COALPRO SUBMISSION TO DECC CALL FOR EVIDENCE ON THE ROLE OF GAS IN THE ELECTRICITY MARKET

Introduction

The Confederation of UK Coal Producers (CoalPro) represents member companies who produce over 90% of UK output. The great majority of UK coal production is sold to the electricity generating market. CoalPro therefore takes a close interest in developments affecting that market and is pleased to respond to this Call for Evidence.

Before addressing the questions for discussion set out at section 6 of the Call for Evidence, it is worth considering the present situation in the electricity generation market and the impacts of Government policies as these form the background to our response.

Present situation in the electricity generation market

It is clear that currently coal is the fuel of choice for electricity generation. It is cheap, abundant and easily stored. Coal-fired generation is low-cost and flexible, more so than gas, and is ideally suited to meet both the present pattern of peak demand and the more complex pattern of demand peaks that will develop with an increasing proportion of intermittent, unreliable wind generation. It is not for no reason that coal meets over 50% of UK electricity demand in peak winter periods winter, after winter, after winter. Throughout last winter, coal provided over 40% of demand. Even in early June 2012, coal was producing a higher proportion of electricity than gas. In the first quarter of 2012, coal burn at power stations was at a higher level than any equivalent quarter since 2006 which itself was at a higher level than any equivalent quarter since the late 1990's.

The reason for this is that gas is high priced. Gas has consistently promised to be a low-cost fuel for electricity generation, but has never delivered. The consequence of past policies has been a greater reliance on gas than relative prices warrant and higher electricity prices for business and domestic consumers than would otherwise have been the case. The impact of present Government policies will exacerbate this perverse situation dramatically.

The impact of Government policies

Carbon Price Support (CPS) is a tax which will do nothing for low carbon electricity generation that other elements of the Electricity Market Reform (EMR)

package, and specifically Contracts for Differences (CfD) will not do. All that it will serve to do is to drive generation from coal to gas. It will make it difficult, if not impossible, to justify investment in the existing fleet of coal-fired stations to meet the requirements of European legislation such that, by the early 2020's, there is a severe risk that virtually all of these stations will close. Only one station, Ratcliffe, has thus far invested to meet these requirements and it will be driven to marginal generation by CPS. This investment was committed prior to the announcement that CPS would be introduced. It is clear that the decision to invest would not have been made had the introduction of CPS been known about at that time.

The consequence of CPS will be that the enormous contribution of the existing coal-fired power stations, particularly at peak winter periods, will be lost and replaced by gas. The increase in low-carbon generation will be facilitated by CfDs not CPS. CPS will put UK electricity customers, homes and businesses, at a competitive disadvantage to the rest of Europe, let alone the rest of the world, first, because it is a tax on electricity generation and, second, because it will displace low-priced coal with high-priced gas.

Another element of the EMR package is the Emissions Performance Standard (EPS) which has, quite obviously, been deliberately set at a level which will prevent any new, or up-rated, coal-fired power stations from being built unless at least partially equipped with Carbon Capture and Storage (CCS), whilst permitting the ongoing construction of wholly unabated gas-fired plant. This will mean new coal-fired plant will be restricted to stations in the CCS demonstration programme. Only once CCS has been proven to be viable at the demonstration stage will new, CCS coal-fired plant be built. This is unlikely to be the case until the early 2020's. At the same time, the maintenance of this EPS for consented stations until 2045 gives unabated new gas a free ride, despite plants being required to be constructed Carbon Capture Ready.

Such an approach is not being followed by any of the UK's major industrial competitors. They are following a policy of continued improvement at coal-fired power plant where carbon emissions are incrementally reduced by moving, first, to higher efficiency boilers and, subsequently, to CCS. The EPS prevents the first stage in the UK and thus interrupts the chain of incremental improvement. It puts the UK out of line with virtually every other nation. CoalPro finds it surprising that Government does not recognise that it might just be the UK that is out-of-step and not everyone else!

The combined effect of these two policies will result in a near total replacement of coal by gas by the early 2020's. Government is thus driving itself, and the country, into a gas cul-de-sac. CoalPro believes the consequences will be disastrous.

Effect on UK Coal Production

UK coal output has been increasing in recent years with a commensurate increase in employment, one of the few industrial sectors to do so. The impact of Government policies is likely to drive UK coal burn down to a level below that of UK coal production capacity. Output will inevitably have to be reduced and there will be premature closure of mining capacity. **A thriving UK industry will be, in part, replaced by imported gas.**

I now turn to the specific questions in the Call for Evidence document.

(a) What are the main strengths and weaknesses of gas generation in helping deliver a secure, affordable route to decarbonisation through to 2020 and then by 2050?

Gas has only one, strictly limited "strength" – it is lower carbon than unabated coal at the point of combustion. In fact, this may be a false strength. The American National Centre for Atmospheric Research (NCAR) has conducted computer simulations that indicate that, because of methane emissions at the point of production and gas leakages in the supply chain, a shift from coal to gas would slightly accelerate climate change right through to 2140. All that a UK shift from coal to gas will do, therefore, is to export emissions from the UK to elsewhere and, in the process, increase them.

By contrast, gas has many weaknesses. It has been, and will continue to be, more expensive than coal. There have been persistent interruptions to the gas supply chain resulting in shortages at various time in various countries. Those who contend that gas is secure have short memories.

Nor does gas offer a route to decarbonisation. A replacement of unabated coal by unabated gas will result in lower carbon emissions in the UK but not overall by 2020. However the free ride for unabated gas through to 2045 will foreclose the market for abated, CCS-equipped coal-fired plant between 2020 and 2050 and will inevitably result in much higher carbon emissions in the later 2020's, the 2030's and 2040's.

In essence, coal has one major problem – it is high carbon. By contrast, gas has only got three problems – it is not secure, it is not affordable and it is not low carbon.

(b) What role can gas-fired generation play in the future and what level of gas generation capacity is desirable?

Gas-fired generation can play whatever role in the future that Government wishes it to play if Government is prepared to persist with skewed policies that result in that outcome.

The consequences of existing Government policies is that at peak periods on a cold, still winter's day in the early 2020's, the UK will be reliant on gas for 70% or more of electricity production (very little coal, no wind, the low point for nuclear generation). This huge peak demand for gas for electricity generation will coincide with peak gas demand for domestic, commercial and industrial heating. The inevitable consequence will be extremely high and volatile gas and electricity prices, a wholly undesirable and potentially catastrophic outcome.

The question as to what level of gas generation capacity is desirable is completely irrelevant. One can have as much capacity as one wishes. The appropriate question is whether there will be sufficient gas to fuel it and, if so, at what price. It is said that there will not be a global shortage of gas. That may well be so and, no doubt, the UK will be able to acquire all the gas that it needs if it is prepared to pay a high enough price to source it.

Such a scenario ignores the fact that security of supply and price are merely two sides of the same coin. **If gas prices are so high that the (increased numbers of) fuel poor are unable to heat their homes, or that businesses have to interrupt production, close, or relocate overseas, then, to them, that has precisely the same effect as a supply interruption.**

Gas is a flexible fuel which should rightly continue to contribute to the UK's electricity generation mix. However, present policies will result in a potentially catastrophic over-reliance on gas at peak demand periods in winter. This is thoroughly undesirable. Policies should be redesigned to ensure that gas continues to contribute, as now, to no more that 30% - 40% of overall annual demand and no more than 45% at any one time. It should form part of a diverse fuel mix which is progressively decarbonised through to 2050 and, as such, should be matched with coal. It follows from this that gas-fired plant should be constructed and retrofitted increasingly with CCS, whatever the level of capacity. **The free ride for unabated gas through to 2045 does not represent a secure, affordable or low-carbon future.**

(c) What are the key factors driving the economics of investing in new gas-fired power generation and how are these factors likely to change?

The Call for Evidence document rightly concludes that generation margins, and more specifically the high price of gas relative to coal, is the main impediment to investment. CoalPro does not see that situation changing, except to the extent that the price of coal is wholly artificially increased by CPS.

It surely represents collective policy failure that the only way to secure investment in unabated gas is for prices to be increased. CoalPro accepts that higher prices are needed to finance low-carbon generation, including CCS on both coal and gas. We cannot accept that high prices should be engineered to enable a switch from coal to unabated gas.

(d) What barriers do investors face in building new gas generation plants in the UK? What are the key regulatory uncertainties that may prevent debt and equity investors making a final decision in gas generation and supply infrastructure?

Quite simply, the main barrier is that it is uneconomic. Coalpro cannot see that, given CPS and the free ride for unabated gas under the EPS, that gas faces any regulatory uncertainties given the clear ongoing need for fossil fuel plant and the artificial pricing of coal off the system.

CoalPro considers that the free ride to 2045 is unnecessary. New gas-fired power plant has, now, to be constructed Carbon Capture Ready. This implies that such plant will be required to retrofit CCS at some point. Investors know this now. It cannot come as any surprise to them, and cannot be a disincentive, if CCS retrofit were to be required, with an appropriate CfD to guarantee reasonable returns, progressively from the mid-2020's onwards once CCS has been demonstrated to be technically and commercially viable.

(e) Are there any other policy issues that need to be addressed beyond the Government's proposals for the capacity mechanism and the EPS?

Not for gas.

However, there are many policy issues that need to be addressed to ensure coal continues to play a significant role without which secure, affordable and progressively decarbonised electricity generation cannot be guaranteed.

(f) Given the continuing role for gas and the potential for increased volatility in gas demand, to what extent is gas supply and related infrastructure a barrier to investment in gas fired generation? What impact will unconventional gas have on the case for investing in gas generation and the supporting infrastructure?

The increasing demand for gas at the expense of coal, particularly during peak periods, will inevitably place stresses on gas supply and related infrastructure. This will require yet further, expensive investment. However, it will only be a barrier to the excessive and unnecessary investment in gas-fired generation that will be induced by Government policies. It is these that will create the problem and it is these policies that need to be changed.

Unconventional gas will increase overall gas availability worldwide and will keep prices lower than they would otherwise have been. At the margin, therefore, it may improve the economic argument for investing in gas generation and supporting infrastructure.

However, unconventional gas is expensive to produce (relative to conventional gas) and it is unlikely to change fundamentals. It may marginally slow the UK's increasing dependence on gas imports but the impact will not be significant. **In particular, it is unlikely to have any significant impact on the relative prices of gas and coal.**

Conclusion

A balanced portfolio of generation technologies and fuel mix is essential to energy security in the UK, and both gas and coal have key roles to play in that.

The recent past has amply demonstrated coal's ability to contribute significantly to secure and economic power supplies through a period of high gas prices.

It is essential that the UK does not become over reliant on gas, given the manifest security and prices issues associated with gas supply.

An energy strategy which favours unabated gas generation to the extent that it is likely to preclude the emergence of viable low carbon coal generation will undermine the UK's long term carbon abatement ambitions, and cut across the UK CCS strategy which recognises that CCS for both coal and gas will be critical to abating CO_2 on a global scale.

What is needed is a coal strategy, alongside the gas strategy, to ensure that UK coal plant capacity is at least maintained, with investment in progressive

efficiency increases and emission reduction, and to create a platform to maintain our national coal industry skills and resources to underpin the very real option of a long term role for coal with CCS.

The key issue for that coal strategy is the impact of CPS which will progressively discriminate against coal generation to the detriment of UK power security and competitiveness. This needs to be addressed as a matter of urgency because UK generators have to make strategic investment decisions in the short term about the future of their generation mix.

The real risk facing the UK is that there will be no substantial coal generation within a decade with a consequent reduction in coal production and premature closure of mining capacity.

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