

Energy mix

Introduction

Since 1999 UK energy production has shown a reducing trend year on year, with total production in 2006 down 33.9% on 1999 levels at 196 million tonnes of oil equivalent (mtoe). This is largely due to the depletion of the North Sea oil and gas fields.

Total UK energy consumption in 2006 was down 0.3% on the previous year at 233mtoe - 19% more than UK production during the same year. Coal based energy consumption stood at 46mtoe, petroleum 77mtoe, natural gas 91mtoe, nuclear 17mtoe, wind/natural flow hydro 1mtoe with net imports adding 1mtoe. On 2005 figures, consumption of oil had risen by 1%, consumption of coal and other solids had risen by 9%, whereas consumption of natural gas had fallen by 5%ⁱ.

In 2004, energy consumption in Wales was down 1.4% on 2003 figures at 9,383 kilotonnes of oil equivalent (ktoe), comprising of; 367ktoe from coal, 110ktoe from manufactured solid fuels, 4,021ktoe from petroleum, 3,397ktoe from natural gas, 1,425ktoe from electricity and 64ktoe from renewables and wasteⁱⁱ.

According to the DTI, approximately 8GWⁱⁱⁱ of coal-fired power stations in the UK will close before 2015 under EU environmental legislation, with 10GW of nuclear power stations reaching end of life by 2023. Further, increasing growth in electricity demand will require substantial investment in up to 25GW of new electricity generation capacity across the UK (equivalent to 30% of today's existing capacity) by 2025.

Welsh energy policy is currently comprised of the following five strands (as outlined in the Energy Wales Route Map 2005^{iv}); securing 4TWh per annum of renewable energy production by 2010 and 7TWh by 2020; greater energy efficiency in all sectors; more electricity from cleaner, high efficiency fossil-fuel plants; significant energy infrastructure improvements, and; achieving measurable carbon dioxide emission reduction targets by 2020.

Overview of current statutory powers of the Assembly

Energy policy in the United Kingdom is predominantly a non-devolved matter. The Department of Trade and Industry is responsible for energy consents under Section 36 of the *Electricity Act*^v for proposed generating stations which are in excess of 50 megawatts. Where a generating station produces 50 megawatts or less, it is a matter for the Welsh Assembly Government and the local planning authorities. Although the National Assembly is consulted by the DTI on proposals for power stations in excess of 50 megawatts, it plays no formal part in the decision-making process.

Forthcoming EU and UK primary legislation

A draft Climate Change Bill was published in March 2007

A White Paper on Energy is expected to be published by May 2007

EU Policy

The Commission published its Green Paper, *A European Strategy for Sustainable, Competitive and Secure Energy*^{vi} on 8 March 2006. The Green paper identified six key areas where action is necessary to address the challenges of the European energy sector, namely; internal competitiveness; diversification of the energy mix; solidarity; sustainability; innovation, and; external policy.

On 10 January 2007, the European Commission adopted its first major package of proposals on energy policy as requested by Members States. The key objectives are sustainability, competitiveness and security of supply. The Commissions package of proposals included the following:

- A renewable energy road map - including an overall target for 2020.
- A communication on sustainable power generation from fossil fuels - to stimulate the development of clean coal technology.
- A communication on nuclear energy - reflecting the future of nuclear energy in the EU.
- Towards a Strategic Energy Technology Plan - a discussion paper preparing the way for the introduction of the plan later in the year.

At the March 2007 European Council, heads of state agreed to reduce greenhouse gas emissions by 20% (on 1990 levels) by 2020 and to produce a fifth of its energy via renewable sources by the same date.

Key Assembly Government strategy documents and action plans from the Second Assembly:

- The *Energy Wales Route Map Consultation (2005)* was launched on 20 June 2005, and set out the Assembly Government's vision with regard to the future of energy production in Wales.
- The *Energy Efficiency Action Plan: Energy Saving Wales Consultation (2004)* proposed to 'address Wales' commitment to effective energy efficiency measures without compromising economic ambitions or loss of amenity'.
- The *Sustainable Development Action Plan (2004)*^{vii} set out the Assembly Government's plans to implement the commitments laid out in the Sustainable Development Scheme, *Starting to Live Differently*^{viii}.

Legacy issues from the Second Assembly

The Enterprise, Innovation and Networks (EIN) Committee agreed that its successor may wish to consider the following items in relation to energy policy in Wales:

- Monitoring the progress of the Energy Route Map action plan.
- Monitoring the development of clean coal technologies.
- Scrutiny of the Strategic European Energy Review and the accompanying package on issues such as renewable energies, clean coal and nuclear energy and its follow up.

The Environment, Planning and Countryside (EPC) Committee include the following energy-related issues in their legacy paper:

- Scrutiny of the Welsh Assembly Government's performance on climate change.
- Conduct a fuller inquiry into the potential of biofuels.
- Scrutiny of the Commission's White Paper "Towards a European Climate Change Adaptation Programme";
- Scrutiny of the Commission's Green Paper on Post-2012 Climate Change;
- Scrutiny of the Commission's Action Plan on Sustainable Consumption and Production;

Useful links

European Commission: *Energy for a Changing World: An Energy Policy for Europe*:

http://ec.europa.eu/energy/energy_policy/doc/2007_03_02_energy_leaflet_en.pdf

European Commission: Energy Homepage:

http://ec.europa.eu/energy/index_en.html

National Assembly Sustainable Energy Group:

<http://www.naseg.co.uk/presentations.htm>

Department of Trade and Industry: Energy Homepage:

<http://www.dti.gov.uk/energy/index.html>

UK Energy in Brief (July 2006):

<http://www.dti.gov.uk/files/file32387.pdf>

Further information

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ⁱ Department of Trade and Industry, Energy Trends: Production (March 2007): www.dti.gov.uk/energytrends

ⁱⁱ Ibid

ⁱⁱⁱ 1TW = 1000 GW = 1,000,000 MW = 1,000,000,000 kW = 1,000,000,000,000 W

^{iv} Assembly Government, [Energy Wales: Route Map, Clean, Low-carbon and Competitive Energy for Wales \(2005\)](#)

^v The *Electricity Act (1989)* can be accessed online [here](#)

^{vi} European Commission, [A European strategy for sustainable, competitive and secure energy \(2006\)](#)

^{vii} Assembly Government, [Sustainable Development Action Plan \(2004\)](#)

^{viii} Assembly Government, [Starting To Live Differently](#)