EN27 Electricity production by fuel

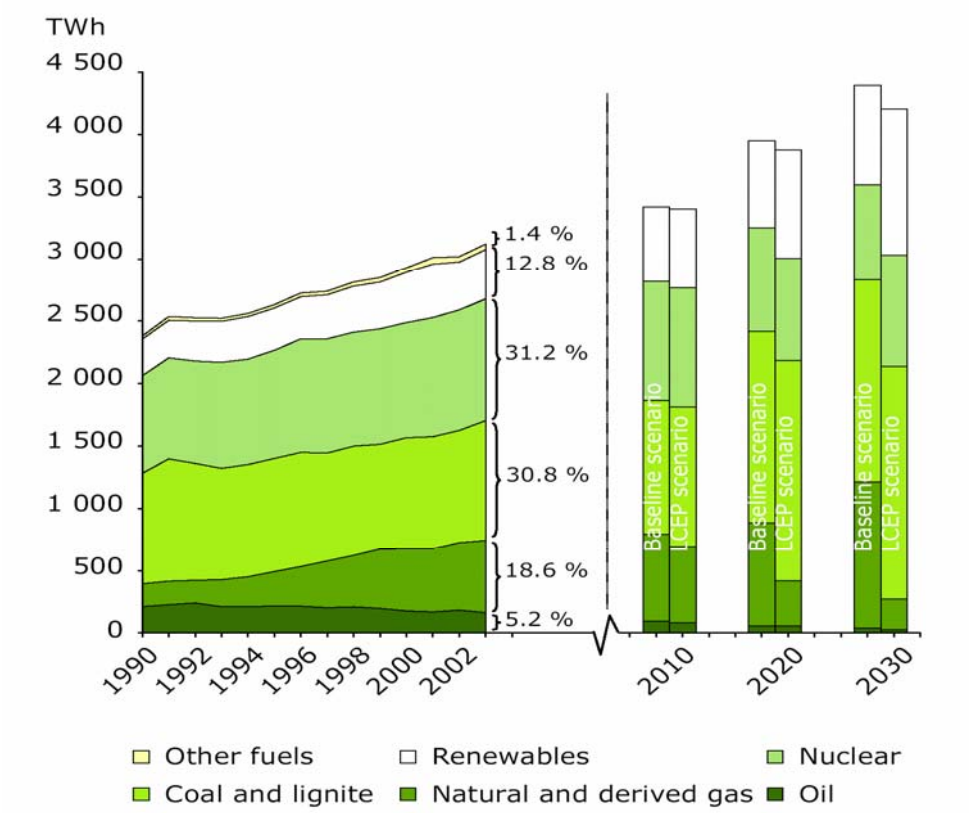
Key message

Fossil fuels and nuclear energy continue to dominate the fuel mix for electricity production despite their risk of environmental impact. This impact was reduced during the 1990s with relatively clean natural gas becoming the main choice of fuel for new plants, at the expense of coal and lignite, and oil. Since 2000, this trend has slowed with a slight increase in the share of coal in recent years. The steep increase in overall electricity production has also counteracted some of the environmental benefits from fuel switching.

Rationale

The trend in electricity production by fuel provides a broad indication of the impacts associated with electricity production. The type and extent of the related environmental pressures depends upon the type and amount of fuels used for electricity generation as well as the use of abatement technologies.

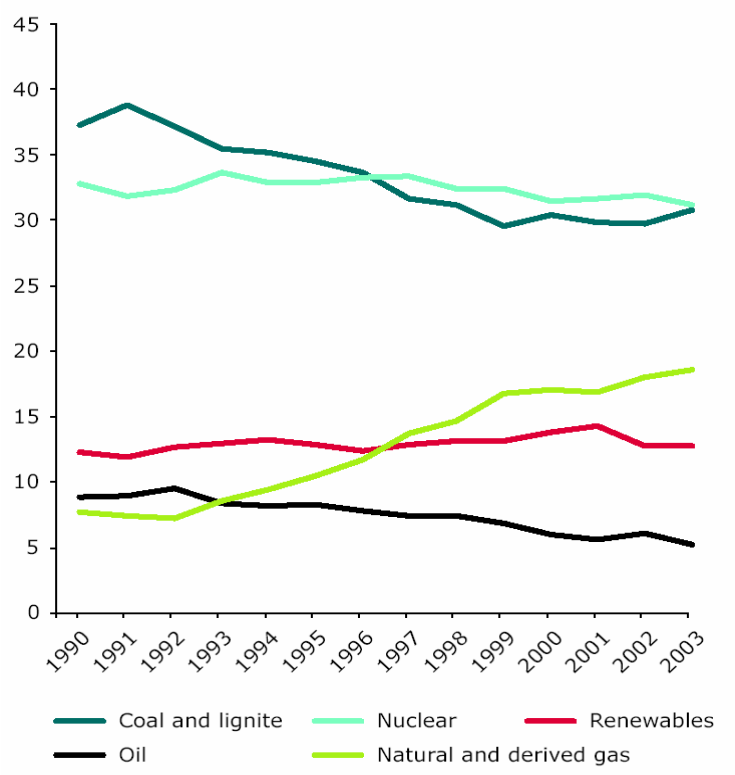
Fig. 1: Gross electricity production by fuel, EU-25



Data Source: Eurostat (Historic data), EEA (2005) for projection data.

Note: Data shown are for gross electricity production and include electricity production from both public and auto-producers. Renewables includes electricity produced from hydro (excluding pumping), biomass, municipal waste, geothermal, wind and solar PV. The share of renewables presented in the chart is that for production and hence does not correspond to the share, for consumption, as required by Directive 2001/77/EC. The difference between both shares is accounted for by the net balance between imports and exports of electricity. The EU-25 value for 1990 includes (former) West Germany only and since 1991 it refers to Germany. More than half of the increase in electricity generation in the EU-25 in 1991 was accounted for by Germany alone, compared to just 10 % over 1991-2003. 'Other fuels' include electricity produced from power plants not accounted for elsewhere, such as those fuelled by certain types of industrial wastes. It also includes the electricity generated as a result of pumping in hydro-power stations. The projections do not include a similar category for 'other' fuels and hence their values for 100 % of production by fuel are contained within the remaining five categories. EEA baseline projections are consistent with European Commission (2004). The Low-Carbon-Energy Pathway (LCEP) scenario assumes that ambitious future greenhouse gas emission reduction targets will be reached and thus assumes a CO_2 permit price of EUR 30/t CO_2 and EUR 65/t CO_2 in 2020 and 2030, respectively.

Fig. 2: Share of electricity production by fuel type in 2003 (%), EU-25



Data source: Eurostat

Note: Data for Germany in 1990 include West Germany only. Electricity produced from pumping in hydro power plants is not considered a renewable source of energy and it is not shown in the chart.

1. Indicator assessment

Electricity production from fossil fuels continues to dominate total electricity production, with a share of almost 55 % in 2003, despite the recognised environmental impacts such as emissions of greenhouse gases and other pollutants, and resource depletion. Natural gas, which causes less overall pollution than other fossil fuels, was the primary, although not only, choice for new fossil-fired power plants over the period 1990-2003, mainly driven by economic concerns. This fuel switch was one of the factors leading to decrease in greenhouse gas emissions of public power generation of 3.6 % over the period. However, with an increase in natural gas prices relative to coal since 1999 (IEA, 2005) as well as a decrease in hydro electricity production in recent years due to low rainfall, the use of coal increased again and hence GHG emissions of public power generation have begun to rise again (+7.8 % between 1999 and 2003; see EN01 and EN02 for more information). The share of oil for power generation is slowly diminishing with time as many of the existing oil-fired plants are kept only as part of the required power reserve margin.

The share of electricity produced from gas has risen by a factor of 2.4 in the EU-25 between 1990 and 2003 to around 19 % in 2003. This growth has been influenced by the liberalisation of electricity markets and implementation of environmental legislation, such as the Large Combustion Plant Directive and the requirements for investing in pollution abatement technologies to lower emissions of air pollutants such as SO_2 and NOx (see EN09 for more information). However, the primary factor was economic, with low gas prices for much of the 1990s and the rapid investment in transportation infrastructure for the delivery of gas from within and outside the EU, which has also assisted its progress. Competition to provide electricity more cleanly and at a lower cost has favoured gas use due to the high efficiencies and low capital costs associated with some gas-based technologies, in particular Combined Cycle Gas Turbines (CCGT).

Electricity produced from coal and lignite accounted for 30.8 % of EU-25 electricity production in 2003, falling from 37.3 % in 1990. However, the decline in coal has slowed in recent years and from 2002 to 2003 its share of electricity production actually increased, as the price of natural gas increased relative to coal. Whether this trend continues into the future will depend upon the long-term cost of gas, which is linked closely to the price of oil and has risen considerably in recent years. It will also depend upon environmental legislation such as the aforementioned Large Combustion Plant Directive, and in particular the EU greenhouse gas emissions trading scheme (2003/87/EC) which favours a shift to less carbon intensive fuels for electricity generation, such as gas, as well as improvements in generating efficiency.

Electricity produced from nuclear fuels continued to grow in absolute terms from the 1990s through to 2003 in the EU-25, although its share of total production fell slightly to 31 % in 2003. This declining share is expected to continue, since few new nuclear plants have been commissioned in recent years to replace those reaching the end of their lives. Economically, the

production of electricity in nuclear power plants is seen as an expensive option in the context of a liberalised market and public concern about environmental and safety considerations has led to plans to phase out nuclear power in certain Member States (such as Germany (Parliament decision in 2001), the Netherlands, Spain, Sweden and Belgium), with some others either declaring or considering moratoria on the building of new nuclear plants (see EN13 for more information). However, factors such as concerns about security of energy supply (and an overdependence on energy imports[1]) and the need to reduce greenhouse gas emissions are increasingly providing countervailing arguments in Member States' debates on the need for new nuclear capacity. In Romania, the Cernavoda 2 reactor is due to be completed in 2007 and the process of building additional capacity in Finland and in France, based primarily on new nuclear designs such as the European Pressurised Water Reactor and Westinghouse Advanced Passive technology, is ongoing.

Total renewable energy sources contribute 12.8 % to gross electricity production in the EU-25 in 2003, and this share has only increased by 0.4 percentage points since 1990. Substantial growth will be required to meet the EU-25 renewable electricity indicative target of 21.0 % renewable electricity share of gross electricity consumption by 2010[2]. For a detailed description of past and future trends in renewable technologies, see EN30 and EN29.

The fuel mix for electricity production in the new EU Member States is rather different to the EU-15 due to historic and economic reasons. The traditional electricity industries in the region were originally vertically integrated monopolies controlled by central governments, but in the second half of the 1990s, the generation, transmission and distribution of electricity were mostly separated. As the power industry's generating plant was in general old, inefficient and highly polluting, huge investments have been required for refurbishment, with the aim of improving their performance, cutting production costs and reducing environmental impacts. Due to the rapid decline in industrial output in the early 1990s and the restructuring of the industrial sector, there was a decline in electricity use in the new Member States, although this started to rise again from the mid-1990s onwards. However, this has not been balanced by equivalent decommissioning of electricity production capacity. Consequently, whereas in the EU-15 the average capacity margin is 26 %, in the New Member States it is 38 %. Given the continued high level of energy intensity of the region and the large available potentials for energy demand reduction, the extent of over capacity may turn out to be even higher (WWF, 2004).

Overall, fuel switching within electricity has benefited the environment, but this trend has slowed in recent years. However, a significant portion of these benefits have been counteracted by the rapid increase in overall final electricity consumption of about 27 % from 1990 to 2003 (see EN18) leading to increase in overall electricity production of about 31 % over the same period.

Baseline projections of future electricity production by fuel indicate that the share of gas is expected to double by 2020 before slowly declining due to the anticipated re-emergence of coal generation. The projected re-emergence of coal, after declining until around 2015, is based on an assumption that forecast increases in the relative price of gas and concerns over the security of energy supply would increase the competitiveness of coal-fired plants. This is also in part due to new coal plant technology (such as IGCC Integrated Gasification Combined Cycle) with efficiencies in the range 40-45 % (with further potential advances that may allow this to exceed 50 %) and which allow sulphur, nitrogen compounds and particulates to be removed prior to combustion, thus allowing environmental legislation to be complied with more efficiently (OECD, 2005). After 2020 baseline projections expect a substantial decline in production from nuclear as ageing plants are retired and no new plants are commissioned, and for renewables they expect their share of to grow slowly to 2030 (see EN30), but even by this point the expected share is still less than the indicative renewable electricity Directive target.

By comparison, the imposition of a rising permit price for carbon under the Low Carbon Energy Pathway (LCEP) scenario projections causes coal and lignite generation drop rapidly to less than a quarter of their expected share, under the baseline projections, by 2030. The share of gas increases by almost 2.5 times its current share by 2030, and the share of renewables increases far rapidly, approximately doubling its current share. The share of nuclear would be around 4 percentage points higher than in the baseline projections. The LCEP scenario also shows a slightly slower growth in the demand for electricity overall and hence lower levels of electricity production.

Towards 2030, over 70 % of the expected reduction in emissions between the LCEP and baseline scenarios is expected to be realised in the power generation, with the sector's emissions less than 60 % of that under the baseline scenario. Whilst there is

[1] Also most uranium would have to be imported from outside the EU.

(1) The share of renewables described in this indicator is that for the *production* of electricity and hence does not correspond precisely to the share required by Directive 2001/77/EC which is specifically for the share of renewables in gross electricity *consumption,* therefore also taking into account imports and exports of electricity.

a slight improvement in thermal generation efficiency and lower overall electricity consumption between these two scenarios the bulk of the savings are expected to come from fuel switching, highlighting the high mitigation potential of this sector.

2. Indicator rationale

2.1 Environmental context

Electricity generation is responsible for 27 % of all EU-25 greenhouse gas emissions and 24 % of all particles emissions (SO_2, NO_X, NH_3 and PM_{10}). The indicator for electricity production by fuel type helps to estimate the environmental impacts of electricity generation. The type and extent of energy-related pressures on the environment depends upon the sources of electricity generation and how the electricity is produced.

Electricity production from fossil fuels (such as crude oil, oil products, hard coal, lignite and natural and derived gas) provides a proxy indicator of resource depletion, CO_2 and other greenhouse gas emissions and air pollution levels (e.g. SO_2 and NO_X). The degree of environmental impact depends on the relative share of different fossil fuels and the extent to which pollution abatement measures are used. Natural gas, for instance, has approximately 40 % less carbon content than coal per unit of energy content, and 25 % less carbon content than oil, and contains only marginal quantities of sulphur.

The level of nuclear electricity production provides an indication of the trends in the amount of nuclear waste generated and of the risks associated with radioactive leaks and accidents. Increasing consumption of nuclear energy at the expense of fossil fuels would on the other hand contribute to reductions in CO_2 emissions.

Renewable electricity production is a measure of the contribution from technologies that are, in general, more environmentally benign, as they produce no (or very little) net CO_2 and usually significantly lower levels of other pollutants. Renewable electricity can, however, have impacts on landscapes and ecosystems (for example, potential flooding and changed water levels from large hydro power) and the incineration of municipal waste (which is generally made up of both renewable and non-renewable material) may also generate local air pollution.

The efficiency with which electricity is produced also determines the scale of the environmental impacts of electricity production and consumption (see EN19), as it determines the amount of input fuel required to generate a given quantity of electricity.

The impact also depends upon the total amount of electricity demanded and hence the level of electricity production required (see EN18 for more details on electricity consumption). Thus another way of reducing energy-related pressures on the environment includes using less electricity on the demand-side, through improved efficiency, conservation or a combination of the two.

2.2 Policy context

The indicator's objective is to analyse the fuel shares of electricity production and the growth in production by fuel type. It identifies whether there is a switch to less polluting fuels to meet the EU's energy needs. Changes in the fuel mix for electricity generation should be seen in the context of meeting the EU-15 target, agreed in 1997 under the Kyoto Protocol to the United Nations Framework Convention on Climate Change, to reduce its emissions of greenhouse gases by 8 % from 1990 levels by 2008-2012 is reached (see EN01), and individual targets by the new Member States. The EU ratified the Kyoto Protocol in May 2002 (Council Decision 2002/358/EC).

Changes in the fuel mix are also important with regard to energy supply security. The Green Paper, 'Towards a European strategy for the security of energy supply' (COM(2000) 769 final) stresses the European Union's heavy dependence on imports of energy sources, 50 % for EU-15 in 1999, with the 2005 Green Paper on Energy Efficiency (COM(2005)265 final) highlighting that on present trends this could rise to 90 % for oil and 80 % for gas by 2030. Both papers recommend significant improvements in energy efficiency as well as increased use of indigenous energy sources, which was also be strengthened in the recent Green Paper 'A European Strategy for sustainable, competitive, and secure energy' (COM(2006)105 final).

There is a large number of relevant policies, which set specific targets or have a direct influence on the fuel share of electricity production. These include the EU Directive on the promotion of electricity from renewable energy sources in the internal electricity market (2001/77/EC). The Directive sets an indicative target of 22.1 % of gross EU-15 electricity consumption to be supplied by electricity produced from renewable sources by 2010. Targets for the new Member States and a target for the EU-25 of 21.0 % were specified in an amendment to 2001/77/EC contained in the Treaty to Accession of the European Union in 2003. As well as this, the Directive establishing a scheme for greenhouse gas emission allowance trading within the Community (2003/87/EC) is intended to contribute to the European Union fulfilling its commitments under the Kyoto Protocol. Under the Directive, Member States have to draw up a National Allocation Plan that will include setting caps on CO_2 emissions from combustion installations over 20 MW, as well as specific industrial processes (oil refining, cement production, iron and steel manufacture, glass and ceramics, and paper and pulp production). This will impact on the fuel mix for generation, primarily by encouraging a shift towards less carbon intensive fuels such as natural gas. Additionally, the Large Combustion Plant Directive (2001/80/EC), which aims to control emissions of SO_2, NO_x and particulate matter from large combustion plants (> 50 MW), also

has a sizeable effect on the shares of electricity generation by fuel type, as it effectively favours the use of higher efficiency gas plant as opposed to coal plant.

Fig. 3: Share of electricity production by fuel type in 2003

Units: %	Coal and lignite	Oil	Natural and derived gas	Nuclear	Renewables	Other fuels	Total gross electricity production (TWh)
EEA Members	29.8	5.1	19.0	28.6	16.2	1.3	3476.1
EU25	30.8	5.2	18.6	31.2	12.8	1.4	3120.5
EU15 pre-2004 Members	26.7	5.4	20.0	32.5	13.9	1.5	2766.4
EU10 New Members	62.5	3.4	7.9	21.3	3.9	1.0	354.1
Austria	13.3	2.8	19.3	0.0	60.3	4.3	63.2
Belgium	11.4	1.2	27.9	56.0	2.0	1.6	84.6
Bulgaria	45.2	1.9	4.7	40.6	7.0	0.7	42.5
Croatia	19.0	24.9	17.2	0.0	38.5	0.5	12.7
Cyprus	0.0	100.0	0.0	0.0	0.0	0.0	4.0
Czech Republic	61.2	0.4	4.5	31.1	2.3	0.5	83.2
Denmark	54.8	5.1	21.2	0.0	18.9	0.0	46.2
Estonia	92.3	0.4	6.9	0.0	0.4	0.0	10.2
Finland	31.1	1.1	17.2	27.0	23.0	0.6	84.2
France	4.6	1.5	3.6	77.8	11.5	0.9	566.9
Germany	51.1	0.8	11.0	27.5	7.9	1.7	599.5
Greece	60.1	14.9	13.7	0.0	9.9	1.4	58.5
Hungary	26.9	4.8	35.1	32.3	1.1	0.0	34.1
Iceland	0.0	0.1	0.0	0.0	99.9	0.0	8.5
Ireland	32.6	9.7	51.7	0.0	4.5	1.4	25.2
Italy	13.2	25.9	41.7	0.0	15.0	4.2	293.9
Latvia	0.6	2.1	38.6	0.0	58.8	0.0	4.0
Liechtenstein	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lithuania	0.0	1.7	12.9	79.5	1.7	4.2	19.5
Luxembourg	0.0	0.0	72.1	0.0	4.7	23.2	3.6
Malta	0.0	100.0	0.0	0.0	0.0	0.0	2.2
Netherlands	25.2	3.0	62.0	4.2	5.5	0.2	96.8
Norway	0.0	0.0	0.4	0.0	98.9	0.7	107.3
Poland	92.8	1.6	2.9	0.0	1.5	1.3	151.6
Portugal	31.0	13.2	16.5	0.0	38.6	0.7	46.9
Romania	41.2	6.4	20.3	8.7	23.4	0.0	56.6
Slovakia	19.1	2.3	9.1	57.3	11.2	1.1	31.2
Slovenia	36.4	0.4	2.6	37.1	23.4	0.0	14.0
Spain	28.4	9.1	15.4	23.5	22.4	1.1	262.9
Sweden	2.0	2.8	1.3	49.7	43.8	0.3	135.6
Switzerland	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Turkey	22.4	6.5	45.8	0.0	25.3	0.0	140.6
United Kingdom	34.7	1.8	37.8	22.2	2.8	0.7	398.6

Data Source: Eurostat

Notes: The share of renewables above refers to production and therefore it does not match exactly the share, for consumption, as required by Directive 2001/77/EC. The difference between both shares is accounted for by the net balance between imports and exports of electricity. 'Other fuels' include electricity produced from power plants not accounted for elsewhere, such as those fuelled by certain types of industrial wastes. It also includes the electricity generated as a result of pumping in hydro-power stations. Data for Liechtenstein or Switzerland are not available from Eurostat.

References

COM(2000) 769 final - Green Paper: Towards a European strategy for the security of energy supply, European Commission.

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COM(2006) 105 final - Green paper- A European Strategy for sustainable, competitive and secure energy, European Commission, 2006.

Council Decision 2002/358/EC to ratify the Kyoto Protocol under the United Nations Framework Convention on Climate Change.

Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market.

Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants.

Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

European Commission (2004) European energy and transport – scenarios on key drivers, Directorate General for Transport and Energy

EEA (2005) Climate change and a European low-carbon energy system, European Environment Agency report No 1/2005.

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Kyoto Protocol to the United Nations Framework Convention on Climate Change; adopted at COP3 in Kyoto, Japan, on 11 December 1997.

OECD (2005) International Energy Technology Collaboration and Climate Change Mitigation, Case Study 4: Clean Coal Technologies.

Treaty of Accession to the European Union, Annex II, Part 12, page 588, which amends Directive 2001/77/EC in order to set targets for new Member States on the contribution of renewable energy to electricity generation.

WWF (2004): Ending Wasteful Energy Use in Central and Eastern Europe.
http://www.panda.org/downloads/europe/endingwastefulenergyincentraleasterneurope.pdf .

Meta data

Technical information

1. Data source:
   Electricity production by fuel and total gross electricity generation: Eurostat (historical data)
   http://europa.eu.int/comm/eurostat/
   Projection data: European Environment Agency (2005) – baseline projections are consistent with European Commission (2004)

2. Description of data/Indicator definition:
   Total gross electricity generation covers gross electricity generation in all types of power plants. The 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 is included.
   Electricity production by fuel is the gross electricity generation from plants utilising the following fuels: coal and lignite, oil, nuclear, natural and derived gas, renewables (wind, hydro, biomass and waste, solar PV and geothermal) and other fuels. The latter include electricity produced from power plants not accounted for elsewhere, such as those fuelled by certain types of industrial wastes which are not classed as renewable. Other fuels also include the electricity produced as a result of pumping in hydro power stations.
   The share of each fuel in electricity production is taken as the ratio of electricity production from the relevant category against total gross electricity generation. It should be noted that the share of renewable electricity in this indicator, based on production, is not directly comparable with the share required under Directive 2001/77/EC which is based upon the share of renewables in electricity consumption. The difference between both shares is accounted for by the net balance between imports and exports of electricity and by how much domestic electricity generation is increased or reduced as a result.
   Units: Electricity generation is measured in either GWh or TWh (1000 GWh)
   The PRIMES model was used by the EEA to analyse possible future developments of the European energy sector, including a baseline scenario without a permit price and the low carbon energy pathway (LCEP) scenario. It describes the least-cost response of the EU-25 energy system to the introduction of a carbon permit price that rises to EUR 65/t CO_2 by 2030.

3. Geographical coverage:
   The Agency had 31 member countries at the time of writing of this fact sheet. These are the 25 European Union Member States and Bulgaria, Romania and Turkey, plus Iceland, Norway and Liechtenstein. On 1 April 2006, Switzerland joined the EEA, bringing its number of member countries to 32.
   No energy data available for Switzerland and Liechtenstein. No projection data are available for Iceland, Liechtenstein.

4. Temporal coverage: 1990-2003, projections to 2030 in 10 year intervals.

5. Methodology and frequency of data collection: Data collected annually.
   Eurostat definitions for energy statistics http://forum.europa.eu.int/irc/dsis/coded/info/data/coded/en/Theme9.htm
   Eurostat metadata for energy statistics http://europa.eu.int/estatref/info/sdds/en/sirene/energy_base.htm

6. Methodology of data manipulation:
   Average annual rate of growth calculated using: [(last year/base year) ^ (1/number of years) –1]*100
   Share of electricity production by fuel calculated as ratio of electricity production by fuel type to total gross electricity generation.
   The coding (used in the Eurostat New Cronos database) and specific components of the indicator are:
   - Coal and lignite: gross electricity generation coal fired power stations 107006 + gross electricity generation lignite fired power stations 107007
   - Oil: gross electricity generation oil fired power stations 107008
   - Natural and derived gas: gross electricity generation natural fired power stations 107009 + gross electricity generation derived-gas fired power stations 107010
   - Nuclear: gross electricity generation nuclear power plants 107003
   - Renewables: gross electricity generation biomass fired power stations 107011 + gross electricity generation geothermal power plants 107002 + primary production 100100 hydro power 5510 + gross production from photovoltaic systems 107023 + gross electricity generation wind turbines 107005
   - Other fuels: gross electricity generation other power stations 107012 + pumping in hydro power stations, calculated as gross electricity generation hydro power plants - primary production 100100 hydro power 5510

   It should be noted that in the Eurostat New Cronos database 'Other fuels – 107012' also includes 'gross production from photovoltaic systems - 107023' and although almost negligible in overall terms it has been subtracted from 107012 in the calculation of the indicator.
   For the denominator, where required: total gross electricity generation 107000

Qualitative information

7. Strengths and weaknesses (at data level)
   Data have been traditionally compiled by Eurostat through the annual Joint Questionnaires, shared by Eurostat and the International Energy Agency, following a well established and harmonised methodology. Methodological information on the annual Joint Questionnaires and data compilation can be found in Eurostat's web page for metadata on energy statistics.
   http://europa.eu.int/estatref/info/sdds/en/sirene/energy_sm1.htm

8. Reliability, accuracy, robustness, uncertainty (at data level):

   Indicator uncertainty (historic data):
   Biomass and wastes, as defined by Eurostat, cover organic, non-fossil material of biological origin, which may be used for heat production or electricity generation. They comprise wood and wood waste, biogas, municipal solid waste (MSW) and biofuels. MSW comprises biodegradable and non-biodegradable wastes produced by different sectors. Non-biodegradable municipal and solid wastes are not considered to be renewable, but current data availability does not allow the non-biodegradable content of wastes to be identified separately, except for that from industry.
   Also, electricity data (unlike that for overall energy consumption) for 1990 refers to the western part of Germany only.
   Electricity consumption within the national territory includes imports of electricity from neighbouring countries. It also excludes the electricity produced nationally but exported abroad. In some countries the contribution of electricity trade to total electricity consumption and the changes observed from year to year need to be looked at carefully when analysing trends in electricity production by fuel. Impacts on the (national) environment are also affected since emissions are accounted where the electricity is produced whereas consumption is accounted where the electricity is consumed.

   Indicator uncertainty (scenarios/projections):
   Scenario analysis always includes many uncertainties and the results should thus be interpreted with care:
   - uncertainties related to future socioeconomic developments (e.g. GDP) and human choices;
   - uncertainties in the underlying statistical and empirical data (e.g. on future technology costs and performance);
   - uncertainties in the choice of indicators (representativeness);
   - uncertainties in the dynamic behaviour of systems and its translation into models;
   - uncertainties in future fuel costs and the impact on low carbon technologies.

   The LCEP scenario uses relatively optimistic assumptions on economic growth, compared with other scenarios. The same level of carbon prices as in the LCEP scenario would lead to higher CO_2 emission reduction when simulated with other models (e.g. TIMER), which may partly result from the fact, that carbon capture and storage was not included in the PRIMES LCEP scenario.

9. Overall scoring – historic data (1 = no major problems, 3 = major reservations):
   Relevance: 1
   Accuracy: 1
   Comparability over time: 1
   Comparability over space: 1