

# Profiles

## Coal in an enlarged European Union

'Accession countries will boost EU reserves from ~72 Gt to >100 Gt'

In May 2004, the fifteen countries making up the existing European Union (EU 15) were joined by a further ten *Accession Countries*, resulting in an EU comprising twenty five Member States. The Accession Countries comprised Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. A number of these, primarily Poland, the Czech Republic and to a lesser degree, Hungary, produce and consume considerable quantities of hard coal and/or lignite and their incorporation into the EU will have a significant impact on overall EU coal reserves, as well as on patterns of production and

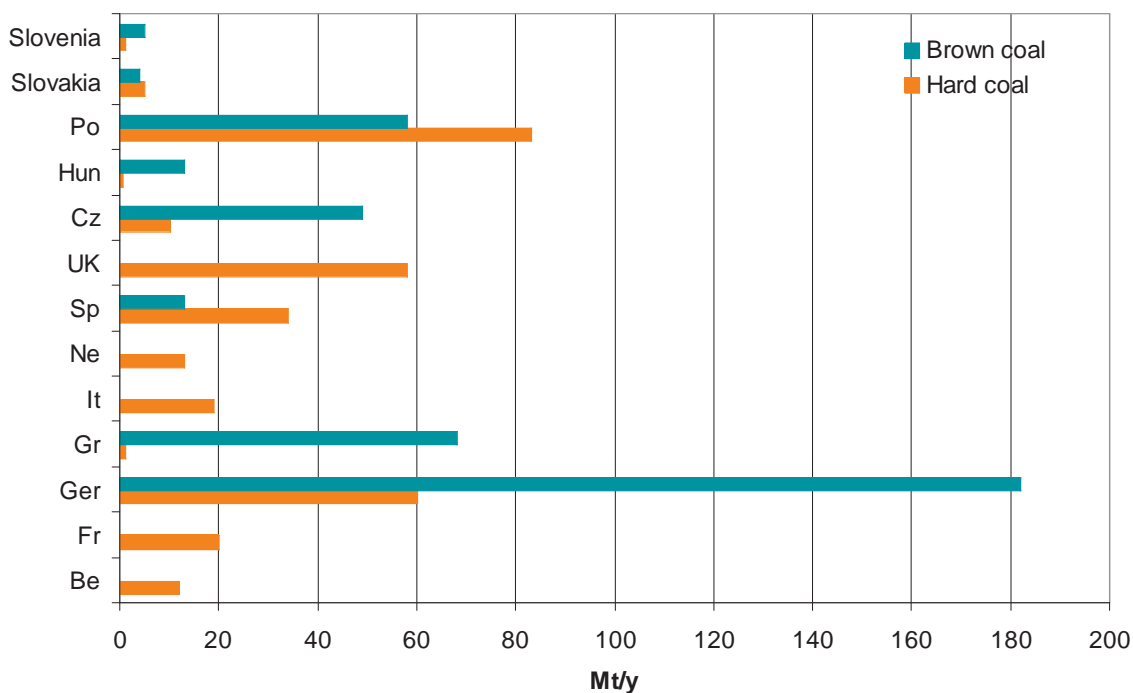
'The enlarged EU will produce more than 400 Mt/y of brown coal'

consumption. In terms of *coal reserves*, the addition of those of the Accession Countries will boost EU reserves from the present level of ~72 Gt to >100 Gt, an increase of over 40%, these now comprising >10% of the world total.

Although overall EU *coal production* from indigenous sources has been in decline for some years, significant quantities are still produced by some countries. Within the EU 15, hard coal continues to be produced mainly by Germany, the UK and Spain (~29, 30 and 10 Mt/y respectively), as well as by several of the Accession Countries, predominantly the Czech

'Coal will continue to play a major role in the provision of energy for many EU countries'

Republic and Poland (~15 and 103 Mt/y). Thus, overall, ~188 Mt/y of hard coal will be produced by the enlarged EU. Similarly, large quantities of brown coal/lignite are also generated. Within the EU 15, production remains centred predominantly in Germany, Greece and Spain, who between them, produce nearly 264 Mt/y. In addition, a number of the Accession Countries (the Czech Republic, Hungary, Poland, Slovakia and Slovenia) also produce annually between them over 141 Mt. Thus for the enlarged EU, annual production of brown coal/lignite stands at over 405 Mt. Even though EU coal production has fallen for some years,



Major EU coal consumers in 2002

incorporation of coal and lignite from the new Member States will increase significantly the overall output from the enlarged EU.

For some time, overall *coal consumption* within the EU has also been declining although in recent years, the EU 15 Member States have consumed annually ~245 Mt of hard coal plus 265 Mt of lignite. During the same period, the Accession Countries consumed 99 Mt/y of hard coal and 140 Mt/y lignite. Thus, annual consumption for the enlarged EU will be ~750 Mt/y. These figures help to confirm that coal continues, and will continue, to play a major role in the provision of energy for many countries, predominantly in their respective power generation sectors. Of the 25 states that now comprise the enlarged EU, to varying degrees, 24 rely on coal to meet a proportion of their energy requirements. The figure presents consumption for the larger EU coal users.

Much of the energy policy of individual countries, either in place or being drafted, reflects the on-going importance attached to the continuing use of coal. As the most abundant fossil fuel, it has global reserves far in excess of other fossil fuels, with significant proven deposits in over 50 countries. In many Member States, coal's stable cost and widespread availability are viewed widely as playing a crucial role in:

- Contributing towards the security of the national energy supply;
- Minimising dependency on imported energy sources;
- Impacting positively in national trading balance;
- Providing a stabilising effect on electricity prices;
- Supporting employment in national mining and power generation industries;
- Providing opportunities for co-utilisation with biomass and waste feedstocks.

Thus, coal is viewed frequently as forming an affordable, easily obtainable, secure supply of energy and even where its overall contribution in the national energy balance may be modest, there are usually measures in place in order to maintain this contribution, often as part of a portfolio of energy resources. Policy measures within many of the EU's Member States look set to ensure that coal will continue to fulfil an important role as an energy provider for the foreseeable

future with, post-accession, it's relative importance growing in the enlarged EU.

The present report examines developments taking place within the EU through examination of general trends occurring in coal production and consumption, coupled with a series of in-depth case studies examining the major coal-using countries within the EU 15 and Accession Countries. Hence, individual studies are presented for Belgium, France, Germany, Greece, Italy, The Netherlands, Spain, the United Kingdom, the Czech Republic, Estonia, Hungary, Poland, and Slovakia. Countries were selected on the basis of an annual coal consumption of ~10 Mt or more.

Analysis of the responses from respective national energy authorities confirms that for some years, coal looks set to remain an important component of the energy mix of many EU 15 States and Accession Countries. Despite competition from other fuels such as natural gas, nearly all countries comprising the enlarged EU rely to some extent on the use of coal and many expect its use to continue, particularly for power generation purposes. Although in some cases, national industrial sectors will also continue to consume significant quantities of coal, generally, it is in the area of power generation that coal's major markets will lie in the future.

On a national basis, the overall level of coal used by an individual Member State will vary and be decided by a combination of commercial, environmental and legislative factors. However, respective national energy policy will play an important role although in some cases, this is still being formulated.

Each issue of *Profiles* is based on a detailed study undertaken by IEA Clean Coal Centre, the full report of which is available separately. This particular issue of *Profiles* is based on the report:

### **Coal in an enlarged European Union**

Stephen Mills  
CCC/85, ISBN 92-9029-400-4, 96 pp,  
May 2004, £255\*/£85†/£42.50‡

- \* non-member countries
- † member countries
- ‡ educational establishments within member countries

IEA Clean Coal Centre is a collaborative project of member countries of the International Energy Agency (IEA) to provide information about and analysis of coal technology, supply and use.

IEA Clean Coal Centre has contracting parties and sponsors from: Australia, Austria, Canada, Denmark, the European Union, India, Italy, Japan, the Netherlands, New Zealand, South Africa, Sweden, the UK and the USA.



Gemini House  
10-18 Putney Hill  
London SW15 6AA  
United Kingdom

**Tel:** +44 (0)20 8780 2111

**Fax:** +44 (0)20 8780 1746

**e-mail:** [mail@iea-coal.org.uk](mailto:mail@iea-coal.org.uk)

**Internet:** [www.iea-coal.org.uk](http://www.iea-coal.org.uk)