the gross inland consumption by the GDP; since gross inland consumption is measured in kgoe (kilograms of oil equivalent) and GDP in EUR 1 000, this ratio is measured in kgoe per EUR 1 000.

Figure SP.25: Relative change in energy intensity of the economy, EU-25



Constant prices are obtained by directly factoring changes over time in the values of flows or stocks of goods and services into two components reflecting changes in the prices of the goods and services concerned and changes in their volumes (i.e. changes in constant price terms). 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.





PRICES

Energy prices are currently collected at a national level, whereas in the past they were collected at a regional level or, in some cases, even for individual cities. The reporting countries are generally the 25 Member States and the acceding and candidate countries (Bulgaria, Croatia and Romania), as well as Norway (only electricity prices).

As of 1 July 2004, European industrial customers had a free choice regarding their gas and electricity supplier — in 2007 this concept should be extended to all households within the European Union. These changes reinforce the independence of network management companies by requiring the establishment of legally distinct companies with operational separation between generation and distribution.

The price and reliability of energy supplies, and of electricity in particular, is a key element of a country's energy supply, and particularly important with respect to international competitiveness, as electricity usually represents the highest proportion of total energy costs to households and industries. The cost of electricity is subject to a particularly wide range of prices within the European Union, in contrast to the price of fossil fuels, which are usually traded on global markets with relatively uniform prices. The price of electricity is, to some degree, influenced by the price of primary fuels and more recently also by the cost of carbon dioxide (CO₂) emission certificates ⁽⁹⁾, and it is likely that resulting higher prices for electricity will provide an incentive for greater energy efficiency and lower levels of carbon emissions.

Statistics on electricity prices are presented as a snapshot as of 1 January of each year. Electricity prices for households are shown including taxes and value added tax (VAT), as these are generally the end price paid by the consumer at point of use. On the other hand, industrial electricity prices include taxes, but not VAT, as enterprises are usually exempt from paying this sales tax.

Electricity prices within the EU-15 tended to fall during much of the last decade, with a reversal of this trend in the last two years forcing prices back to, and sometimes above, their level of the early 1990s. The price of electricity in the Member States varied by a factor of 3 from Greece to Denmark, where the highest electricity prices for households existed, EUR 23.62 per 100 kWh on 1 January 2006. Note that a high proportion of the price of electricity in Denmark is accounted for by taxes, as Denmark was only the 10th most expensive country if taxes were excluded.

 $^{(9)}$ In the context of reducing greenhouse gas emissions to prevent global warming.



In keeping with electricity prices, the evolution of gas prices also followed a downward path during much of the 1990s. This trend stopped abruptly at the end of the last decade, since when prices were either relatively unchanged or rising. The price of gas to domestic household users rose on average by more than 4 % per annum during the period 1995 to 2006, while increases for industrial users were almost double that rate. Gas prices are measured in much the same way as prices for electricity, with taxes and VAT included for household users. The average consumer in the EU-25 paid EUR 12.89 per GJ of gas on 1 January 2006. Once again the highest prices were recorded in Denmark, which together with Sweden reported gas prices that were more than 50 % above those recorded in the next most expensive country, the Netherlands (EUR 16.92).

As with electricity and gas prices, the recent evolution of prices of unleaded petrol and diesel also followed an upward path. The contribution of taxes to the price of a litre of petrol was considerable in each of the Member States, often accounting for more than 70 % of the total cost. The highest tax rates per litre of unleaded petrol and diesel were recorded in the Netherlands and the United Kingdom. There were sharp price increases for unleaded petrol during the second half of 2005, with the price of a litre of unleaded petrol on the garage forecourt ranging from EUR 0.83 in the cheapest Member State to EUR 1.40 in the most expensive, while the range for the price of a litre of diesel was similar, between EUR 0.83 and EUR 1.35.





Table SP.7: Electricity prices — households (1)

(as of 1 January)

Including taxes (EUR per 100 kWh) Proportion of taxes in total price (%) 1985 1990 1995 2000 2005 1985 1990 1995 2000 2005 **EU-25** 13.54 24.3 EU-15 13.53 13.22 13.85 18.6 24.7 22.0 14.76 Euro area 25.1 **Belgium** 12.42 12.64 15.00 14.33 14.81 14.5 14.5 17.9 18.3 24.6 Czech Republic 5.78 8.68 17.8 16.0 Denmark 9.91 13.50 14.78 19.66 22.78 37.7 49.0 58.9 63.5 59.3 Germany 15.87 15.26 17.85 18.2 22.0 25.3 **Estonia** 6.78 15.0 7.4 Greece 7.64 6.09 6.88 15.3 7.4 Spain 12.25 10.91 10.97 13.8 18.0 18.0 **France** 12.96 11.79 11.94 22.4 21.3 24.2 Ireland 8.25 8.94 14.36 11.0 11.1 16.6 25.0 19.82 20.00 19.70 23.9 26.9 Italy Cyprus 9.14 10.74 7.5 14.8 Latvia 8.28 15.2 Lithuania 7.18 15.2 9.50 10.15 5.7 Luxembourg 11.31 11.19 14.78 5.6 5.7 5.6 12.9 Hungary 5.10 6.97 10.64 10.8 10.8 20.0 Malta 4.84 6.09 7.64 0.0 0.0 4.8 **Netherlands** 9.93 14.40 19.55 14.8 34.9 43.6 Austria 12.26 14.13 22.6 31.8 **Poland** 10.64 22.7 **Portugal** 13.22 12.56 13.81 4.9 4.9 4.9 Slovenia 7.38 9.88 10.33 9.1 16.0 16.7 Slovakia 13.38 16.1 **Finland** 8.57 8.73 26.1 25.1 10.57 18.0 Sweden 10.20 13.97 37.5 39.4 10.21 7.3 4.7 **United Kingdom** 11.08 8.77 4.7 Bulgaria 6.44 16.6 Croatia 8.48 17.2 Romania 7.79 16.0 15.71 25.8 29.1 Norway 8.91 10.16 27.6

This indicator presents electricity prices charged to final domestic consumers, which are defined as follows: annual consumption of 3 500 kWh, of which 1 300 kWh is overnight (standard dwelling of 90 m²); prices are given in EUR per 100 kWh corresponding to prices applicable on 1 January each year.

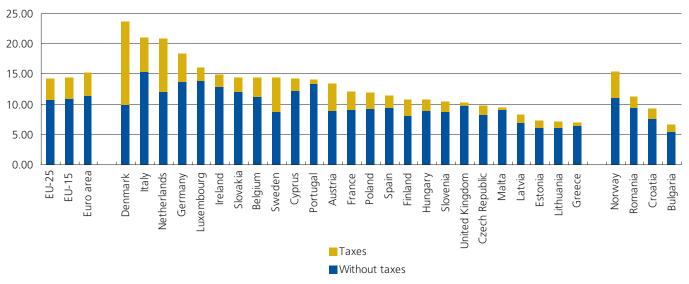


⁽¹⁾ Data extracted on 12.10.2006.

Figure SP.26: Electricity prices — households, as of 1 January 2006 (1)







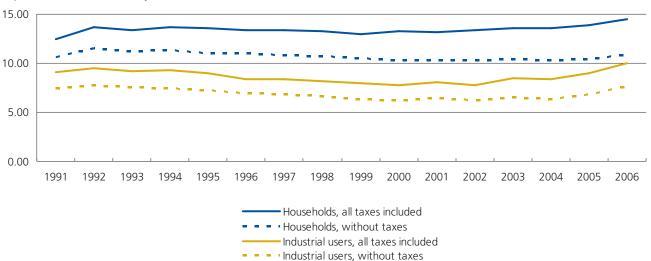
(1) Data extracted on 12.10.2006.

This indicator presents electricity prices charged to final domestic consumers, which are defined as follows: annual consumption of 3 500 kWh, of which 1 300 kWh is overnight (standard dwelling of 90 m²); prices are given in EUR per 100 kWh corresponding to prices applicable on 1 January each year.

Figure SP.27: Electricity prices, EU-15 (1)







(1) Data extracted on 12.10.2006.

Electricity prices charged to final domestic consumers: annual consumption of 3 500 kWh of which 1 300 kWh is overnight (standard dwelling of 90 m²); prices are given in EUR per kWh corresponding to prices applicable on 1 January each year.

Electricity prices charged to final industrial consumers: annual consumption of 2 000 MWh, maximum demand of 500 kW and annual load of 4 000 hours; prices are given in EUR per kWh corresponding to prices applicable on 1 January each year.





Table SP.8: Gas prices — households (1)

(as of 1 January)

	lı	ncluding	taxes (E	UR per G	J)	: : : : : : : : : : : : : : : : : : :			ce (%)	
	1985	1990	1995	2000	2005	1985	1990	1995	2000	2005
EU-25	:	:	:	:	11.29	:	:	:	:	24.5
EU-15	:	:	8.97	10.01	11.75	:	:	23.6	27.7	25.1
Euro area	:	:	:	:	13.45	:	:	:	:	29.0
Belgium	:	:	8.75	9.41	11.16	:	:	21.0	20.9	20.7
Czech Republic	:	:	:	4.36	7.49	:	:	:	18.1	15.9
Denmark	:	:	:	18.14	28.44	:	:	:	50.7	55.8
Germany	9.33	7.20	8.87	9.16	13.56	12.3	17.2	18.9	24.3	25.1
Estonia	:	:	:	:	4.63	:	:	:	:	15.3
Greece	:	:	:	:	:	:	:	:	:	:
Spain	:	:	10.04	10.62	11.90	:	:	13.8	13.8	13.9
France	:	:	8.42	8.26	10.57	:	:	14.3	15.4	14.9
Ireland	:	:	8.03	8.19	9.98	:	:	11.1	11.1	11.8
Italy	:	:	13.58	15.98	15.34	:	:	42.1	45.0	41.5
Cyprus	-	-	-	-	-	-	-	-	-	-
Latvia	:	:	:	:	4.54	:	:	:	:	15.2
Lithuania	:	:	:	:	5.41	:	:	:	:	15.3
Luxembourg	:	:	5.45	6.02	8.14	:	:	5.7	5.6	5.7
Hungary	:	:	2.95	3.32	5.10	:	:	10.8	10.5	13.1
Malta	-	-	-	-	-	-	-	-	-	-
Netherlands	:	:	7.39	9.04	15.17	:	:	18.8	37.8	36.5
Austria	:	:	:	10.67	13.36	:	:	:	26.9	33.3
Poland	:	:	:	:	7.55	:	:	:	:	18.0
Portugal	:	:	:	:	12.34	:	:	:	:	4.8
Slovenia	:	:	5.66	7.19	10.33	:	:	4.8	23.2	24.3
Slovakia	:	:	:	:	8.14	:	:	:	:	16.0
Finland	:	:	6.57	:	:	:	:	21.8	:	:
Sweden	:	:	:	12.99	22.18	:	:	:	41.3	47.2
United Kingdom	:	:	6.42	6.97	7.26	:	:	7.3	4.6	4.8
Bulgaria	:	:	:	:	6.73	:	:	:	:	16.6
Croatia	:	:	:	:	7.99	:	:	:	:	21.5
Romania	:	:	:	:	4.79	:	:	:	:	15.9

⁽¹⁾ Data extracted on 12.10.2006.

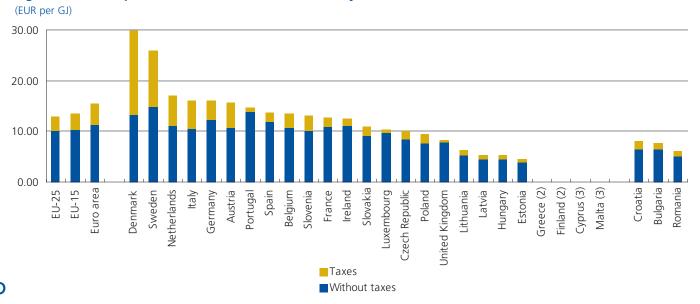
This indicator presents the natural gas prices charged to final domestic consumers, which are defined as follows: annual consumption of 83.7 GJ (equipment: cooking, water heating and central heating); prices are given in EUR per GJ corresponding to prices applicable on 1 January each year.





Figure SP.28: Gas prices — households, as of 1 January 2006 (1)







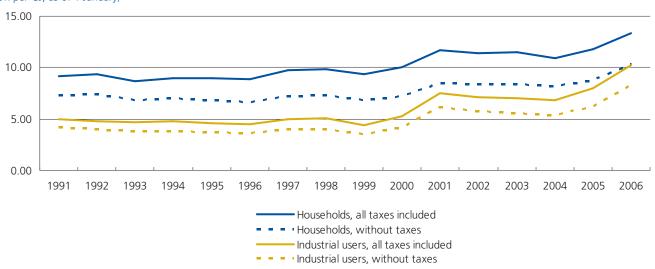
- (2) Not available.
- (3) Not applicable.

This indicator presents the natural gas prices charged to final domestic consumers, which are defined as follows: annual consumption of 83.7 GJ (equipment: cooking, water heating and central heating); prices are given in EUR per GJ corresponding to prices applicable on 1 January each year.

Figure SP.29: Gas prices, EU-15 (1)



(EUR per GJ, as of 1 January)



(1) Data extracted on 12.10.2006.

Natural gas prices charged to final domestic consumers: annual consumption of 83.7 GJ (equipment: cooking, water heating and central heating); prices are given in EUR per GJ corresponding to prices applicable on 1 January each year.

Natural gas prices charged to final industrial consumers: annual consumption of 41 860 GJ, and load factor of 200 days (1 600 hours); prices are given in EUR per GJ corresponding to prices applicable on 1 January each year.



Table SP.9: Price of premium unleaded gasoline 95 RON

(as of first half of the year)

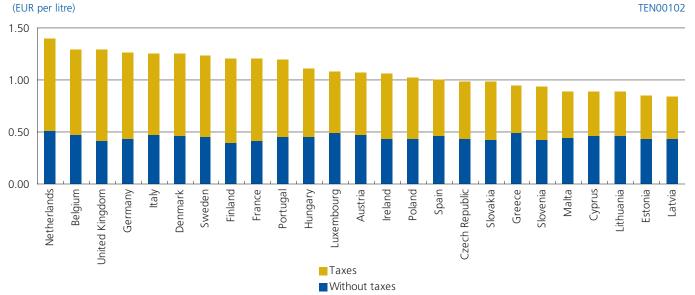
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	Pri	ce inclu	ding tax	ces (EUI	R per lit	re)	Pro	portion	of taxe	s in tot	al price	(%)
	2000	2001	2002	2003	2004	2005	2000	2001	2002	2003	2004	2005
Belgium	0.96	1.00	0.95	0.98	0.99	1.07	70.4	67.9	71.0	69.0	70.0	70.1
Czech Republic	:	:	:	:	:	0.81	:	:	:	:	:	64.3
Denmark	1.00	1.07	1.04	1.11	1.07	1.10	71.9	69.9	72.7	69.5	71.0	69.3
Germany	0.96	0.97	0.99	1.11	1.08	1.11	72.6	74.8	76.9	72.7	74.6	72.7
Estonia	:	:	:	:	:	0.67	:	:	:	:	:	58.0
Greece	0.67	0.72	0.69	0.75	0.74	0.77	59.8	56.7	58.5	55.2	56.0	67.6
Spain	0.75	0.79	0.77	0.83	0.80	0.84	63.4	61.0	65.3	61.4	63.4	61.5
France	1.04	1.00	0.96	1.05	1.00	1.04	73.8	72.6	76.2	72.7	75.5	73.1
Ireland	0.82	0.95	0.80	0.87	0.87	0.94	63.8	57.0	60.1	63.5	68.2	64.4
Italy	1.00	1.04	1.00	1.07	1.05	1.09	69.4	66.8	71.1	67.3	70.0	68.0
Cyprus	:	:	:	:	:	0.76	:	:	:	:	:	52.7
Latvia	:	:	:	:	:	0.72	:	:	:	:	:	50.1
Lithuania	:	:	:	:	:	0.71	:	:	:	:	:	55.9
Luxembourg	0.74	0.78	0.74	0.79	0.83	0.90	60.9	58.3	61.3	57.9	64.2	62.1
Hungary	:	:	:	:	:	0.96	:	:	:	:	:	65.1
Malta	:	:	:	:	:	0.87	:	:	:	:	:	50.7
Netherlands	1.06	1.14	1.10	1.16	1.19	1.25	71.3	68.3	72.9	70.8	72.0	69.2
Austria	0.87	0.87	0.82	0.90	0.86	0.91	64.3	64.2	67.1	62.7	66.2	63.3
Poland	:	:	:	:	:	0.88	:	:	:	:	:	64.1
Portugal	0.80	0.91	0.86	0.95	0.95	1.00	50.6	46.2	54.5	68.4	70.4	68.4
Slovenia	:	:	:	:	:	0.82	:	:	:	:	:	66.2
Slovakia	:	:	:	:	:	0.86	:	:	:	:	:	62.8
Finland	1.06	1.09	1.00	1.08	1.05	1.14	70.8	69.6	73.8	73.1	74.8	70.3
Sweden	1.00	1.04	0.95	1.02	1.02	1.10	71.8	68.8	72.5	70.3	71.5	69.7
United Kingdom	1.22	1.21	1.13	1.14	1.10	1.13	77.5	78.4	80.4	76.0	76.7	74.6

Source: Eurostat and Directorate-General for Energy and Transport

This indicator presents the average unleaded gasoline (Euro-super 95) consumer prices at the pump; the prices are supplied to the Directorate-General of Energy and Transport of the Commission by the Member States as being the most frequently encountered on the 15th of each month.

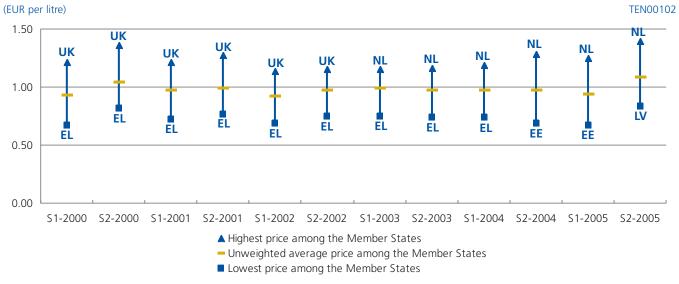
Figure SP.30: Price of premium unleaded gasoline 95 RON, second half of 2005



Source: Eurostat and Directorate-General for Energy and Transport



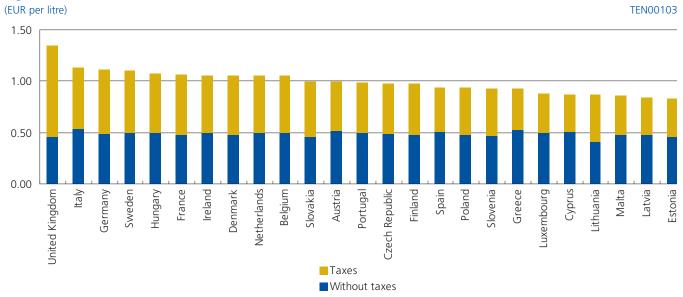
Figure SP.31: Price of premium unleaded gasoline 95 RON (including taxes) (1)



(1) EU-15 Member States up to and including the first semester of 2004; EU-25 Member States thereafter. Source: Eurostat and Directorate-General for Energy and Transport

This indicator presents the average unleaded gasoline (Euro-super 95) consumer prices at the pump; the prices are supplied to the Directorate-General of Energy and Transport of the Commission by the Member States as being the most frequently encountered on the 15th of each month.

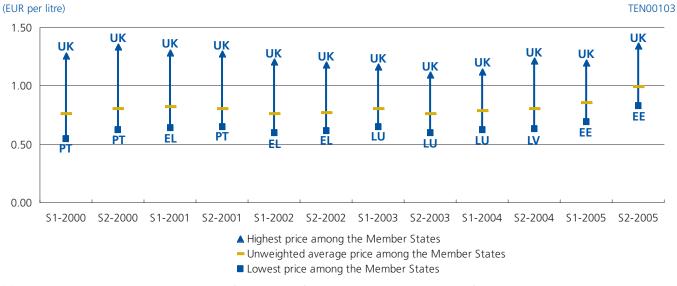
Figure SP.32: Price of diesel oil, second half of 2005



Source: Eurostat and Directorate-General for Energy and Transport

This indicator presents the average automotive diesel oil consumer prices at the pump; the prices are supplied to the Directorate-General of Energy and Transport of the Commission by the Member States as being the most frequently encountered on the 15th of each month.

Figure SP.33: Price of diesel oil (including taxes) (1)



(1) EU-15 Member States up to and including the first semester of 2004; EU-25 Member States thereafter. Source: Eurostat and Directorate-General for Energy and Transport

