



29th June 2012

Gas Generation Call for Evidence
Area 4E
Department of Energy and Climate Change
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Dear Sirs

Call for Evidence Questions on Gas-fired Generation

I am writing on behalf of the Major Energy Users' Council (MEUC) which is an independent consumer led body representing the interests of a large number of industrial, commercial, retail and public sector organisations and for which the use of electricity and gas is a significant factor in their operations' costs.

The Major Energy Users Council welcomes the review being carried out by DECC and this opportunity of providing customers' views on the proposals. I must begin by apologising for missing last night's deadline for submission of evidence, my reason was I wished to attend the National Grid seminar on Future Energy Scenarios held yesterday in order to be better informed when answering the questions.

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

Advantages

1. Low construction costs compared to other forms of generation.
2. A well-known and established technology.
3. Lower emissions than coal.
4. Short lead time of construction.
5. Rapid response to changes in demand
6. Ability to exploit shale gas as the feed in fuel giving stability and security of supply, returning the UK to self-sufficiency in generation fuel.
7. Output is predictable, unlike wind generation.
8. Does not rely on time of day and time of year as does solar.
9. Ability to exploit local/distributed generation through the use of CHP, which significantly increases the efficiency of normal CCGT units. The benefits of CHP for local use have been well demonstrated by over 40 universities in addition to Local Authority district generation and heating schemes. However there is growing concern about Government commitment to the technology due to the changes in support through CCA agreements and LEC.

Disadvantages

1. Higher emissions than nuclear, solar and wind generation.
2. Increased reliance on gas generation will prevent the UK from meeting its carbon targets without the use of Carbon Capture and Storage, which at present is an unproven technology.



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

1. The key role – being the most flexible of all generation, however this will in turn make it the marginal plant making investment decision very difficult in determining the earning potential of a new plant.
2. The UK has in the past seen gas generation approaching 50%; however levels above this must be of concern as we become more dependent on gas imports. Active encouragement of the development of shale gas could significantly reduce concerns over security of supply.

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

1. Low capital costs plus a short development lead time.
2. Uncertainty of future gas prices.
3. The development of wind generation both numbers and timing.
4. The unpredictability of wind generation particularly the load factor and when the power will be delivered.
5. The unpredictability of Government policy and commitment. Gas can be the lowest cost producer of electricity, which would in normal market conditions make them base load generation. However Government initiatives that champion wind, solar and nuclear generation will push gas to become the marginal plant. This in turn will require further interference in the market in the form of capacity or stand-by payment. Until such payments are known it is unlikely that sites with consent approval will proceed to be built.
6. As previously mentioned the changes to the level of support for CHP must put in doubt future investment in this area.
7. The impact on generation plans that a Scottish independence vote will have, particularly if the wind generation subsidy will no longer be passed from England to Scotland and Scotland were to ban importing gas fired generation under their 100% green energy plan.

**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 investment decision in gas generation and supply infrastructure?**

1. Availability of funds in the present economic climate.
2. Planning uncertainty.
3. Current Government targets on carbon emission will require CCS to be installed on gas fired generation from the early 2020s. Construction of a new gas plant started today will probably begin production in 2015. Such a plant will begin competing with plant with CCS fitted within 5 or 6 years, this new plant will have double the operating cost of a current CCGT plant. How will this difference be handled? Will plant with CCS be given priority as it will reduce emissions? Will plant with existing planning consent be expected to fit CCS retrospectively?
4. National Grid's Future Energy Scenarios "Gone Green" that shows how to meet Government carbon targets has graphs indication that by 2030 (only 18 years away) gas fired generation



capacity will need to increase by about 15% over current levels, while the volume generated must fall by 80%. This I believe highlights the dilemma facing investors.

5. What will be the role of existing mothballed plant?

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

1. Bearing in mind the changes that have been made to the Feed in Tariff scheme, investors must be concerned that with a build time of up to 3 years, changes to both capacity mechanism and EPS could occur. Investors will need guarantees that the numbers on which they based their decision will be maintained for the life of the plant.

Given a 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?

1. With a Government commitment to a future role for gas generation, the existing infrastructure has coped with gas generation meeting 50% of electricity demand. Therefore this should prove sufficient providing that the location of new generation plant is sited sensibly.
2. Decisions on the location of storage for captured carbon and the infrastructure to transport carbon to these stores will have a major impact on investment decisions.
3. Unconventional gas in the main is planned to be imported into the distribution network thereby reducing demand on the NTS. The current development of shale gas is within a few miles of the NTS in the North West that has in the past handled larger volumes both from Morecambe Bay and St Fergus. Therefore I would suggest that the infrastructure should cope and the case for investing in gas generation will improve through improved security of supply of a domestic gas source.

This submission is not confidential.

Yours truly,

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