PROJECT DISCOVERY ENERGY MARKET SCENARIOS

COMMENT BY E.ON UK

Approach and Assumptions

Question 1: Please provide comments on our approach of using scenarios and stress tests to explore future uncertainty, and as a basis for evaluating policy responses.

Using scenarios to examine the implications of a range of potential future developments is the right approach.

Question 2: Are there other techniques for analysing uncertainty that we should consider?

There are other approaches (probability analysis, stochastic probabilistic analysis) but we do not believe that these could capture the range of future external developments which need to be considered. Hence we believe scenario analysis is the right approach here.

Question 3: Do you agree with how we measure the impacts of our scenarios and stress tests?

Yes. It is sensible to measure the impact of outlying events on delivering the UK's basic energy policy goals, although some goals such as the EU renewable targets are legal obligations and not necessarily integral to sustainability objectives.

Question 4: Do you agree with our key scenario drivers and choice of scenarios?

Yes, and they are similar to our own approach. The level of commitment to addressing climate change is the single most significant policy driver while the extent and speed of future economic growth are key economic drivers affecting future demand for energy.

We note the scenarios assume that limited global focus on climate change leads to a similar effect in the UK. In our view limited progress on international negotiations on a global climate change agreement would not necessarily lead to a scenario in the UK where climate change policy has limited emphasis. This reflects the wide cross-party commitment to tackling climate change, the high level of NGO influence on energy policy, the relatively low UK industrial exposure to high energy prices (given the relatively low proportion of GDP accounted for by energy intensive industries), and policies already entrenched in legislation including the system of carbon budgeting and the EU renewable targets.

Question 5: Do you believe our scenarios sufficiently cover the range of uncertainty facing the market, and hence cover the areas where future policy responses may be required?

In our view the scenarios do not cover the full range of oil and gas price uncertainty.

The scenarios should ideally be extended to cover the period to 2030 as this period will be more relevant to most new power plant investments than the remaining period to 2020, although we recognise that for electricity the analysis has been extended to 2025.

Question 6: Do you have any specific comments on scenario assumptions, and their internal consistency?

In general we suggest that one scenario might consider outcomes where capital costs for all plant types are somewhat higher (given that Ofgem's cost estimates appear significantly lower than current levels) and gas prices lower given that the combined effects of reduced demand for gas arising from the recession, liberalisation of the EU gas market, substantial investment in LNG production and new domestic sources of US gas could lead to a more general decoupling of the gas price from the oil price, at least until over-supply in the gas market is eliminated. Together these factors would make the investment case for non gas plant significantly more difficult and increase the likely dependence on gas for power generation. Similarly the analysis should consider the impact of higher gas storage costs than those envisaged.

Question 7: Do you agree with our methodology for modelling gas and electricity supply/demand balances?

Yes.

Question 8: Do you agree that LNG is the likely medium-long term source of "swing gas" for the European market?

LNG is the most significant source of swing gas (supply able to vary seasonally) but we would expect gas from Norway and the Netherlands also to perform this function.

Scenario Analysis

Question 1: Do you have any observations or comments on the scenario results?

We believe that more new capacity will be needed than Ofgem indicates as Ofgem's assumptions about plant lifetimes and life extensions appear to us to be optimistic. At the same time, construction of non-gas plant will be more difficult given the possibility of lower gas prices and higher construction costs. The regulatory and funding uncertainties in the Government's coal and CCS policy set out on 9 November also seem unlikely to stimulate much, if any, new coal investment within the current policy framework. We do not believe that it is reasonable to assume that all CCGTs will achieve a lifetime of 40 years. We would expect some to close at around the 25 year point, given that significant further investment will be needed to achieve the Industrial Emissions Directive requirements for NOx in particular. The expected level of nuclear life extensions is also not necessarily deliverable.

While it is certainly reasonable to test the implications of full delivery of the UK's renewable targets for both heat and power in one scenario, it might be sensible to have one scenario where these are not met until

perhaps the early 2020s. Overall this would suggest that outcomes where there is a higher level of gas-fired CCGT build are more likely with a corresponding high demand for gas.

Question 2: Do you agree with our assessment of what the key messages of the scenario analysis are?

Overall we agree with the high level messages. It is interesting that all the scenarios project, on the basis of rational decision making, historically low capacity margins from as early as 2016, even without the effect of stress tests. Ofgem does not appear to have brought out the implications of this for security of electricity supply as starkly as it might but rather states that 'electricity capacity margins are uncertain and likely to vary considerably due to a complex array of different factors'. In practice the predicted outcome might lead to some intervention in the market to reduce the risk of supply interruptions occurring as aresult of low capacity margins. Our concern is that this type of knee-jerk intervention might itself damage the ability of the market to reward plant investment in the longer term. Further consideration needs to be given to whether these outcomes are likely and if so what the correct policy response is.

Question 3: Are there other issues relating to secure and sustainable energy supplies that our scenarios are not showing?

The effects of competing demands for limited capital across the EU and globally should be taken into account. Companies making international investment decisions and constructing assets with long lives will favour regimes with clear and stable regulatory frameworks over those where there is uncertainty and flux.

Question 4: To what extent do you believe that innovations on the demand side could increase the scope for voluntary demand side response in the future?

We cover this in our response to the recent DECC call for evidence on securing low carbon electricity supply and enclose a copy.

Stress Tests

Question 1: Do you agree that our stress tests are representative of the types of risks facing the GB energy sector over the next decade?

Broadly yes, particularly on the gas side.

Question 2: Are there further stress tests that you think should be considered?

Other stress tests might assess the impact of developments with longer term impacts such as safety issues forcing early closure of AGR plants or supply side constraints affecting annual installation rates for offshore wind projects despite adequate financial incentives to make the investment.

One might also consider combinations of less extreme events such as cold but less extreme winter conditions, low wind output and the effect of a Ukraine : Russia dispute which might combine in a January period.

For all technologies, there is a risk that the planning system continues to delay projects. Similarly grid constraints may not be alleviated in a timely and efficient manner and hence prevent new generation from being connected in certain areas of the Great Britain.

Question 3: Do you agree with the assumptions behind our stress tests?

Some additional swing gas supply may also come by pipeline from Norway and the Netherlands in addition to LNG, which we agree is the major source. This might leave the UK less vulnerable to supply disruption and means that Ofgem's sensitivities show greater vulnerability to disruption than might be expected.

On the other hand, the scenario work as a whole may underestimate the difficulties associated with non-gas construction and overestimate the level of renewable build.

Question 4: Do you have any views on the probabilities of these stress tests occurring?

The probability of these events is low but the purpose is to illustrate the broad effects of different types of event so the approach is fine. An alternative approach would be to combine the effects of a number of much more probable events.

Question 5: Do you agree with how we have modelled demand curtailment in response to constrained supply?

Yes.

Question 6: Do you have any other comments on our stress tests?

No.

E.ON UK
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