PIU Project on Energy Policy - Coal

Response by London Electricity plc

These are comments by London Electricity plc (LE) on the paper **Coal – Initial Scoping Note** posted on the PIU website in August.

Our approach to reviewing this subject has been to focus on a number of high level issues, and does not necessarily follow the sequence of the propositions, questions and comments in the note.

Summary

Key issues are:

- Existing coal plant is a major contributor to existing generation security, with low fuel volatility risk.

- Emission abatement technology is being progressively employed. Future requirements call for pro-active Government management.

- Economics of coal fired generation are viable but bear high revenue risks.

Our approach to this subject has been to consider coal fired electricity generation under three distinct headings, namely, Security, Environment and Economic. Clearly, there are areas of strong inter-relationship between these.

1. Security

Availability

Coal fired electricity generation currently accounts for around one third of generation in the UK and around 40% of the gross registered capacity of installed plant.

Flexibility

Historically coal plant operated at base load, but in recent years, and in particular since NETA, coal plant has operated flexibly, with many stations operating a combination of base load and two-shifting.

The flexibility of coal plant makes it an ideal complement to intermittent forms of generation such as wind and some hydro-generation, and is thus an important contributor to the success of the UK's renewable generation requirements.

Durability

UK coal fired electricity plant is highly durable; employing well-established technology, originally designed and installed to offer high

technical margins. With on-going maintenance, such plant can run efficiently and reliably for many years after the original design life of around 30 years.

Indeed, the current move by many large coal stations to fit FGD to meet on-going environmental requirements suggests that coal station owners believe that such plant has at least a further 20 years of economic life.

Fuel

Coal fired electricity generation in the UK has historically used UK mined coal. The level of UK deep-mined coal extraction has fallen dramatically over the last 20 years or so, from well over 100mte per annum to around 20mte per annum currently. While this level should be sustainable over the next 10 years, thereafter it is set to decline to around 10mte by 2020. The reduction in UK mined coal is already being offset by readily available supplies of imported coal, which offer lower sulphur content and are often more competitively priced.

The logistics of transporting coal are flexible and diverse, offering relatively unconstrained supplies by ship, rail and road.

A major advantage of coal is that it can be stockpiled easily. Many stations have the capability to store 6-12 months' generation requirement, some even more.

2. **Environment**

Emission abatement technologies have already been implemented to control and reduce substantially the levels of particulates, sulphur and oxides of nitrogen in UK coal fired electricity generation.

At present flue gas de-sulphurisation (FGD) is operational at a number of UK plants and is being planned for a significant number of other plants. This will make a major contribution to controlling future sulphur emissions within the new Large Scale Combustion Directive (LCPD).

There is a need for Government to manage the application of future NO_x emission limits under the LCPD to enable coal fired electricity generation to be viable.

Carbon dioxide emissions are likely to require managing nationally through a trading mechanism.

3. **Economic**

The current and forecast economics of coal fired electricity generation are supportive of on-going operation and maintenance of coal plant, as well as additional investment in certain environmental abatement technologies such as FGD.

There are however high revenue risks associated with such substantial investments, requiring long term payback. In particular, it is not yet clear that the reliable and flexible capability of coal generation is rewarded under NETA.

Government should ensure that future application of environmental legislation to meet national obligations is achievable without creating risk of plant capacity withdrawal, due to unacceptable increases in cost to plant owners, whilst at the same time avoiding the risk of making electricity costs to consumers rise disproportionately.

Taking account of current and forecast economic factors, it is unlikely that technology currently available would be used for new-build coal fired electricity generation plant. Thus, it is important that we maintain the viability of our existing coal plant as part of the UK's strategy to ensure an economic and secure electricity supply.

London Electricity
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