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Dear Mr Wieckowski

EMR White Paper Annex C Consultation: Capacity Mechanism

Introduction

ExxonMobil has a major business presence in the UK. We have invested some £31 billion in the UK offshore oil and gas industry since first exploration in 1964 and remain the third largest producer in the North Sea. We are a joint venture partner with Qatar Petroleum and Total in the South Hook LNG Terminal at Milford Haven in Pembrokeshire which brings liquefied natural gas (LNG) into the UK. Our refinery at Fawley on Southampton Water is the largest in the country and we market Esso and Mobil-branded products to around 1 million customers a day through a network of over 900 service stations. We are also a significant manufacturer of petrochemicals with integrated production units at the Fawley refinery and an ethylene production facility in Fife.

ExxonMobil affiliates operate several reliable and efficient cogeneration plants across Europe including one 135MW CHP plant at its Fawley refinery; ExxonMobil is a potential new investor in efficient gas fired plant in the UK, and a significant consumer of power at our various office and operating installations. Its UK gas marketing affiliate, ExxonMobil Gas Marketing Europe Limited contributes around 25% of all physical gas sold into the UK wholesale market, helping to ensure security of supply to UK consumers.

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Recap - ExxonMobil Response to December 2010 Consultation

On 10th March 2011, ExxonMobil International Limited, submitted its response to the EMR consultation of December 2010, in which it expressed a number of concerns about the EMR package and outlined views that the introduction of such a wide ranging package of interventions carried with it significant risks and unintended consequences including: the risk of rapidly rising costs to the UK consumer; a potential for a continuing investment hiatus as long as policy stability is perceived to be threatened by a future consumer backlash on rising bills; and the risk that the instability or uncertainty in the power market spills over into the natural gas market. To illustrate the risks to gas we included as one attachment to the March 10th consultation response a "Natural Gas Perspectives" paper which illustrated a number of potential impacts on the gas market.

Government has now implemented the carbon price support mechanism (Finance Act 2011) and has also confirmed that it will also proceed with introducing Feed-in Tariffs for low carbon generators on the CfD model and implement its backstop Emissions Performance Standard. The success of the schemes on several reference measures remains in our view uncertain.

Capacity Mechanism Consultation

A summary of our perspective on the Capacity Mechanism is as follows:

- **The purpose of a capacity or reliability market** should be to provide robust economic signals to support ongoing investment in reliable new generation consistent with the overall aim of supply security and efficient system operation.

  We do not support the Strategic Reserve approach as described since we do not believe it is the best mechanism to meet the above objective. However, a market based capacity mechanism is only likely to function well if it is complemented by a liquid, transparent and well-functioning commodity market.

- **GB commodity market arrangements are not well suited to provide a clear price reference** for the purposes of a reliability market, with a multitude of possible indexes being available for a given product from sources ranging from exchanges to market commentators, and widespread liquidity issues. If a reliability market were to be implemented then we feel that this would require a broad reform of the current GB electricity trading arrangements. This would go further than Ofgem's proposed interventions to improve participation and liquidity in the retail power market as it would address ways in which price references can be focussed on a smaller range of more robust and transparent indices.

- **On timing it remains unclear to us whether a capacity mechanism is going to be needed sooner, later, or at all.** In view of this uncertainty we would support the Government spending additional time to explore a wider restructuring. This would allow industry/regulator/Government variously to: (i) test alternative market designs against detailed arrangements for implementing both a capacity mechanism and CfD FiTs (ii) examine impacts on the natural gas market; (iii) allow the changes currently occurring to financial market regulation (which increasingly impinge on energy markets) to be finalised so that the impact of such changes on the proposed capacity/reliability mechanisms

can be properly assessed; (iv) be clear on constraints over participation that may be imposed by the proposed Energy Efficiency Directive (COM 92011) 370 final); and (v) perform a critical analysis of capacity markets in other jurisdictions around the world.

Summary

The alternative schemes presented in the consultation demonstrate a further Government dilemma – whether to pursue a simpler, low ambition and less efficient mechanism (Strategic Reserve) that is unlikely to stand up to (consumer) scrutiny over the longer term; or whether to pursue a market model (for instance a Reliability Option market) where an enduring efficient solution may well be possible but only if developed in an integrated way alongside reforms to current commodity market arrangements. We would urge the Government to pause and take the time to design an enduring solution and implement the full range of necessary reforms.

Yours sincerely

Manager, Europe Power Supply

Attachment
Responses to Specific Consultation Questions on Capacity Mechanism Models

Targeted Capacity Mechanism

Q1: Does this table capture all of your major concerns with a targeted Capacity Mechanism? Do you think the mitigation approach described will be effective?

No. Whilst many of the concerns expressed by respondents to the December consultation have been acknowledged the remedies are not sufficient. The 'slippery slope' risk of suppliers/generators holding back, waiting for capacity reserve margin to fall to a level that forces Government to tender, as articulated more fully at C5.7, remains a major risk. Over time more and more capacity, particularly flexible/peaking capacity, would be contracted into the Strategic Reserve and be held off the market.

We remain unclear about Government thinking on the key objective of a Capacity Mechanism. In section 3.2.6 of the White Paper a point is put forward that the capacity mechanism seeks to *"...ensure there is sufficient reliable and diverse capacity to meet demand..."* as opposed to the balancing market/STOR which seeks to *"...ensure that moment to moment supply matches demand..."*. This would seem entirely reasonable except that Strategic Reserve is elsewhere described as being capacity that is held off the market until it is needed (i.e. until a high despatch price is reached). This has the characteristics of a balancing market action rather than a forward looking mechanism capable of incentivising economic and reliable capacity.

We are also concerned that the Strategic Reserve solution may not provide the most efficient use of assets since it requires that generation is deliberately held off-line until the system reaches crisis point, when that generation could have been efficiently dispatched at an earlier point.

On the basis of the current proposal and description ExxonMobil does not support the Strategic Reserve solution.

Q5: How can a Strategic Reserve be designed to encourage the cost effective participation of DSR, storage and other forms of non-generation technologies and approaches?

We would support cost effective measures that allow consumers to see pricing signals and make sensible economic decisions regarding consumption on the basis of those signals. As we know already from Ofgem's Significant Code Review (on gas) the basis on which the price signal might be constructed has been highly contentious. We have no panacea to offer on this.

At a more practical level the economic factors governing participation in DSR may for many consumers vary from month to month and few if any potential DSR providers are likely to commit a number of years ahead. In addition, we see some difficulty in assessing/auditing the reliability of potential sources of DSR in the same way that reliable reserve capacity of a generator can be assessed/audited; delivery duration, for example, is usually limited from DSR and so it cannot be seen as a straight alternative to generation.

Q6: Government prefers the form of economic despatch described here. Which of the proposed despatch models do you prefer and why?

We do not support the Strategic Reserve option for reasons already outlined.

Q7: How would the Strategic Reserve methodology and despatch price best be kept independent from short-term pressures?

With great difficulty, and this underlines one of our main concerns. It would seem inefficient to withhold available generation capacity from the market and force the system to reach crisis point before dispatching.

Moreover there is a higher likelihood of significant price volatility in the Strategic Reserve approach and large price swings could become increasingly frequent the greater the dependence on the reserve. In that scenario we wonder whether Government would in fact be able to resist further intervention if there was a significant public reaction.

Q9: Into which market should Strategic Reserve be sold and why?

This question illustrates our point in Q1: Strategic Reserve is a balancing action, not a mechanism to sustainably encourage development of reliable capacity. Because of this, we agree that, if the Government wishes to pursue this model, then sales into the balancing market appear to be the only credible option.

Q11: Given the design proposed here and your answers to the above questions, do you think a Strategic Reserve is a workable model of Capacity Mechanism for the GB market?

No, we believe that the Strategic Reserve is an option that:

- Increases the risk that generators hold back investment to increase the chance of being rewarded by a Strategic Reserve contract;
- Tries to address the wrong problem: acts as a balancing action rather than a mechanism to encourage development of reliable capacity;
- Makes inefficient use of system resources by withholding them from the system until crisis point is reached;
- Is not sustainable, as frequency of market crises will tend to increase, leading to ever high risk of further political intervention.

Market-wide Capacity Mechanism

Q12: How and by whom should capacity in a GB market be bought and why?

In order to operate effectively, we feel that any capacity mechanism requires some form of system wide coordination. We see a need for further evaluation, but recognize the advantages (counterparty risk management, cost minimization, administrative simplicity) of a regulated central counterparty that Government notes in the consultation. Importantly, this approach minimises opportunities for current incumbents to exercise market power, or leverage their integrated generation and supply portfolios to the detriment of new entrants. An additional advantage is that a potential new entrant has to deal with only one counterparty rather than finding the resources to deal with a series of potentially different bilateral options.

We believe that a secondary market would be desirable under any market-wide mechanism as it improves overall market efficiency. There will be times when operational or construction issues will impact individual capacity providers who need to adjust their position, and a secondary market may provide an efficient solution to that adjustment. A regulated institution could be set up to act as a common counterparty for capacity holders to offer/trade capacity surplus or deficits. That institution should also be allowed to participate in this secondary market and, for example, offer to trade out (sell back) any surpluses of contracted capacity that are identifiable closer to the time od delivery (thus minimising costs to consumers).

We would not support the implementation of a bilateral system, whether as a unique mechanism or as a parallel option. We believe that this would reduce transparency and would strengthen the position of the integrated incumbents by allowing their generation and supply arms to cut an off-market deal.

Q13: What contract durations would you recommend for a Capacity Market?

It would seem sensible to differentiate between existing and potential new capacity when considering contract duration to allow potential new entrants a degree of income security at the start of their project economics. An annual commitment for current capacity would seem the appropriate period that allows generators to plan their operations.

The balance to be struck here seems to be one of ensuring that a potentially required new project can gain sufficient certainty over future revenues whilst ensuring that the consumer does not bear excessive risk. In our view contract durations of at least 5 years should be allowed for potential new entrants.

Q14: How long should the lead time for capacity procurement be? Should there be special arrangements for plants with long construction times?

The objective of a capacity market is ultimately to ensure security of supply for consumers at the lowest cost, and so lead time should be kept as short as is realistically possible to allow as accurate an assessment of requirements as possible. If this were to exclude some very long lead time options

from participating then this would seem to be a price worth paying to avoid burdening the consumer with excessive risk costs.

That said, there are clearly restrictions on speed of construction of new capacity, and making the lead time excessively short would simply favour existing generators at the exclusion of new entrants.

With this in mind, we would suggest a lead time that is set between the shortest and longest construction times for technologies available and able to offer capacity at the time of capacity procurement. We would expect that technologies that are supported via other policy instruments (such as CPS and CfD FiTs) would not be considered in this assessment.

It should be noted that potential investors do have some flexibility to manage the construction lead time for their project at the point of offering capacity, albeit at some additional cost and risk. This may mean that for longer lead time technologies, the potential investor would need to be more advanced in the project design, permitting and financing process than shorter lead time technologies.

We would not support special arrangements for any one technology, as this introduces risks to consumers and efficient capacity market operation arising from the asymmetry of information between generators and Government.

Q15: Should there be a secondary market for capacity? Should there be any restrictions on participants or products traded?

As we stated in our response to Q12, we believe that a secondary market would be desirable under any market-wide mechanism, as operational or construction issues will inevitably impact individual capacity suppliers who then need to adjust their position.

We would see no benefit, and potentially significant downsides of allowing financial trading in the secondary market. We see no reason why the Government would allow physically backed offers to be replaced by financial products in the secondary market, thus undermining security of supply. As an additional consideration, pure financial trading would be likely to result in a significantly increased regulatory burden flowing from the suite of new European financial market regulation (and revisions to existing legislation) that is currently being introduced.

In any case, the mechanism by which market participants provide physical capacity or reliability services and are remunerated for those services should be carefully designed to ensure that contracting counterparties (in primary or secondary markets) are not exposed to a need to be authorised under the Markets in Financial Instruments Directive (2004/39/EC) and the corresponding UK legislation.

Q16: What are the advantages and disadvantages of making a central, administrative determination of (i) the capacity that can be offered into the market by each generator; (ii) the criteria for being available; and (ii) the penalties for non-availability ? In outline, how would you suggest making these determinations ?

It would be difficult to do justice to these questions of detail at this stage. Suffice it to say that our initial views include: (i) that we would support a regulated, technically robust, approach to

determining the level of reliable capacity that each generator/unit could bid into the market; (ii) we see the need for robust penalties for non-availability during periods of system stress; and (iii) such a system would need an effective method of auditing availability.

We are not convinced that the 'claw back' penalty mechanism as described in the Reliability Option proposal will provide on its own a sufficient penalty for failure to deliver.

Q17: How should the reference market for reliability contracts be determined and what would be an appropriate reference market if it is set by the regulator? How could any adverse effects of choosing a particular option be mitigated?

The reference market for a reliability contract would need to be sufficiently granular to reflect system requirements as close to real time as possible, in particular periods of potential supply shortage. The current balancing mechanism would not be a suitable reference, as this mechanism is not a market, and the prices set by it are designed to be punitive.

The current OTC-focused GB market arrangements are not well suited to provide a clear price reference for the purposes of a reliability market, with a multitude of possible indexes being available for a given product from sources ranging from exchanges to market commentators, and liquidity issues across the board. If a reliability market were to be implemented then we feel that this would require a broad reform of the current GB electricity trading arrangements. This would go further than Ofgem's proposed interventions to improve participation and liquidity in the wholesale power market as it would address ways in which price references can be focussed on a smaller range of more robust and transparent indices, which may necessitate the re-introduction of some form of price pool.

Q18: For a Reliability Market, how should the strike price be determined? If using an indexed strike price, which index should be used?

We believe that this question is premature – establishing a rational methodology to arrive at a strike price will require considerable analysis and careful thought and discussion in the industry.

Q19: For a Reliability Market, what level of physical back up (if any) should be required for reliability contracts and how should it be monitored?

In a reliability market, contracts should only be offered if fully supported by a suitable physical asset (i.e. the "regulatory de-rated capacity" option). The whole rationale presented by the Government for introducing a market in reliable capacity would be to encourage sufficient quantities of such capacity to be built. Allowing any amount of pure financial trading in this market would seem to run contrary to this aim.

Q20: Do you agree that a vertically integrated market potentially raises issues for the effectiveness of a Reliability Market? If so, how should these issues be addressed?

Yes, and these issues become more acute if the market is based on bilateral contracts, which tend to reduce transparency.

Q21: What could we do to mitigate interactions between a Capacity Market (especially if a Reliability Market) and Feed-in Tariff with Contract for Difference without diluting the effectiveness of either?

It is important to keep the Government's objectives in mind when considering this issue. A capacity market should be aimed at ensuring additional capacity will be built that would not be brought forward as a result of other Government policies.

CfD FiTs are an incentive to bring forward capacity that meets the UK's decarbonisation objectives, but in many cases this is intermittent generation that compounds the other challenge, that of ensuring supply security standards are maintained. With this in mind, capacity that has been incentivised via CfD FiTs should not be further incentivised to participate in a capacity market of any kind.

Q22: How can a Capacity Market be designed to encourage the cost effective participation of DSR, storage and other non-generation technologies and approaches?

DSR, storage and non-generation technologies are more likely to find an effective, if limited, route to participate in a market wide reliability market than they would in a Strategic Reserve for the simple reason that such schemes are designed to reward reliability and penalise non-availability rather than keep capacity off grid. That said, we believe that the issues we highlighted in Q5 related to DSR duration and forward commitment would still exist under a market-wide mechanism.

Whilst we support the concept of DSR and storage as potentially cost-effective ways of managing the supply-demand balance within-day, we feel that work is needed to evaluate the realistic contribution that can be achieved by DSR participation.

One technical point to make here: the financial flows illustrated in figures C10, C11 and C12 do not explain exactly what a DSR provider would be "paying back" when the reference price exceeds the strike price.

Q23: Do you have any comments on the functional arrangements proposed for managing a Capacity Market?

We support Government including enabling legislation next year to the extent that this is required to force an in-depth review of alternative capacity market designs; however we would not support including in the enabling legislation a deadline or target date for implementation or any final decision on the form of the implementing institutions.

Introducing a capacity market structure for Great Britain will be no easier than any of the major market reforms of the past; NETA, NGTA, Long Term Capacity arrangements (gas) were all two or more years in development. The enabling legislation might start the process of industry debate but must not constrain the possible solutions that might emerge in that debate, or force the industry down a path that will prove to be unsuitable once other elements of the EMR process have had time to bed-in.

Q24: Do you think that a trigger should be set for the introduction of a Capacity Market? If so, how do you think the trigger should be established, and how should it be activated?

It is not yet clear to us that the market will fail to deliver or maintain sufficient new or existing capacity to meet future needs, and a credible course of action would seem to be to allow the current broad swathe of proposed reforms to the electricity market to bed-in whilst allowing as much time as possible to examine and test the potential for, and detailed design of, any capacity market.

We can see that in theory at least, a well-designed capacity market could exchange uncertain premium commodity revenues for more certain capacity payments for both generators and consumers. The important point here though is that this needs a well-designed capacity market, as well as reforms to the commodity market, to make the two work well together.

If the Government believes strategically that a capacity market would be beneficial, then it would seem to us that taking the time to get the design of both capacity & commodity markets correct is the most critical item, and that discussions around triggers seem premature at this stage.

Q25: What is the most appropriate design of Capacity Market for GB and why?
Q27: Which Capacity Mechanism should the Government choose for the GB market and why?

In our view, the key criteria for a capacity market are that it must:

- Provide a robust investment signal to reliable physical capacity providers, coupled to strong penalties for non-delivery, consistent with the importance Government places on security of supply for consumers;
- Be open in a non-discriminatory way to both existing and potential new providers, and make efficient use of system resources through primary and secondary physical capacity markets;
- Be open to participation from providers of physical capacity only, and not financial speculators, and avoid introducing additional complexity due to exposure to EU and UK financial market regulations;
- Be shown not to subsidise generation that is already supported via other policy levers (such as CfD FiTs or CPS);
- Be developed as part of a wider market reform including the commodity market and a robust assessment of the outcome of introducing similar capacity markets in other parts of the world.

With these points in mind, we believe that Government has much more work to do before it can present an enduring solution for a GB capacity market, and that time and care should be taken to implement the right solution rather than rushing into a capacity mechanism at a time that other complex and overlapping changes are being made to the GB electricity market.