ELECTRICITY MARKET REFORM

RESPONSE FROM EGGBOROUGH POWER LIMITED

Introduction

Eggborough Power Limited (EPL) is an independent generator which owns and operates Eggborough Power Station (EPS) , a 2000 MW Coal Fired Power station situated in the Aire Valley in North Yorkshire. EPS was previously owned and operated by British Energy (and latterly EDF) to provide flexible and reliable mid merit support to the "baseload" nuclear portfolio. EPL is now owned by two substantial private shareholders, SVP and Bluebay and is operating as an essentially merchant power plant in the wholesale market.

Our aim in responding to this consultation is not to answer every question posed but to provide a short and objective comment on we believe the Government's preferred package of reforms will affect the market, the unintended consequences that might be created and how best these might be mitigated.

Context

There is a reasonable consensus that the power sector will be decarbonised by the progressive deployment of renewable energy, largely from wind farms, nuclear power and the capture and storage of carbon from fossil fired generation. Wind power is intermittent and nuclear generation is effectively inflexible. So, in the absence of large scale storage and flexible demand response, flexible conventional plant will be needed on the system. Yet there is a risk that the proposed market reforms will remove such plant from the system.

As the document on Electricity Market Reform points out, over 19GW of nuclear, oil, coal and gas plant is scheduled to close over the coming decade as stations reach the end of their design lives and EU environmental legislation imposes stricter limits on emissions. De-rated capacity margins are expected to reduce in the latter part of the decade from some 20% to below 10%. It is important that policy does not reduce this further.

But security of supply is not just a peak capacity issue. With large amounts of wind on the system, it is a flexibility issue. Analysis by Birmingham University suggests that by 2020, the most extreme hour-to-hour change in demand net of wind output could be as much as 17GW, which is a significant increase from the maximum variation of 5GW in 2009.

Yet subsidies for intermittent wind, and inflexible nuclear and CCS plant, will mean that the wholesale electricity price will be low and unpredictably spiky and that conventional gas and coal plant will have to try to survive on reduced running hours and reduced wholesale prices. Analysis by Redpoint suggests that load factors for 'new CCGTs' are likely to fall to 55% from around 75% at present and, for 'Old CCGTs', to below 5% from 25%.

Any measure which further reduces margins for existing coal and gas fired plant is therefore likely to reduce the capacity margins and the flexibility necessary to maintain security of supply as we make the transition to a low carbon power sector.

Eggborough Power Ltd | Eggborough Power Station | Goole | East Yorkshire | DN14 0BS
t: +44 (0) 1977 782500 f: +44 (0) 1977 782501 w: www.eggboroughpower.co.uk
Registered Office: Eggborough Power Station | Goole | East Yorkshire | DN14 0BS | Registered in England and Wales No. 3782700

This is an immediate issue because most of the conventional plant on the system is facing a decision, to be taken this year, on whether to invest in further emission reduction technology.

Response to the Consultation

Against this background, the key points to make on the proposed package of reforms are

Carbon Price Floor (CPF)

- The proposed CPF, which is in fact a surcharge on top of the ETS price, will accelerate the closure of existing conventional plant.
- Yet it will not affect decisions to invest by low carbon generators because they will be offered Contracts for Differences (CFDs) which will make them indifferent to the level of the ETS price and to the CPF.
- Nor will a CPF lead to any reduction in carbon emissions from the EU power sector since these are capped by the EU ETS.
- It will create windfall gains for existing nuclear and renewable plant and raise prices to consumers.
- While the CPF may raise tax revenue, and reduce the public spending effects of the CFDs, it will only do so by creating all the perverse and unintended effects noted above.
- So, if a CPF is to be introduced, the perverse effects should be mitigated by introducing the CPF from the point at which new nuclear plant is likely to be commissioned – say, 2020 - and by making it a genuine "floor" by targeting a combined CPF+ETS price at the bottom end of the range of private sector projections of the ETS price.

Contracts for Differences (CFDs)

- To the extent that these accelerate the deployment of wind and nuclear power, they will reduce the average wholesale price and the load factors of conventional plant, accelerating its closure.
- It is important that the incentive regime offers conventional plant the possibility to reduce its carbon emissions while remaining on the system. For existing coal plant, a sufficiently generous CFD for conversion to dedicated biomass would help to achieve this. And, from 2013 to 2017, a sufficiently generous ROC band should be set to achieve the same end. In both cases, the incentive regime, whether ROCs or CFDs, should allow for the conversion of individual units of a power station to dedicated biomass operation, and should not be limited to the conversion of the whole station. The incentive regime should also take account of the costs of establishing sustainable biomass supply chains.
- A Contract for Differences requires a transparent and effective wholesale price against which to strike the "differences". This requires a properly transparent and liquid wholesale market. The Electricity Pool introduced in 1990 provided such a liquid market because all generators were required to sell into the Pool. The current market is not sufficiently liquid to provide

a secure base for striking CFDs on the scale proposed. Measures to improve the liquidity of the market are therefore an urgent necessity.

Emissions Performance Standard (EPS)

- While the Government has said that it does not intend to apply an EPS to existing plant, the introduction of an EPS creates that possibility and so creates uncertainty in the market.

- An EPS is unnecessary if the aim is to regulate power sector emissions. EU power sector emissions are capped by the EU ETS and a unilateral UK cap, applied at the station level, is an unnecessary and bureaucratic piece of red tape which will have no effect on EU emissions. The proposal should be dropped.

Capacity Mechanisms

- The effect of the rest of the package will be to accelerate the closure of flexible conventional plant. Yet such plant will be needed as the UK makes the transition to a decarbonised power sector. Climate change policies will not command public support if there are widespread interruptions to supply.

- So the Government is right to propose the introduction of capacity payments. We also understand why the Government has proposed a targeted payment. Consumers should not be asked to pay more than they must for security of supply.

- Unfortunately a targeted payment is unlikely to deliver security of supply.

- First, the capacity problem is not just about meeting peak demand. It is also about having enough flexible conventional plant on the system to meet potential hour to hour swings in demand net of wind output of perhaps some 15 to 20 GW. If flexible conventional plant does not qualify for the capacity payment, there is a serious risk that it will not be profitable because it will only be running at low load factors. Running at low load factors and flexing output to match demand not only reduces revenue, it also increases costs.

- Second, if a targeted capacity payment is used to create a strategic reserve of spare capacity, there is a serious risk that peak prices will be reduced, so reducing further the profitability of flexible back up plant and increasing the risk of its early closure. To avoid this, the capacity payment would have to be extended to more and more plant.

- These are arguments for introducing a capacity payment available to all from the outset so that the transition to a low carbon future does not jeopardise security of supply.

- Because of these arguments, the Independent Generators Group has commissioned an expert study of the options for capacity payments. EPL believes that this study should be considered carefully by DECC and HM Treasury, and discussed with the IGG, before any final decisions are made on capacity payments.

Conclusions

In summary, EPL believes

- If a CPF is to be introduced, the perverse effects should be mitigated by introducing it from the point at which new nuclear plant is likely to be commissioned – say, 2020 - and by making it a genuine "floor" by targeting a combined CPF+ETS price at the bottom end of the range of private sector projections of the ETS price.

- It is important that the incentive regime offers conventional plant the possibility to reduce its carbon emissions while remaining on the system. For existing coal plant, a sufficiently generous ROC band or CFD for conversion to dedicated biomass would help to achieve this. Such an incentive should be available for conversion of individual units of a station to dedicated biomass operation, not just for conversion of the whole station.

- Measures to improve the liquidity of the market are an urgent necessity. Without them, the implementation of CFDs will be fraught with difficulty.

- An EPS is an unnecessary piece of red tape.

- A targeted system of capacity payments is unlikely to ensure security of supply. The IGG's expert study of capacity payment options should be considered carefully by DECC and HM Treasury, and discussed with the IGG, before any final decisions.

Eggborough Power Limited
March 2011