Third Generation
Environmentalism
47 Great Guildford Street
London SE1 0ES

T: +44 (0)20 7593 2020
F: +44 (0)20 7633 9032
E: info@e3g.org
www.e3g.org

E3G

28 June 2012

DECC public consultation on the role of gas in the electricity market: E3G's response based on its 'Gas Analysis' project

In the past few years, a stronger narrative on the role of gas in meeting climate policy objectives and delivering security of supply has gained momentum. This has led to a polarisation between the different constituencies that support different technology pathways, and in particular over the role of gas vs renewables in delivering policy objectives.

A number of market and energy models have been developed to justify the choice of technologies. Nevertheless, these are generally based on a perfect foresight of the future which does not correspond to the realities of investment and policy decisions, where the future remains uncertain. **A new approach is needed, therefore, to move the debate from least-cost equilibrium modelling to risk managed delivery of policy objectives.**

E3G has recently embarked on a new analysis that offers a new and more neutral approach to examining the economics underpinning short term vs long term choices and the associated underlying risks, including the role of gas, in decarbonising UK power sector. The Climate Change Committee's recommended levels of power sector decarbonisation of 50 g/KWh was taken as the basis of 2030 ambition. Using Redpoint's investment decision model, which simulates investor behaviour, we have tested the resilience of different technology pathways to unforeseen shocks and uncertainties. Overall, our objective is to contribute to a new way of thinking about technology options and to move the debate from a narrow least cost and a 'right' vs 'wrong' choice discussion toward understanding the underlying risk landscape of different choices and, therefore, effectively managing those risks to achieve key policy objectives.

Indicative early results from our analysis suggest the following conclusions:

- In order to drive cost effective decarbonisation, a mixture of policy tools are needed. Choice over broad (i.e. single carbon price) versus narrow (i.e. targeted technology subsidies) ranging policy tools affects the way costs are distributed in the society. Where a single carbon price needs to drive investment, everybody bears higher costs and higher rents are appropriated by the investors compared to a targeted subsidy regime supported by a lower carbon price.

E3G

- Creating an early abatement option through gradual deployment of renewables decreases exposure to policy failure in case CCS fails to be deployed at scale in the situation in which significant new gas capacity has been built over the next decade.
- In order to risk manage the delivery of policy objectives effectively, in light of future uncertainty, a portfolio of technologies needs to be deployed. Delivery of energy efficiency plays a major role in reducing the risks of policy failure and also has a significant cost reduction impact of several tens of billons of pounds over the next two decades.
- If we rely on a 'dash for gas' to achieve policy objectives instead of a range of technologies, longer term gas demand in the power sector is higher but also less predictable which would have implications for gas network planning and create high levels of uncertainty over its utilisation.

We are in the process of reviewing the emerging results and carrying out additional analysis. More comprehensive results will be available by September 2012. For more information about this analysis, please contact

About E3G

E3G is an independent not-for-profit European organisation, established in 2004, that works in the public interest to accelerate the global transition to sustainable development. More information is available at www.e3g.org