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Re: DECC's Consultation on Electricity Market Reform

Thank you for the opportunity to respond to the above consultation.

The Gas Forum was established in 1994, acting as a body that represents the views of Gas Shippers and Suppliers active in the GB Market. The Forum now counts among its membership virtually every significant GB gas shipper and gas supplier. Its members are Centrica, BP, Total, Shell, E.ON, npower, EDF Energy, BG Group, Scottish Power, Statoil, Corona Energy, ExxonMobil and GDFSuez.

The Gas Forum has a significant interest in seeing competitive energy market arrangements continue to develop in the UK, building on the market arrangements that exist today, in order to allow gas to take its rightful place as a fuel of choice in a low carbon economy. While the Electricity Market Reforms (EMR) document has significant impacts on our colleagues in the electricity market, a number of the policies outlined are likely to have consequential impacts on the GB gas market.

The Forum firmly believes that the GB gas market is a well functioning market, built over years, to create a competitive environment that has delivered secure gas supplies at competitive prices to consumers. However, its development was against a very different background of electricity market operation to that envisaged by the EMR proposals. The market has successfully delivered significant new investments and has maintained secure supplies over periods with significantly high demand, most recently this winter.

The Future Role of Gas

We appreciate and support the Government's desire to move the UK to low carbon electricity market and we believe that gas has a fundamental role to play in this process. As the older coal plant closes and new gas plant fills the gap, the UK will cut the carbon emissions from the electricity sector. Gas fired generation is the lowest carbon emitter out of all the fossil fuels, and it is also a reliable technology with relatively low capital costs, that

can be built relatively quickly. The Government is also right to identify that gas fired generation can be more flexible than many technologies and is controllable unlike wind farms. Clean coal and new nuclear may well form part of the generation mix in future, but gas generation will also be vital in delivering diverse, secure electricity supplies as well as heating homes and offices.

As well as the role of the gas market in helping to deliver efficient, secure electricity supplies, the gas market must continue to deliver secure and affordable gas supplies for all the GB gas customers. The Forum expects that the GB gas network will also be important in delivering bio-gas to consumers, including generators, along with conventional gas supplies in the future. The Forum is working with other market participants (National Grid, green gas producers, etc.) to develop a gas market that facilitates green gas accessing the market along with other sources, on an equal footing. While at an early stage in development, the role of green gas is important for a low carbon future and the Forum members will continue to support initiatives aimed at developing market codes to help increase the amount of bio-gas in the UK.

EMR Gas Impacts

The Forum's main concern with the EMR proposals is that there is no explicit recognition of the consequences of the electricity policies' impact on the gas market. In a GB power market with significant amounts of green generation, notably intermittent generation, we agree with Government that there is an increasing need for back up generation. This is reflected in the Government's consultation on the possible need for an electricity capacity mechanism.

In order to meet the Government's renewables targets the capacity required for "peaking" is larger than that seen today. The requirement for an increased capacity margin is further enhanced by the building of larger nuclear plants, as electricity reserve must be able to cover the largest electricity plant tripping off the system. The nature of this peaking and reserve requirement, being mainly gas fired, will impact the operation of the GB gas market and the design of the gas transportation network.

If we assume that the capacity mechanism is delivering additional back-up to the current Short Term Operating Reserve (STOR) contracts, this implies that larger CCGTs as well as new OCGTs are needed, as discussed in the Redpoint modelling. The carbon floor price will favour gas fired plant over oil plant (which accounts for a significant amount of the STOR plant). The forecast increases in CCGT gas demand have been relatively consistent in recent years, but they were expected to operate more as base-load and mid-merit plant, rather than peaking plant. This may mean that many gas-fired generators, in terms of peak gas demand previously forecast, may still connect, but that their operation will be significantly different than previously expected.

In particular, changes to the way short-term demand fluctuations are managed will have an impact in relation to:

- a) The continued need for and access to a liquid traded market; and
- b) Network flexibility requirements.

Peaking gas generators may find that their operational responses require greater use of within-day wholesale and traded gas markets than previously witnessed. For example, a day with little wind may see such generators running at base-load, whilst a gusty day may see them altering the gas usage significantly within the gas market day to meet volatile wind output in the electricity market. This impacts the way gas is traded, as shippers aim to balance against a more volatile demand portfolio. The continued success of the NBP as the most liquid market (gas or power) in Europe therefore needs to be maintained and enhanced.

The existing fleet of CCGTs currently take gas from the network on a relatively “flat” profile, as CCGTs are currently designed to operate on a “base-load” basis, i.e. they run at high load factors. If the existing gas fired generators are required to increase their flexibility they may need more flexible “ramp rates”¹ in their Network Exit Agreements (NExAs) than those currently allowed by the gas transportation networks. Some generators may have paid at the time of connection for higher ramp rates, but this is unlikely against a background of base-load gas plant operation.

For the transporters there may also be new network investment required to deliver increasing ramp rates. At the present time many CCGTs will have their flexibility limited by the gas ramp rate that their gas connection agreement allows, though each will be plant specific. If the generators need to increase their flexibility we suspect the transporters may need significant investment, either in additional pipes to allow for more linepack² or in compressors. These network investments will need to be agreed by Ofgem under the National Grid transmission or distribution network price controls.

While the changes outlined above are deliverable, if the EMR proposals do require additional flexibility from the gas network these investments will have to be financed. The Forum acknowledges that there are other sources of flexibility such as gas storage and LNG facilities which can provide system balancing flexibility as well. However, the Forum believe that the need for extra flexibility in gas transportation must be assessed with the benefits that market sources of flexibility can bring in order to have an efficient, fair and competitive market. These investment decisions will have relatively long lead times, so it is important decisions about any new investments are made in a timely manner.

¹ Ramp rates are the rate at which a gas customer (producer) can take gas off (put gas on) the network. They are set at the level that the network can support, but are not as flexible as the Government may assume.

² Linepack is the gas that is “stored” in the gas pipes for operational flexibility. As gas can be “squashed” linepack can be used to allow for faster off-take rates even if for relatively short periods of time.

Potential Changes to the Gas Market

The Forum would argue that the principles behind the operation of the daily balancing market must be protected to maintain the levels of liquidity, and thus efficiency, in the gas market. The solutions to the issues outlined above may be relatively simple, invest in more linepack or more compression, and the Forum would be worried were Ofgem to consider making market changes in a way that increased market complexity, for example introducing flexibility products, to the detriment of its general success as a commodity market that has delivered secure supplies at competitive prices. It is important that any changes to the current GB gas market do not deter or undermine the current and future investment decisions. The market must also be accessible to new market entrants, for example smaller scale, flexible gas fired generators or new storage operators, who will also want access to a liquid market, based on rules they understand.

The costs of altering the GB gas network to facilitate larger, flexible loads could be smeared across all parties in the gas market or targeted to the flexible loads, but these costs will feed into gas customer bills. The EMR talks about the impact on domestic electricity customers' bills, but not about gas customers' bills. The Government may wish to examine in greater detail the gas price increases to make all energy customers aware that the EMR policies impact the delivered prices of both power and gas.

As well as these impacts on the gas market arising from the EMR, the Forum would assume that the new carbon floor price will impact gas demand. Not only will the impact be on the gas fired generators, captured in Redpoint's model, but also on other gas fired plant, such as CHP, embedded within the distribution networks. We have seen no analysis in relation to the carbon floor price impact on the absolute gas demand, or the shape of gas demand. Both of these factors will be important in assessing the impact of the policy package on the GB gas market.

The Forum would welcome the opportunity to discuss with DECC the details of the Redpoint modelling to ensure that it captures the inter-market impacts we have identified. We believe it is vital to the delivery of energy policies that all parties work together to develop market based arrangements fit for the needs of its customer, and to manage customer expectations about the costs of delivering a low carbon economy.

Investment Environment

As noted above the GB gas market has seen significant investment in recent years, with new LNG facilities, new pipes connecting the UK to markets like Norway and more gas storage. These investments have been of significant cost and the value of them must not be undermined if the market is to go on encouraging companies to keep investing in the GB gas market.

The Government should use time available during this period of consultation to consider how the GB gas market might develop and how the energy market in general might appear to external investors/suppliers if these multiple major market interventions in power are simultaneously implemented.

The Forum's view is that the possible consequences for the gas market should be considered as closely as they have been for the power market so that final decisions on the evolution of EMR can be as informed as possible. The Forum is happy to work with Government to ensure not only are the consequences of change understood, but that the solutions to accommodate change are deliverable, in the required timetable, without impacting the success of the market to encourage investment.

If there are any points in this letter that you would like to discuss further please do not hesitate to contact me. In the meantime the Forum looks forward to working with DECC going forward.

Yours sincerely



Steve Gordon
Chairman of the Gas Forum