

## **PIU Energy Review**

### **Comments on Coal - Initial Scoping Note**

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#### **Introduction**

UK policy towards coal over recent years, including the 1993 and 1998 Reviews, has tended to confuse and conflate two issues:

- The extent to which coal as a fuel, and sourced from anywhere, should remain an element in our energy mix, particularly on grounds of security and diversity
- Policy towards UK coal production.

In my view it is important to try to separate out these two issues. The Initial Scoping Note, while covering all the major points, still fails to distinguish them sufficiently. It might be helpful, in subsequent analysis, to bring together the key policy questions relevant to each of the two issues.

#### **History and Background**

##### Paragraph 9

It is true that since coal imports began to take a significant share of the UK coal market in the late 1970's, most of the tonnage imported was of coking coal. However, in recent years the volume of coking coal imports has been exceeded by that of steam coal. Coking coal imports have been stable for many years at about 8 m tonnes. In the year 2000, steam coal imports (mostly for power station use) were close to 15 m tonnes. In 2001, on current trends, steam coal imports will be substantially in excess of 20 m tonnes. For the first time ever, total coal imports into the UK this year are likely to exceed UK coal production.

##### Paragraph 13

As the Note implies, the long-term trend in coal prices has been downwards, but superimposed upon this trend is a distinct price cycle. Prices can change rapidly: even since the Note was written, prices CIF at UK ports have fallen back to around 105 p/GJ, having been as high as 120 p/GJ earlier this year. As coal is traded in US dollars, exchange rate volatility has an important influence on prices. This not only relates to prices paid by consumers. It also fundamentally affects the economics of coal production e.g. Australian producers have been able to prosper and expand because of the devaluation of the Australian dollar against the US dollar.

## Paragraph 16

The Note refers to coal plant fitted with FGD, with 6000 MW fitted (Drax and Ratcliffe), and a further 2000 MW currently being installed (West Burton). British Energy has recently announced that they will install FGD on 1000 MW at Eggborough. Consideration is being given by other companies to further retrofitting (e.g. at Ferrybridge, Cottam, Rugeley, Longannet). The economics of retrofitting FGD are now much more favourable than at the time of the 1998 Review, with higher gas prices and apparently much reduced capital costs of FGD.

For a long time it was felt that the lack of plant fitted with FGD was a severe impediment to the long-term consumption of UK-mined coal. It now seems that this will not be the case.

## Prospects

### Paragraph 24

There may be a small residual link between oil and coal prices, in that high oil prices can lead to coal-for-oil substitution in some countries (very little in the UK). In addition, coal may be subject to some influence from the prevailing level of energy prices. But the main link between oil and coal prices was broken as far back as the 1980's, and an examination of price trends since then would show little if any correlation between prices of the two fuels. The expansion of world coal production since the 1980s, and a highly diversified ownership, led to coal prices being determined overwhelmingly by coal-on-coal competition. Despite recent consolidation of ownership, this is likely to remain the case.

### Questions

1. With competition between coal companies, and prospects for expansion in many coal producing countries, it seems likely that coal prices (CIF at major European ports) for the foreseeable future will remain at most times in the range \$35 to 40 per tonne (140-160 US cents/GJ). The price in pence/GJ will depend on the exchange rate. At an exchange rate of \$1.45/£, this is equivalent to 97-110 p/GJ. There will always be times when prices will move temporarily out of this range, but these are likely to be short-lived.
2. In general, there is little link between oil and coal prices.

## Coal fired Electricity Generation

### Paragraph 29

### Questions

1. DTI projections have consistently underestimated the level of coal fired generation, which has in fact increased significantly over the past two years. A level of coal fired generation towards the top end of the DTI range has a higher probability than the bottom end.

2. This is really a matter for the generating companies, but it does seem that generating sets can and do last much longer than their stated lifetimes. Amongst the biggest threat to plant lifetimes would be the requirement to install expensive NOx abatement technology (SCR).
3. With 9000 MW of FGD plant installed, under construction or firmly planned, and consideration being given to other plant, the eventual total is likely to be in the range 11000 - 13000 MW.
4. It is most unlikely that generators will build new coal plant in present circumstances. But this is just one aspect of the much wider problem of investment in new plant more generally.

## **UK Coal Production**

### Paragraph 31/Questions

Since the 1998 Review, output has fallen more rapidly than envisaged, with deepmined production in 2000 at 17.6 mt, and likely to be similar in 2001. It may be possible to reverse this trend to a limited extent (and both UK Coal and Mining Scotland are seeking to do so). However, there will also be progressive exhaustion of reserves at a number of collieries. The UK coal mining industry is a mature one, with more limited scope for productivity improvements than elsewhere (e.g. USA, Australia) and no real prospects of investment in new deepmined capacity other than through accessing reserves adjacent to existing mines.

It may be that production from existing deep mines could recover to 19-20 mt in 2002, but from about 2005 the level is likely to reduce to under 15 mt. Production of 10 mt/year from 2010 to 2020 remains plausible, but subject to increasing risk.

Opencast (surface mining) production has fallen from over 16 mt/year in the mid-1990's, to about 13.5 mt/year now. Given appropriate planning policies, which strike a sensible balance between environmental protection and the desirability of utilising this low-cost energy resource, output could remain at present levels - though the absence of this balance is likely to cause output to fall further.

### Paragraph 32

The lack of FGD plant has been a factor affecting the future ability of generators to burn UK coal. As mentioned above, this impediment may now be largely removed.

## **Coal and security of supply**

### Paragraph 34

It is not only ease of storage of coal that could justify retaining some role in the energy mix. The ability to storage on a large scale does however distinguish coal from gas, and it is this that has enabled coal fired generation

to pick up rapidly over the past two years in response to higher gas prices and lower nuclear generation. Coal does provide a reliable and flexible option. The suggestion (in the third question) that coal plant might be kept in reserve just for occasional use is probably not practicable.

#### Paragraph 36

The sources of coal are even more diverse than stated here, as Colombia, Venezuela and Russia are also major exporters. There is minimal risk of an OPEC-type cartel emerging.

#### Paragraph 37

The consolidation of ownership that has occurred over recent years appears to have led to a degree of greater "discipline" in the market place. Nevertheless there remains a large number of coal producing companies, large and small. It is unlikely that the major producers would either wish or be able to sustain prices at an artificially high level. Coal mines operate at their most efficient by maximising output, and at any time producers will seek to clear their output, putting downward pressure on prices.

#### Paragraph 38

The massive increase in coal imports over the past two years (from 20.8 mt in 1999 to a projected figure of over 30 mt in 2001) has shown UK port capacity to be beyond previous expectations. There still remains some spare capacity, and it may be that facilities currently used by Corus will become available on a greater scale for steam coal imports. There is one project for a further major import terminal on the East Coast (convenient for most power stations) which could be activated with a relatively short lead-time.

A greater concern is the ability of the rail system to handle the volume of coal required to be transported. This applies to both UK coal and imports, but may have a greater effect on imports, as they tend to travel over longer distances than UK coal. To some extent, this is related to the general national railway problems. But there are also potential conflicts between capacity and priority for freight and passenger traffic, which may adversely affect future coal movements.

#### Paragraph 39

The advantages listed in this paragraph are all real, though the extent to which (if at all) coal users recognise these benefits in the price is unclear. Practice differs between purchasers, and also depends on the nature of the supplying company. At times of low international prices, large UK coal producers have sometimes been able to command a price premium, which may have been justified in part (but not exclusively) by these advantages. At times of higher international prices (such as in late 2000/early 2001) any such premium disappears.

Small UK producers, on the other hand, frequently suffer a price penalty because of their perceived unreliability or the disproportionate effort said to be involved in dealing with them.

In a competitive market, with a variety of purchasers, with UK coal competing with imports from various sources, and where UK output is unable to meet anything like the total market, it does not in general seem appropriate for there to be Government intervention in price negotiation.

### **Cleaner Coal**

It is important that the conclusions of the DTI review of cleaner coal technology are fully considered by and incorporated into the Energy Review.

### **Policy**

As stated in the Introduction to these comments, it would be helpful to bring together the public policy issues under two headings. Examples of matters that might be considered include the following:

#### **Should Coal (sourced from anywhere) remain an element in the energy mix?**

- Coal's contribution to diversity and security, and to reducing the overall cost of electricity generation
- Issues surrounding investment in coal fired generation (a particular case of the overall issue of investment in energy production)
- Costing the environmental disbenefits of coal usage
- Development of clean, more efficient coal generation (being reviewed by the DTI)
- Public policy issues surrounding impediments to inland coal transport

#### **Policy towards UK mined coal**

- Should there be explicit policy towards the development of UK coal reserves? On what grounds?
- The case for supporting investment in UK mines
- Possible support at times of particular price weakness (as in the present subsidy scheme) to preserve UK mining capacity.

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