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03 Low Carbon

Electricity Market Reform Briefing Paper
November 2012

The third in our series of briefing papers will summarise some of the current issues and progress around Electricity Market Reform (EMR) and will focus on some of the key issues around delivering low carbon generation, including carbon floor price; emission performance standards; and de-carbonising the energy industry

Timeline to Date

- The Chancellor announced in the Budget 2011 the introduction of a carbon floor price from 1 April 2013
- The UK Government are still considering an Emissions Performance Standard (EPS) set at the equivalent of 450g CO2/KWh for plant running at base load to limit emissions

Would a carbon floor price create a glass ceiling for UK Business?

In contrast to the current EU Carbon Reduction Commitment scheme, which has a fluctuating price of emissions, the Government's proposed carbon floor price would ensure that UK companies were paying a minimum price (green "tax") for the carbon they produce. The UK Government believe that by introducing a floor price it will encourage companies to use energy more efficiently and introduce new low carbon technology.

The Government's plan to set the carbon floor price from April 2013 was hit with a significant blow earlier this year when the Climate Change Select Committee published their report stating that a floor price would push up energy costs and disadvantage UK companies against their competitors in Europe.

Analysts have indicated that in order for a floor price to really affect how UK businesses operate the price per tonne of carbon would require being set somewhere above £20. The current EU level is nearer £5.50. The UK Government's proposed floor price of £16 per tonne, although significantly higher than the current EU level is, according to market analysts, unlikely to achieve the desired effect on business behaviour. If the proposed plans go ahead it is believed that we are likely to see around a 5% increase in wholesale energy prices in the UK as a result.

Instead of achieving low carbon displacement development, it may be that the proposed carbon floor price encourages a lower carbon "dash to gas" as energy generation from coal becomes unprofitable. Burning gas emits about half as much carbon as burning coal, so a switch of this nature would, to some extent, have a significant effect on emissions. However, this would be a 'stop-gap' measure as new gas power stations will need to be carbon capture ready and consider heat off-take if viable but would slow the rate of carbon emissions rather than create a holistic strategy by UK PLCs to work towards a viable long term low carbon economy. Dislocating economic growth from energy consumption and carbon emissions is a "holy grail" but until this is found, policy makers need to recognise that green taxes pay for much of the UK renewable investment. Taxes come from economic growth and investment and this requires the right energy tax environment.

A floor price is likely to have a positive effect on emissions, although is it the correct method of achieving the UK's long term low carbon goals? The risk is that by adopting a unilateral policy, the UK will isolate itself from Europe, increasing wholesale energy costs and becoming less competitive and less a desirable location for investment.

Will the proposed EPS further encouraging a 'Dash for Gas'?

The UK Government's proposals to set an Emissions Performance Standard is set to prevent new coal-fired power stations being built but would back gas-fired power until 2045. This has resulted in further fears that Government policy will encourage a stop-gap 'dash to gas' rather than encouraging long term low carbon planning in the UK. Many expect the latest measures to displace investment in carbon free / renewable technologies and instead invest in technology relating to fracking for shale gas. Many fear this will lead to increased energy prices and a major barrier blocking the long term provision of affordable renewable energy in the UK.

The Government intends to set the EPS for new power plants at 450g of CO2 per kilowatt hour. If consented under the current level the plant would be allowed to continue to emit at that level up to 2045 despite the fact that the Committee on Climate Change has recommended that in order for the UK to meet its wider emission targets this should be reduced to around 50g of CO2 per kilowatt hour by 2030. Existing plants will continue to be regulated under the existing Large Combustion Plant Directive (LCPD), with those opting out of that Directive being required to close by 2015.

Existing plants which wish to extend their operating life, or make significant upgrades will be required to meet the new EPS after such upgrades are completed. The EPS would effectively "ban" the construction of new coal-fired plants without a carbon capture and storage (CCS) facility, however, new gas-fired power plants will generally meet the EPS without the need for CCS technology. Clear proven commercial large-scale CCS is not yet in serial production. Therefore, developing new gas/coal power stations that are CCS "ready" may result in future problems.

DECC have however indicated that the proposed EPS is merely a "backstop measure" and that other instruments within the EMR (including the carbon floor price) will encourage a move away from fossil fuels towards a mixed portfolio of renewables, nuclear and CCS. It would appear that the main aim of EPS is to ensure that all coal-fired power stations adopt CCS. This seems to fit in line with the Scottish Government's recent announcement that all Scottish coal-fired power stations will be fully equipped with CCS technology by 2025 although, given that only 2 coal-fired power stations remain in operation in Scotland, this target is unlikely to have considerable effect. Especially given that Longannet is unlikely to remain in operation after 2020 and Cockenzie must close by the end of 2015 under the LCPD.

Conclusion

It is unclear whether either the carbon floor price or EPS on their own are likely to encourage a real move towards a long term low carbon economy. It would appear that both are more likely to encourage short term measures relating to gas. Such a move could see a sharp increase in wholesale energy prices and disadvantage the UK against its European neighbours. However, as part of the wider EMR the Government are confident that the measures will encourage a move away from fossil fuels towards a more balanced portfolio of energy generation which should provide a sustainable supply of affordable renewable energy in the UK.

There is a requirement for a stable long term environment (across numerous Government terms) to be created with decisions taking into account the lead time for creating new generating capacity. The reality is that energy prices must materially increase to drive the necessary market and Government interventions which will radically affect emission levels. Incentives are of course necessary to drive change, and the sooner these are developed the better, however a unilateral approach by the UK that does not adequately balance the "carrots with the sticks" may adversely affect energy consumption and costs and consequently have an adverse impact on economic growth.

If you require advice on any of the matters raised in this paper, please get in touch with any of our lawyers listed below, who have been focusing on keeping updated on EMR developments, or your usual Shepherd and Wedderburn contact.

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