

Policy Background

A European energy policy must pursue the objective of a sustainable, competitive and secure supply of energy. If the EU continues on its present course, this key objective will not be attained. In January 2007, the European Commission adopted an energy policy for Europe. This was supported by several documents on different aspects of energy and included an action plan to meet the major energy challenges Europe faces. Each European citizen must be informed of these challenges and the role they should play in meeting them.

A diversified mix of energy sources will increase security of supply.

Key Issues

A significant increase in final energy consumption has resulted in high import dependency for Portugal, given that domestic production is limited to renewable energy sources. Oil dominates primary energy supply. Natural gas was first introduced in 1997 and is gaining an increasing share in energy supply and electricity generation. Electricity generation depends to a great extent on hydro energy, which exhibits significant annual variation, and hard coal also plays a significant role in the electricity mix. Industry and transport are the major energy-consuming sectors. Energy and CO₂ intensity are above the EU average, although energy consumption and CO₂ per capita are below the EU average. Much debate on energy focuses on the future energy mix in the light of high dependency on imports and climate change.

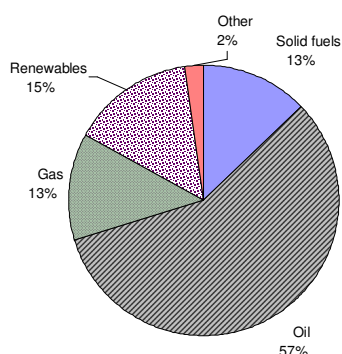
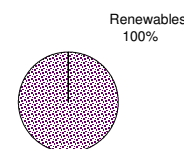
Key Figures (2004)

Mtoe	Primary Energy Supply	Domestic Production	Net Imports	Final Energy Consumption	Electricity Generation (TWh)
Solid fuels	3.4		3.2	0.1	14.9
Oil	15.0		15.4	12.2	5.7
Gas	3.3		3.3	1.3	11.7
Nuclear					
Electricity			0.6	3.8	
Renewables	3.9	3.9		2.5	12.6
Other	0.6			0.3	0.3
Total	26.2	3.9	22.4	20.1	45.1

The source for all data is the European Commission, unless otherwise stated

Key Indicators (2004)

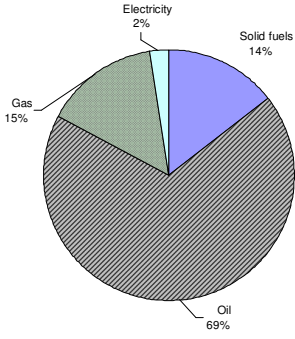
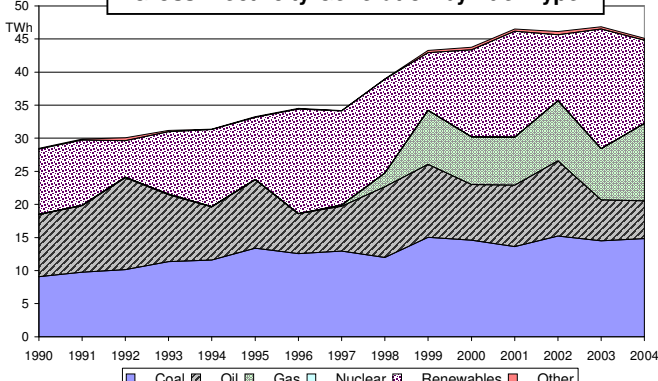
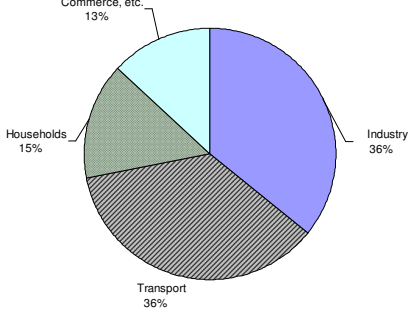
	PORTUGAL	EU-27
Energy per capita (kgoe/cap)	2 492	3 689
Energy intensity (toe/MEUR '00)	208	185
Energy import dependency %	83.6	50.1
CO ₂ Emissions (Mt)	64	4 004
CO ₂ intensity (tCO ₂ /toe)	2.5	2.2
CO ₂ per capita (kg/cap)	6 121	8 180

2004 Primary Energy Supply

2004 Domestic Production

Primary Energy Supply

Primary energy supply in Portugal has increased significantly since 1990 (by 55%). This increase consists mainly of an increase in oil (by 29% since 1990) and in solid fuels (by 31% since 1990) supply. In 1997, natural gas was first introduced in the primary energy supply of Portugal and in 2004 the share of gas in total energy supply had reached 13% (remaining below the EU-27 average). The share of renewable sources (mainly hydro) in total energy supply is 15%, significantly higher than the EU-27 average of 6%.

Domestic Production

The domestic production of Portugal is exclusively based on renewable energy sources, mainly hydro and biomass. Growth has been significant (45% since 1990).

<p>Imports</p> <p>Import dependency of Portugal in terms of energy (83.6%) is much higher than the EU-27 average. Most of the imported energy is oil but also includes significant amounts of gas and solid fuel imports. Crude oil is imported from African countries (Algeria, Nigeria, Libya) and Saudi Arabia. Nigeria and Algeria are also main suppliers of natural gas. Solid fuels (hard coal) mainly originate from Colombia and South Africa.</p>	<p>2004 Net Imports by Energy Product</p>  <table><thead><tr><th>Energy Product</th><th>Percentage</th></tr></thead><tbody><tr><td>Oil</td><td>69%</td></tr><tr><td>Gas</td><td>15%</td></tr><tr><td>Solid fuels</td><td>14%</td></tr><tr><td>Electricity</td><td>2%</td></tr></tbody></table>	Energy Product	Percentage	Oil	69%	Gas	15%	Solid fuels	14%	Electricity	2%																																																																																																						
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<p>Electricity Generation</p> <p>Electricity generation has increased significantly since 1990 (58% increase), although has remained fairly constant over the past 4 to 5 years. Traditionally, the electricity fuel mix depended on coal, oil and hydro generation. The increased availability of natural gas through imports has led to an increasing share of natural gas in the electricity fuel mix replacing mainly oil. While coal production has been steadily increasing, hydro generation shows large variability due to its dependence on rainfall and climatic conditions.</p>	<p>Gross Electricity Generation by Fuel Type</p>  <table><thead><tr><th>Year</th><th>Coal</th><th>Oil</th><th>Gas</th><th>Nuclear</th><th>Renewables</th><th>Other</th></tr></thead><tbody><tr><td>1990</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1991</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1992</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1993</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1994</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1995</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1996</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1997</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1998</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>1999</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>2000</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>2001</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>2002</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>2003</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr><tr><td>2004</td><td>10</td><td>10</td><td>0</td><td>0</td><td>5</td><td>0</td></tr></tbody></table>	Year	Coal	Oil	Gas	Nuclear	Renewables	Other	1990	10	10	0	0	5	0	1991	10	10	0	0	5	0	1992	10	10	0	0	5	0	1993	10	10	0	0	5	0	1994	10	10	0	0	5	0	1995	10	10	0	0	5	0	1996	10	10	0	0	5	0	1997	10	10	0	0	5	0	1998	10	10	0	0	5	0	1999	10	10	0	0	5	0	2000	10	10	0	0	5	0	2001	10	10	0	0	5	0	2002	10	10	0	0	5	0	2003	10	10	0	0	5	0	2004	10	10	0	0	5	0
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<p>Final Energy Consumption</p> <p>Final energy consumption in Portugal has increased dramatically since 1990 (80% increase in the period 1990-2004), mainly due to increases in the consumption of the transport, industrial and commercial sectors. Transport and industry are the most important energy-consuming sectors (both above EU average shares), exhibiting a 72% aggregate share in total final energy consumption in 2004. 61% of consumed energy comes from oil, while 20% is electricity and 12% renewable energy (mainly biomass).</p>	<p>2004 Final Energy Consumption by Sector</p>  <table><thead><tr><th>Sector</th><th>Percentage</th></tr></thead><tbody><tr><td>Industry</td><td>36%</td></tr><tr><td>Transport</td><td>36%</td></tr><tr><td>Households</td><td>15%</td></tr><tr><td>Commerce, etc.</td><td>13%</td></tr></tbody></table>	Sector	Percentage	Industry	36%	Transport	36%	Households	15%	Commerce, etc.	13%																																																																																																						
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<p>For further information</p> <p>If you want to find more data on Portugal or other Member State energy markets, go to http://epp.eurostat.ec.europa.eu/http://ec.europa.eu/dgs/energy_transport/figures/pocketbook/2006_en.htm</p> <p>Further fact sheets on Portugal and other Member States can be found on: http://ec.europa.eu/energy/energy_policy/facts_en.htm</p> <p>What is meant by.....?</p> <p><i>Energy Import Dependency</i> shows the extent to which a country relies upon imports in order to meet its energy needs. It is calculated using the following formula: net imports / (primary energy supply + bunkers)</p> <p><i>Energy Intensity</i> gives an indication of the effectiveness with which energy is being used to produce added value. It is defined as the ratio of Primary Energy Supply to Gross Domestic Product</p> <p><i>Final Energy Consumption</i> is the energy finally consumed in the transport, industrial, commercial, agricultural, public and household sectors. It excludes deliveries to the energy transformation sector and to the energy industries themselves</p> <p><i>Primary Energy Supply</i>: The quantity of energy consumed within the borders of a country: primary production + recovered products + imports + stock changes - exports - bunkers (i.e. quantities supplied to sea-going ships)</p> <p>Disclaimer</p> <p>Views expressed in this document have not been adopted or in any way approved by the European Commission and should not be relied upon as a statement of the Commission's views.</p> <p>The Commission does not guarantee the accuracy of the data included in this document, nor does it accept responsibility for any use made thereof.</p>																																																																																																																	