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London SW1P 3GE

May 8<sup>th</sup> 2012

Dear Camilla,

### **Retail Market Review: intervention to enhance liquidity in the GB power market**

Thank you for the opportunity to respond to the above consultation. When Ofgem first suggested the concept of mandatory auctions in 2009 we thought that the idea would be worth exploring. Since then, however, the market context has evolved to such an extent that we think the auctions are not only no longer needed, but also potentially harmful for the market.

Liquidity has already improved significantly in the spot market, and it is now improving very rapidly in the Futures market. The industry is currently introducing a series of structural changes in trading arrangements that will guarantee the sustainability of these improvements (notably market coupling and standardised trading calendars). The market is also developing new services that will facilitate market access for small participants and end-users.

Against this background, the type of regulatory intervention considered by Ofgem might hamper industry initiatives and damage confidence in the wholesale market. The proposition that participation should be mandatory for certain generators (namely, the Big 6), but not others has no clear foundation. Imposing different rules on different market participants is bound to create a false market, leading to price distortions and artificial arbitrage opportunities. Excluding large independent generators would exclude substantial generation capacity that would normally be expected to provide some of the products mandated by Ofgem. This will reduce market efficiency and increase costs to consumers.

Ofgem states that the cost of mandating participation will not be significant for the big 6. However, it looks potentially very costly to Centrica. A major issue is governance, which is likely to be slow and antagonistic (as obligated and non-obligated parties will have divergent interests). Moreover, given the pace of market developments and the problems with Ofgem's auction design, it is inevitable that Ofgem will want to revise the detailed terms in due course, once the auction is established. The prospect of repeated amendment and refinement of the auction rules, imposed on some but not all large generators, is another factor that will damage confidence and reduce efficiency in the wholesale market.

While the risks of the intervention are very significant, the benefits remain unclear. The mandatory auctions are very unlikely to lead to new retail entry, and they are certainly not needed to support EMR. If implemented, the intervention would be the most radical reform of NETA since its inception. It should only be carried out if there is sufficient certainty that the benefits can exceed the costs. We do not think that this case has been made.

Against this backdrop, we believe that Ofgem should refrain from introducing any licence changes at this stage. We suggest that Ofgem continue to monitor changes in the market, paying particular attention to the development of the Futures market and the effects of increased interconnectedness between GB and other European markets. We are actively supporting these developments and we believe that they have the potential to deliver sufficient liquidity to meet the need of market participants.

Annex 1 to this letter summarises our position, and Annex 2 provides detailed answers to the questions set out in your consultation paper.

I hope that these comments are useful. Do not hesitate to contact me if you have any questions.

Yours sincerely,

*By e-mail*

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## Annex 1 – executive summary

We strongly support ongoing industry initiatives to improve liquidity which are already showing considerable success. We do not think that the proposed intervention is necessary or appropriate for the following reasons.

- **The market context has evolved to the extent that regulatory intervention is no longer necessary to improve liquidity.** Liquidity has already improved in the spot market, and it is now improving very rapidly in the Futures market. This trend is likely to be reinforced in the coming months as the GB market is becoming more strongly integrated with EU markets, both at the day-ahead stage (through market-coupling, due to be implemented by the end of the year) and for forward trading (through a better alignment of trading calendars, due to be phased in over the next two years). These are *structural* changes in trading arrangements that will deliver a *permanent* improvement in liquidity. We believe that regulatory intervention in this complex and fast-changing environment would be both unnecessary, and potentially distortive.
- **Mandatory auctions would be a particularly inappropriate form of intervention in this context.** Mandatory auctions are a very intrusive form of intervention, requiring the regulator to specify the products that must be traded and how they must be traded. This type of intervention is ill-suited to an evolving market environment like the GB market. However much Ofgem wants to make the intervention ‘flexible’ or ‘adaptable’, it will be less responsive to market needs than normal commercial developments. Moreover, a mandatory auction with multiple sellers necessarily implies the use of a central clearing counterparty and, therefore, high credit requirements for participation. Independent players have made it clear that credit requirements are one of the main obstacles they currently face when trying to trade wholesale products.
- **The scheme design proposed by Ofgem is particularly problematic.** Imposing the obligation solely on the Big 6 would be both arbitrary and counter-productive. It would be arbitrary because there is no evidence that the Big 6 are foreclosing the market through vertical integration. It would be counter-productive because imposing different rules on different market participants is bound to lead to price distortions and artificial arbitrage activity. The auction cannot produce robust price signals unless all major parties are required to participate under equal terms. We also have strong reservations about other parameters of the proposed design, notably: the inclusion of long-dated products (for which demand is very uncertain); the volume requirement of 25% (which seems disproportionate); and the buy-side rules (which seem unnecessary).
- **The benefits that can be expected from the intervention are unlikely to outweigh the costs.** Firstly, the emphasis put on the need to improve liquidity to stimulate retail competition seems misplaced. Ofgem has not clearly demonstrated that liquidity is a material barrier to entry in the retail market. On the contrary, the evidence suggests that the main obstacle faced by independent participants seeking to trade energy products is the cost of meeting credit requirements, not the availability of these products as such. Secondly, it is not clear that liquidity must be improved to guarantee the success of EMR. The N2EX day-ahead auction already provides a reference price for intermittent CfDs that is both resilient to manipulation (because it is based on large volumes) and easy to capture (because it is based on a single-price auction). The OTC market trades sufficient volumes of baseload power in the front year to provide reliable reference prices for baseload CfDs. Any outstanding concerns with ‘gaming’ are best addressed through the use of the market monitoring powers which Ofgem has been granted under REMIT.
- **It is not possible to develop a detailed mechanism for intervention that would be effective across a range of market circumstances.** We understand that Ofgem

intends to develop a detailed mechanism in the next few months while reserving the option to 'switch on' the scheme at a later stage, depending on market developments. We do not think that this strategy is workable, as the intervention would have to be suited to the market context in which it is implemented to be effective. The uncertainty about future market conditions is such that if Ofgem wants to intervene in the future it might have to revisit the form of the intervention (ie, whether it should be an auction or not) as opposed to just its design parameters. We recognise that Ofgem needs to reserve the option to intervene, but making detailed licence changes at this stage would be premature.

- **It would be more appropriate to encourage market-based initiatives to meet the needs of market participants.** The industry is currently developing a range of initiatives and services that will improve liquidity and facilitate market access, and Centrica is committed to supporting these developments. We started to trade power Futures on N2EX on April 13<sup>th</sup>, and we are currently finalising a gross-bidding agreement with N2EX to increase our participation in the day-ahead auction. We also have a dedicated origination team that provides risk-management services and facilitates market access for end-users and independent participants. We are confident that these initiatives, together with other measures developed by the industry, will soon deliver sufficient liquidity to meet the needs of all market participants.

Against this backdrop, we recommend the following.

- **Ofgem should refrain from introducing licence changes at this stage.** Ofgem should continue to monitor market developments, focusing on the development of the Futures market and the effects of greater interconnectedness with the rest of Europe. We believe that the effects of these changes should become progressively more visible over the next two years.
- **Should Ofgem still wish to intervene, the design of the scheme should be reviewed fundamentally.** First and foremost, it would be critical to reconsider the focus on the Big 6, which in our opinion is purely arbitrary and potentially distortive. Ofgem should also revisit the volume requirement, the product range, and the buy-side rules. In terms of process, we would strongly recommend that the scheme be developed in closer association with the industry. This is a very complex area that cannot be approached without tapping into the expertise of market participants.
- **Finally, Ofgem should help energy companies to secure appropriate exemptions from financial regulation.** The EU is currently seeking to extend a body of financial regulations to commodities markets (under MiFID and EMIR). We are concerned that these rules might increase transactions costs and reduce market flexibility in the energy sector, with potentially serious consequences for liquidity (and no tangible benefits for consumers). Ofgem and DECC should work with the industry to ensure that the EU financial agenda does not conflict with GB energy policy.

## Annex 2 – consultation questions

### Question 1: Do you agree with the objectives we have identified?

We broadly support the objectives identified by Ofgem. However, the key issue from our point of view is that meeting these *objectives* is unlikely to deliver the *outcomes* expected by Ofgem. In other words, we do not think that improving liquidity will necessarily lead to more effective competition in supply, more efficient investment in generation, and more effective market reform.

Clearly, the wholesale market needs sufficient liquidity to function efficiently. However, the importance of liquidity in achieving the specific policy goals mentioned by Ofgem has been overstated, and we are concerned that these inflated expectations might lead to disproportionate regulatory interventions. It is absolutely crucial that Ofgem be realistic about the policy benefits that can be expected from improved liquidity; otherwise the (predictable) failure of the proposed mechanism to deliver these benefits could lead to a spiral of ever more intrusive interventions.

More specifically, we think that Ofgem has overstated the potential benefits of improved liquidity in at least three ways.

#### 1. Improved liquidity is unlikely to make a material difference to retail competition

Fundamentally, we disagree with the premise that retail competition is ineffective. Compared to other consumer-facing businesses, the energy market exhibits high switching rates, low concentration, and weak profit margins. Existing suppliers already pursue a diversity of business models, and there is no reason to believe that additional entry would change the dynamics of retail competition.

Ofgem has not clearly demonstrated that liquidity is a significant barrier to entry in the retail market. The factual evidence gathered by Ofgem broadly indicates that: (i) liquidity is lower in the GB power market than it is in other energy markets (specifically the GB gas market and the German and Nordic power markets); and (ii) liquidity is lower now than it was around 2002. These observations are beyond question, but it does not necessarily follow that GB liquidity is insufficient to support retail competition. There is no evidence that retail competition is more effective in the comparator markets examined by Ofgem, nor is there any indication that the GB power market was more contestable in 2002 than it is now.<sup>1</sup>

Ofgem's analysis also relies on feedback from independent suppliers. Judging from previous consultation responses and recent public events, this feedback seems to cover a range of concerns which are only tangentially related to liquidity. The most salient issues appear to be: (i) the capital costs of participating in the wholesale market; (ii) the price of peak and shaped products; and (iii) the administrative costs of signing multiple GTMAs with counterparties. None of these problems are genuinely liquidity issues. Even if energy contracts became more frequently traded, they would not become more easily accessible for participants with poor credit, they would certainly not become cheaper, and they would not be directly available to participants unable or unwilling to sign GTMAs. It seems to us that the concept of liquidity has become an umbrella term for a broad range of concerns associated with market access and pricing. It is critical that Ofgem 'disentangles' the various

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<sup>1</sup> Ofgem's own analysis in RMR (and previously in the supply probe) showed that switching rates are higher in the GB power market than in any other European power market. The wholesale market is three times more liquid in gas than it is in electricity, and yet there is no more entry in gas supply.

demands made by independent suppliers to ensure that its intervention is targeted at material issues.

Ofgem's analysis presumes that new entry in domestic supply is economic but somehow 'held back' by the lack of liquidity. In reality, new entry in domestic supply is simply uneconomic under current market conditions, irrespective of the state of liquidity. British Gas have modelled the business case of a hypothetical new entrant in domestic supply. This analysis confirmed that new entry 'at scale' in this market segment is currently uneconomic, even with optimistic cost assumptions and assuming away any potential issues with liquidity.<sup>2</sup>

The corporate strategy of Drax and International Power is consistent with this conclusion. Both companies have made it clear that they are seeking to expand their retail businesses, and their generation base means that liquidity is not an obstacle for this purpose.<sup>3</sup> Yet both companies have chosen to enter the business segment of the market, but not the domestic segment. If new entry in domestic supply was financially attractive but practically difficult because of low liquidity, these two generators could have entered the market using a VI model. The fact that they have not done so suggests that liquidity is not the main issue.

Ofgem also argues that, because of low liquidity, a new entrant seeking to compete against incumbents would need to enter the upstream and downstream segments of the market simultaneously.<sup>4</sup> This is not strictly true. We do agree that it would be difficult to operate a very large supply business without any generation base (indeed, this is why British Gas has gradually built a generation business over the last decade). However, it is perfectly possible to envisage a business model where a new entrant would start by procuring energy in wholesale markets to supply consumers, and would then gradually expand upstream as its customer base grows (perhaps initially through long-term contracts, and then through direct investment). This type of business model has been used by new entrants in other European markets (Poweo in France is a good example). This concept is also similar to the 'ladder of investment' ascended by new entrants in the telecommunication sector, where small companies typically enter the market with very thin retail operations before progressively building up their own wholesale infrastructure.

Liquidity would be sufficient to support this type of business model if it became economic. There is sufficient liquidity in baseload products up to 24 months ahead, which is the time horizon over which most suppliers hedge their procurement costs. Peak products are traded more thinly on the curve, but this is a reflection of the underlying uncertainty in peak prices, and it is not clear that it represents a barrier to entry. This level of liquidity already provides potential new entrant with a route to market and protection against the risk of foreclosure.

## **2. Improved liquidity is unlikely to change the economics of generation investment.**

Ofgem argues that generators need more robust price signals to take efficient investment decisions. In reality, even the most liquid power markets in Europe do not produce price signals beyond 3 years, while the lead time for developing a thermal plant is at least 3 to 4 years. Generators take investment decisions based on their analysis of long-term fundamentals, not observed market prices.

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<sup>2</sup> British Gas has shared this analysis with Ofgem and we are happy to discuss the assumptions and results further.

<sup>3</sup> In their 2011 annual report, Drax states '*Our intention is to grow a significant retail business providing us with a valuable alternative to trading through the wholesale electricity market*'

<sup>4</sup> Ofgem (2011), 'RMR: findings and initial proposals', paragraph 2.77.

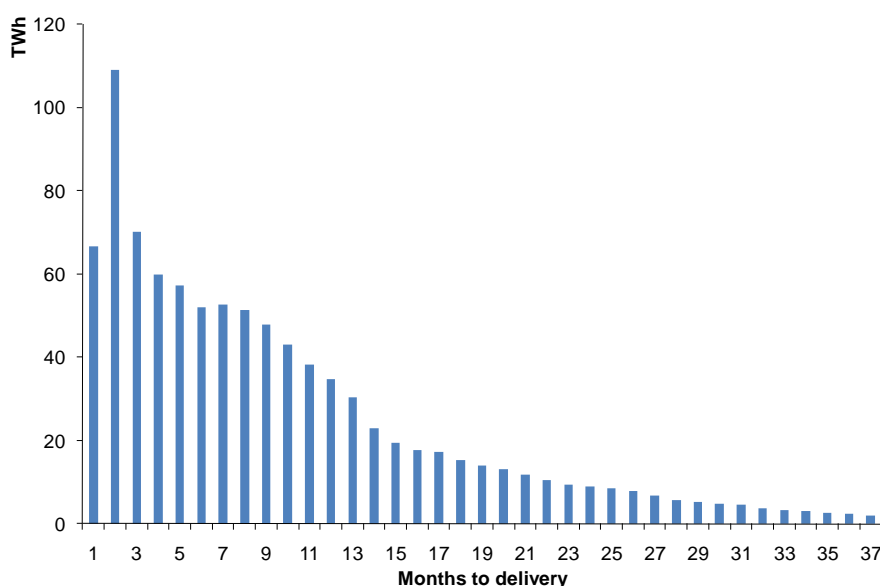
### 3. The current level of liquidity is sufficient to support EMR.

We believe that the market is sufficiently liquid to produce reliable reference prices for the two types of CfDs developed by DECC.

- The day-ahead auction on N2EX produces a reference price for intermittent CfDs that is both resilient to manipulation (because it is based on large volumes), and easy to capture (because it is based on a single-price auction).<sup>5</sup>
- Similarly, the OTC market is sufficiently liquid to produce a suitable reference price for baseload CfDs. Baseload volumes are relatively high for the front year, which is the time horizon considered for the indexation of these contracts (Figure 1), and the bid/offer spreads only widens for very long maturities (Figure 2). It is possible to construct reliable price indexes in continuously traded markets (indeed the market already relies on such indexes to structure PPAs); it is not necessary to set up an auction specifically for this purpose. Moreover, the counterparties of baseload CfDs are likely to be large sophisticated players capable of dealing with any residual basis risk.

To the extent that there are any residual concerns with market manipulation, Ofgem could use the powers granted to national regulators by REMIT. The market structure emerging from EMR and REMIT will be very transparent: Ofgem will have access to the companies' exposure under CfDs and to the details all their market transactions. This structure will make it relatively easy for Ofgem to detect and punish any attempt at 'gaming' the reference price of CfDs.

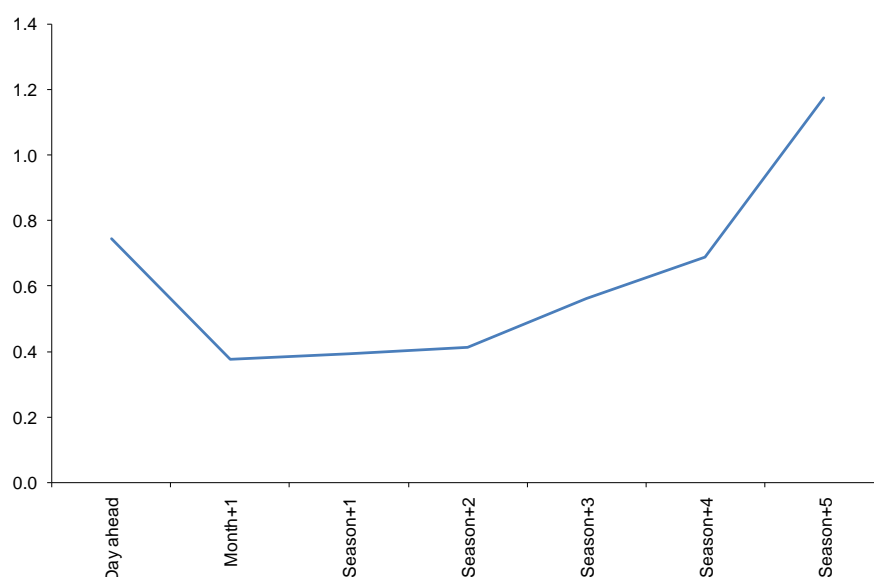
**Figure 1 Term structure of baseload power trades in GB (2011)**



Source: Trayport data, Centrica Energy analysis.

<sup>5</sup> There have been occasions when the N2EX price has temporarily diverged from the OTC price (most recently on April 10<sup>th</sup>). However we do not think this indicates an issue with the way the auction operates. The N2EX price and the OTC price are based on different time windows in the market, which means that the two prices may diverge if market participants' appreciation of fundamentals change during the day. Also N2EX organises sequential auctions before weekends and bank holidays (ie, on Fridays, there are three auctions for power delivery on Saturday, Sunday, and Monday) which mean that weekend prices can be based on forecasts made 2 to 3 days earlier (we understand that N2EX is looking to move to a 7-day auction this year).

**Figure 2 Bid offer spreads for baseload power in GB (2011 - £/MWh)**



Source: Argus.

In sum, we believe that Ofgem's analysis of the problem may be too simplistic. This is not to say that liquidity is irrelevant to competition or efficiency in the energy market. However we think that the benefits associated with the proposed intervention have been poorly evaluated, and largely overstated.

If implemented, the mandatory auctions would be the most radical reform of NETA since its inception. This reform should only be carried out if there is sufficient certainty that the benefits (in terms of more effective competition) exceed the costs (in terms of potential distortions in trading arrangements). This cost and benefit analysis is missing from Ofgem's proposals. At present, the premise seems to be that new entry is an end in its own right, and that it should be encouraged at all costs. This is not a sound basis for overhauling the way the wholesale market works.

### **Question 2: Do you think there are other objectives we should be considering?**

No, this workstream should remain tightly focused on monitoring the level of liquidity in the wholesale market (as measured in terms of trading volumes, frequency of transactions, number of counterparties, and bid-offer spreads). This initiative should *not* be used to satisfy ad hoc demands regarding credit requirements or trading terms.

### **Question 3: Do you agree with our views on market developments since summer 2011?**

We think that Ofgem's analysis understates the significance of recent market developments and overlooks the potential for these initiatives to further improve liquidity. The market context is changing very rapidly, and Ofgem's analysis should be more forward-looking to capture the effects of these changes.

The industry is currently introducing several changes in trading arrangements that will create the foundations for increased liquidity.



- **Increased trading on the day-ahead auction on N2EX**—Volumes traded in the N2EX day-ahead auction have already increased from 30 GWh per day in September to 200 GWh per day in March, and this trend is likely to be reinforced over the coming months. Firstly, market coupling (which is due to be completed before the end of the year) will effectively ‘pool’ day-ahead liquidity across Northwest Europe. Secondly, as ACER and Ofgem progressively clarify the status of gross-bidding agreements with respect to market conduct rules more counterparties might decide to participate in the auction. We are currently finalising such an agreement with N2EX. Improved liquidity in the day-ahead market is important in itself (because most market participants trade shape at the day-ahead stage), but also because it enables trading in cash-settled derivatives along the curve.
- **Increased trading in financial Futures**—The expectation has always been that, by providing a robust reference price, increased liquidity in the spot market would facilitate the development of a market for cash-settled derivatives with longer maturities. There are now tangible signs that this is happening: trading in cash-settled Futures has increased from 140 GWh in October to 5,600 GWh in March (Figure 3 below), and long-dated products have started to account for a significant proportion of these trades since January (Figure 4 below). We started to trade financial Futures in this market on April 13<sup>th</sup>.

From the point of view of stimulating liquidity, the key advantage of financial Futures is that they are easier to trade for European counterparties than physical products: there is no need to enter into separate trading agreements with GB counterparties (GTMAAs), and no need to trade different products based on the GB calendar (the EFA calendar). In other words, the development of this market is reducing barriers to entry for EU power traders. They are also easier to trade for purely financial players. As such, we would expect this market to deliver a genuine improvement in forward liquidity, as opposed to merely a transfer of activity from the OTC market to N2EX.

If the recent uptake in Futures volumes is sustained, market participants will become more confident in the prospects for the market and the improvement will become self-sustaining. To facilitate this transition, Centrica is developing a service that will allow market participants to swap equivalent financial and physical products with no risk and at minimum cost (Exchange For Physical, or EFP).

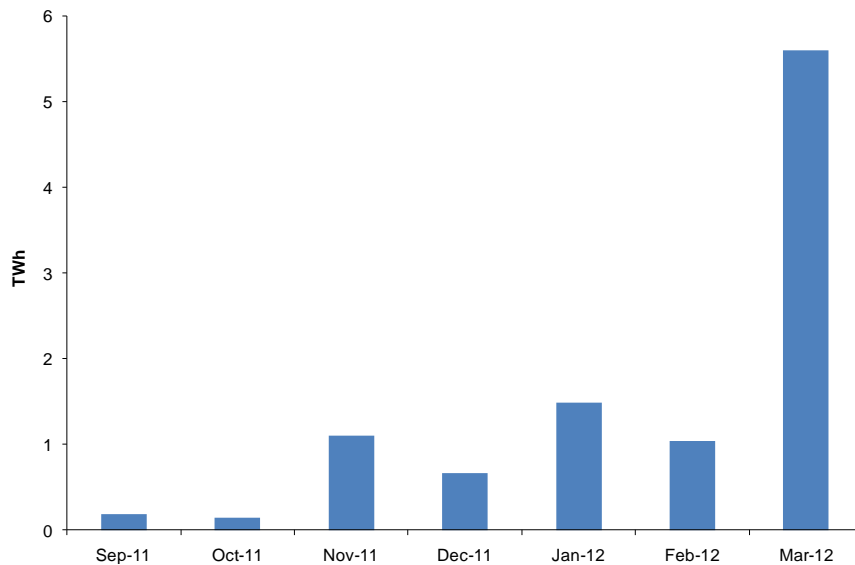
- **Harmonised trading arrangements for physical power between GB and EU markets**—The GB physical market currently trades contracts based on the EFA calendar, while other EU markets trade contracts based on the normal (ie Gregorian) calendar. The EFA calendar has been cited as one of barriers to entry into GB by European trading houses (because of system issues and the difficulty to arbitrage between both types of contracts).<sup>6</sup> Having recognised this issue, the FOA is now working to align GB trading arrangements with EU rules over the coming months (the market is planning to trade Summer 2014 under the normal calendar). Again, this will facilitate participation by EU counterparties in the GB market.

Taken together, these changes will improve the interconnectedness between GB and EU markets and provide the foundations for a more dynamic wholesale market. These are all *structural* changes in the market that will deliver a *permanent* increase in liquidity. This is not a temporary ‘blip’ in trading activity prompted by regulatory scrutiny.

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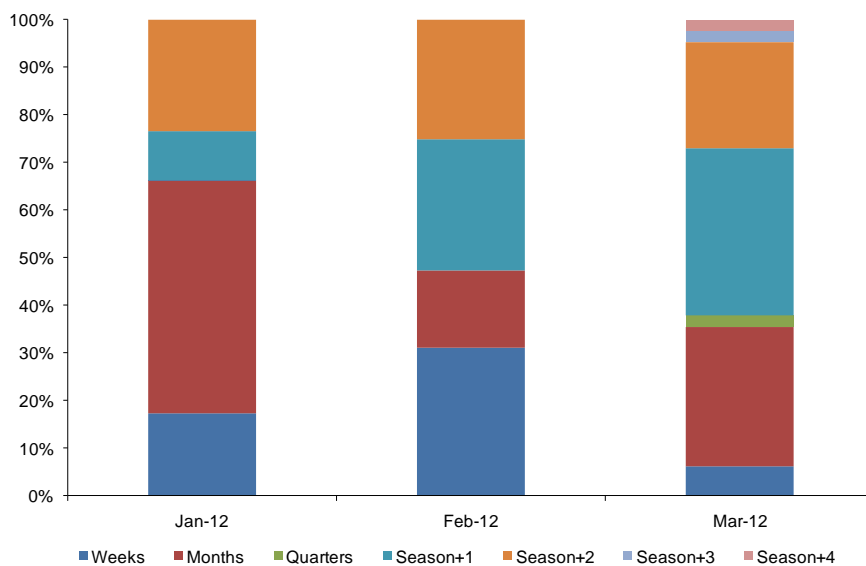
<sup>6</sup> Power Trading Forum (2011) ‘EFA calendar survey results’.

**Figure 3 Traded volumes on the N2EX Futures market**



Source: N2EX

**Figure 4 Term structure of Futures trades on N2EX**



Source: N2EX, Centrica analysis.

**Question 4: What specific further developments would be necessary to meet our objectives?**

We believe that the three developments outlined above (concerning the day-ahead auction, the market for financial Futures, and the trading calendar) have the potential to deliver sufficient liquidity to meet Ofgem’s objectives. We recommend that Ofgem monitor the effect of these changes on market liquidity, taking into account trading volumes, but also the frequency of transactions, the number and type of counterparties, and the product mix. We expect that these benefits will progressively become apparent over the next two years.

## **Question 5: Do you agree that objectives one and two are current priorities given market developments?**

We agree that objective three is met, but we do not believe that regulatory intervention is warranted with respect to objectives one and two.

As explained above, we think that the ongoing changes in trading arrangements are likely to improve liquidity along the curve. There is now a tangible prospect that the market will provide sufficient liquidity to meet the needs of all categories of market players in the short- to medium-term.

Conversely, there is a genuine risk that regulatory intervention in this complex, fast-changing environment could actually hamper these more ‘organic’ developments and hard-bake the market into a sub-optimal configuration. To take just one example, market participants now have the choice between trading physical or financial products to hedge their commodity price risk. There are both advantages and disadvantages to trading the two types of products, and the market could go one way or another depending on the needs of market participants, the availability of contingent capital, and the services offered by trading platforms. It would be inappropriate to prejudge the outcome of this evolution by imposing one particular choice (ie, physical products) through the intervention.

## **Question 6: Do you agree that the MA is the appropriate mechanism to meet our immediate objectives?**

We think that regulatory intervention is unnecessary at the moment (and indeed could be harmful), and that mandatory auctions would be a particularly inappropriate form of intervention in the current context.

- **Mandatory auctions are a particularly intrusive form of intervention—**Mandatory auctions require the regulator to specify the products that must be traded, how they must be traded, and when they must be traded. Regulated auctions have been reasonably successful at ‘kick starting’ power trading in European markets at the early stages of the liberalisation process, but they are ill-suited to a more advanced market environment like the GB market. However much Ofgem wants to make the intervention ‘flexible’ or ‘adaptable’, it will be less responsive to market needs than normal commercial developments.
- **Mandatory auctions are unlikely to facilitate access to the wholesale market—**Ofgem claims that an auction would facilitate access to trading for all market participants. We believe the opposite is true: a mandatory auction with multiple sellers logically implies the use of a central clearing counterparty and, therefore, high credit requirements for participation. Independent players have made it clear that credit requirements are precisely one of the main obstacles they are facing when trying to trade wholesale products. In Germany, the most liquid power market in Europe, only 13% of volumes were exchange-cleared in 2010, which confirms that market participants tend to be averse to central clearing. Long-dated products will have particularly high credit requirements.
- **Mandatory auctions are not necessary to produce robust reference prices—**Ofgem claims that a distinct advantage of the MAs is their capacity to generate robust reference prices. We think that this advantage is overstated: it is perfectly possible to produce reliable price indices based on OTC transactions. Indeed such indices are available and commonly used in the GB power market. The vast majority of commercial PPAs are referenced to price indexes generated in the OTC market, most notably the

LEBA index (for PPAs indexed on day-ahead prices), and Argus indexes (for PPAs indexed on month-ahead and season-ahead prices). There is no reason why such indexes should be considered insufficiently reliable to structure FiT-CfDs.

- **More generally, a monthly auction of long-dated products is unlikely to match the trading preferences of market participants**—To our knowledge, no power market has developed a system of centralised auctions for long-dated products on a commercial basis. In our opinion, this is prima facie evidence that such a system does not match the trading preferences of market participants, and there are a number of reasons why this might be the case. Most market participants seek to adjust their hedge incrementally over time – the auction format makes this more difficult by requiring large orders once a month (and implying a higher degree of exposure to instantaneous market conditions). Gas generators might want to trade electricity and gas simultaneously to lock in their margin – the auction format makes this more difficult by introducing a lag between the placement of bids and offers and the confirmation of results.

We originally supported the concept of mandatory auctions when it was first formulated in early 2011. Since then, however, the market context has changed to such an extent that we think the auctions are not only no longer needed, but also potentially harmful for the market. We also believe that the particular auction design proposed by Ofgem could exacerbate the generic problems with MAs listed above (we comment on these issues in our answer to question 8).

### **Question 7: Do you agree that, at the present time, the other mechanisms identified would not be appropriate for Ofgem to pursue?**

No, we think that regulatory intervention is unnecessary at the moment, but Ofgem should not discard any options if it wants to intervene in the future.

The alternative mechanisms examined by Ofgem do have significant drawbacks, but they are not evidently more or less problematic than the MAs. For example, Ofgem discards the 'large scale MMM' because this option would involve regulating the bid-offer spread. However, the MAs also constrain the pricing strategy of obligated parties through the buy-side rules. More generally, with the MAs Ofgem would need to regulate a range of parameters that would shape the risk exposure of obligated parties, including the product mix, the bidding rules, and the trading terms of the auctions. The MAs are not a light touch intervention.

We understand that Ofgem intends to develop a detailed design for the MAs in the next few months while reserving the option to 'switch on' the scheme at a later stage, depending on market developments. We do not think that this strategy is workable since, to be effective, the intervention would have to be suited to the market context in which it is implemented. The uncertainty about future market conditions is such that if Ofgem want to intervene in the future it might have to revisit the form of the intervention (ie, whether it should be an auction or not) as opposed to just its design parameters.

### **Question 8: Do you agree with the key features of the MA we set out?**

We have some serious concerns with almost all of the design parameters proposed by Ofgem. There is a real risk that, if implemented as specified in the proposals, the MAs would not only fail to deliver the objectives set out by Ofgem, but also potentially introduce distortions in the wholesale market.

This section sets out our views on the main design parameters identified by Ofgem (sections 1 to 5), as well as credit issues and the auction format, which are not addressed in the proposals (sections 6 and 7). To be clear: we do not think that the MAs are necessary, but we are sharing these thoughts to illustrate the type of work that would need to be undertaken should Ofgem still wish to develop the scheme following the consultation.

### **1. Participation: mandatory participation should be extended to all major generators, not just the Big 6**

We believe that imposing the obligation solely on the Big 6 would be arbitrary: there is no evidence that vertical integration creates barriers to entry in the retail market, and no reason to believe that complying with the obligation would be less costly for the Big 6 than for major independent generators (who all run sophisticated trading operations). We also believe that this approach might be distortive: the asymmetric treatment of the Big 6 versus other generators could lead to inefficient auction prices (which would defeat the objectives of the intervention), and potentially to inefficient incentives in the generation and retail market.

#### **There is no evidence that vertical integration creates barriers to entry in the retail market**

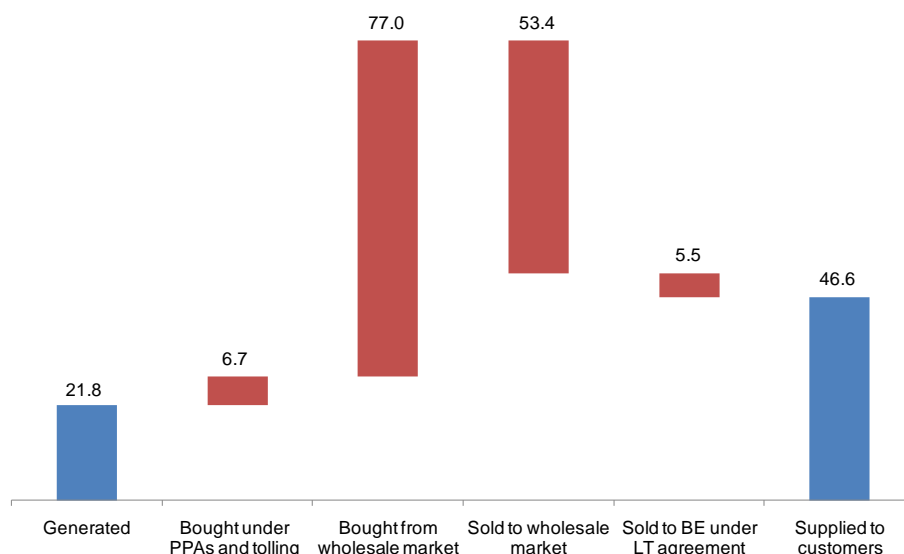
In the EU, mandatory auctions have typically been imposed on incumbent companies following a formal competition inquiry and a clear finding of dominance (or of market power increasing following a merger). Ofgem has made no such finding in the GB market and, as such, there is no economic or legal basis for imposing the obligation solely on the Big 6.

As discussed in our answer to question 1, we do not think that Ofgem has proven that vertical integration creates barriers to entry in the retail market. Moreover, there is no evidence that the Big 6 are foreclosing the market by limiting access to wholesale products. Ofgem itself has recognised that the Big 6 already trade multiples of their generation volumes.<sup>7</sup> By way of illustration, the generation and supply businesses of Centrica hedge their positions separately under distinct asset and load books, and they do so by trading the bulk of their positions in the market. For example, in 2011 our external trades amounted to 130 TWh (which represents 6 times our generation and 2.8 times our load) while our internal trades only amounted to 8.9 TWh (Figure 5). This means that an independent supplier can purchase power from our generation business at the same terms as our own supply business.

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<sup>7</sup> Ofgem (2012), 'RMR: intervention to enhance liquidity in the power market', paragraph 3.14.

**Figure 5 Centrica power balance (2011 – TWh)**



Source: Centrica Energy.

**There is no reason to believe that the obligation would be less costly to deliver for the Big 6 than for other players**

Ofgem argues that the MAs could generate significant risks for independent players, but not for vertically integrated players. There is no basis for this assertion – the MAs would generate significant risks for any obligated parties, whether they are vertically integrated or not.

The MAs would commit obligated parties to trading a defined set of products at specified times in order to guarantee a ‘baseline’ market for mandated products. By being subject to this requirement, obligated parties would effectively forego certain options in their trading strategy, for example the option to scale back their trading activity at times of market volatility, or the option to trade different products depending on market conditions. These options have a value for energy companies, and therefore foregoing them would have a cost. More importantly, there is no reason to believe that these options are less valuable for vertically integrated players than they are for independent players.

In essence, the commitment imposed on obligated parties under the MAs would be similar to that undertaken by market-makers on commercial terms: under both cases, a company (or a set of companies) accepts to constrain its trading activity in order to insure the market against the risk of liquidity drying up. The key point is that market-makers only accept to undertake such a commitment in return for a fee (or for lower transaction charges), *even if they are vertically integrated*. This is prima facie evidence that constraining one’s trading activity in order to provide liquidity involves substantial risks, and that such risks also exist for vertically integrated players.

Ofgem argues that mandatory participation would be problematic for independents because it might force them to take trading positions unmatched to their ‘natural’ physical positions.<sup>8</sup> This risk is certainly real, but it applies to all obligated parties, not just independent players. The Big 6 are *net buyers* in aggregate, but the default requirement in the MAs is that they

<sup>8</sup> Ofgem (2012), paragraph 4.11.

would have to *sell* power in the auction. This configuration could force them to take trading positions that do not match their 'natural' trading needs simply to mitigate the risk of value destruction. As explained below, this risk is particularly acute if independent generators are exempted from the obligation.

### **Imposing the obligation solely on the Big 6 could distort auction results**

In aggregate, the Big 6 are *net buyers* of electricity in the GB market, while independent generators are *net sellers*. A number of independent generators have made it clear that the MAs would not match their trading preferences, not least because the capital costs of participation would be high. There is therefore a risk that independent generators might choose not to participate in the auction, or that they might charge a premium for doing so. If both sides of the market are not equally represented in the auction, there is a serious risk that it produces distorted prices.

More specifically, if sellers are under-represented, the auction could deliver inflated prices. If this is the case, the auction would be of little use to independent suppliers, and it could lead to under-recovery of the CfD strike price for the low-carbon generators who do not participate in the auction. That is, it would defeat the objectives of both RMR and EMR.

Arbitrage activity could mitigate this risk, but only partly. For example, if the Big 6 anticipate a supply deficit in the auction, some of them could decide to be net sellers in the auction and then buy back the volumes they need in the OTC market. Financial intermediaries might also contribute to this arbitrage activity. However, this arbitrage activity is risky (because the spread between the auction and the OTC market might be uncertain and difficult to capture) and it is therefore unlikely to fully close the gap between the auction price and the OTC price. This risk is likely to be exacerbated at times of market volatility, which is when the MAs would otherwise be most valuable in facilitating price discovery.

### **Targeting the obligation at VI players could also create barriers to expansion**

Triggering the obligation at a specific threshold instead of applying it to all participants could create *barriers to expansion* for medium-sized players even if it mitigates *barriers to entry* for very small players. A small market participant might be discouraged from extending its business 'horizontally' if the threshold is defined as a market share in generation or retail. A small market participant might be discouraged from extending its business 'vertically' if the threshold is defined as a level of VI. More concretely, Drax or IP might be dissuaded from entering the domestic supply market if the intervention is triggered at a specific level of VI.

### **All major generators should be required to participate under equal terms**

We recognise the need for a *de minimis* exemption for very small participants, but we find the current focus on the Big 6 to be purely arbitrary, and potentially counter-productive. The guiding principle should be that all major generators are required to participate in the MAs under equal terms. We would suggest a trigger of 1 GW of installed capacity, which would leave some scope for small independent activity outside the obligation. The size of the obligation could also be phased progressively in order not to create strong incentives to remain below the threshold.

## **2. Annual volume: the volume requirement should be kept below 10% and compliance should be assessed ex post**

We have two issues with the volume requirement: first, the size of the obligation (25% of generated volumes); and second, the way it is defined (by reference to generated volumes *in the previous year*).

### **The size of the obligation seems disproportionate to the objectives of the scheme**

The French VPP auctions were successful at creating a dynamic wholesale market with volumes amounting to 10% of EDF's capacity. Presumably, a smaller obligation should be sufficient in the GB context where the objective is to 'top up' liquidity rather than to create a wholesale market from scratch.

We understand that Ofgem wants to design the MAs as a one-stop-shop, and this may explain this large volume requirement. We think that the idea of a one-stop-shop is neither feasible (because market participants would need to adjust their positions more frequently than once a month), nor particularly desirable (because the MAs would then absorb liquidity from the OTC market instead of improving liquidity overall). If they are implemented, the MAs should be conceived as a 'trading venue of last resort' rather than a 'one stop shop', and this would imply a smaller volume requirement.

### **The way the obligation is defined does not take account of the volatility in generation volumes faced by generators**

Generators face substantial uncertainty in their generation volumes. For example we generated 23% less in 2011 than we did in 2010. Generation volumes may vary between years as spark spreads change, capacity is retired or built, and renewables availability varies. The operating regime for plant may also be quite different in winter than in summer.

If the volume obligation for a given year is defined by reference to generated volumes in the previous year, and if generated volumes drop over time, obligated parties might be forced to trade a disproportionately large share of their portfolio through the MAs. Given the lag associated with the use of historic data and the fact that the product mix includes contracts for delivery up to 36 months forward, the volume requirement may be 4 years out of date when delivery takes place.

Most generators manage the uncertainty in generation volumes by adjusting their hedge progressively over time: they constantly adjust their generation forecasts, and progressively increase the proportion of these forecasts that is hedged in the forward market. It would be possible to capture the essential characteristics of this approach by verifying compliance with the volume requirement *ex post*, instead of prescribing volumes *ex ante*. For example, Ofgem could verify that for any one MWh generated in a given month, an obligated party has sold 0.25 MWh in the MAs for delivery in that month. This rule could incorporate a profiling constraint to ensure that obligated parties sell products along the curve.

Moreover, Ofgem's approach does not consider the heterogeneous nature of generation portfolios. The obligated parties may have very different proportion of peak and base plants. It would be inappropriate and unfair to impose a baseload obligation on a party with predominantly peak plant or vice versa.

## **3. Products: the term of mandated products should not extend beyond 24 months**

We are concerned that the obligation to trade long-dated products could expose obligated parties to significant risk without necessarily achieving any substantial benefits.



## **As a matter of principle, the MAs should only cover products for which there is a viable market**

We recognise that it may be difficult to identify the reason why a given product is not traded. One interpretation is that there is a ‘latent’ supply and demand for this product, but the two sides of the market somehow fail to meet for institutional reasons. This is a genuine liquidity issue which might have to be addressed through market intervention. An alternative interpretation is that there is simply no matching supply and demand for this product – buyers are not interested in the type of products that sellers would like to offer, or are unwilling to pay the price required by sellers. This is *not* a liquidity issue; it simply means that there is no viable market for this product.

This distinction is crucial for the design of the intervention. Any attempt to ‘force’ the auctioning of a product for which there is no viable market might lead to very serious consequences for obligated parties and the market: the auction might not clear, or might clear at artificial prices.<sup>9</sup> This risk is particularly acute if obligated parties are subject to a ‘must sell’ obligation which makes reserve prices practically irrelevant. Any such result could harm obligated parties and discredit the auctions.

There is no straightforward way of making this distinction, but Ofgem’s current approach, which relies almost entirely on ‘market feedback’, is far too simplistic. The fact that a given participant (or group of participants) is unhappy about the availability of a particular product does not mean that there is a viable market for this product – it could simply mean that there is no matching counterparty. Typically, generators have a preference for longer maturities compared to suppliers, which is why long-dated products are typically not commonly traded, even in markets that are otherwise liquid.

### **There is no evidence of a viable market for long-dated products**

The following observations suggest that there is unlikely to be any significant demand for long-dated products.

- **Retail hedging strategies in GB**—Most GB suppliers hedge their retail costs over 18 to 24 months.<sup>10</sup> It is unlikely that any independent suppliers would choose a longer hedging period, as this would expose them to significant competitor risk (the risk that they cannot follow retail price changes without incurring higher losses or profits than their competitors).
- **French VPP auction results** – More than 85% of the products cleared in the French VPP auctions were for delivery within 24 months (Table 1). This is particularly informative as the VPP auctions were based on a system of indifference curves designed to let buyers express their preferences for various maturities.

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<sup>9</sup> This is not just a theoretical possibility: in March 2009, the Spanish VPP auctions failed to clear for long-dated products.

<sup>10</sup> Ofgem’s own supply reports assume an 18 months hedging strategy.

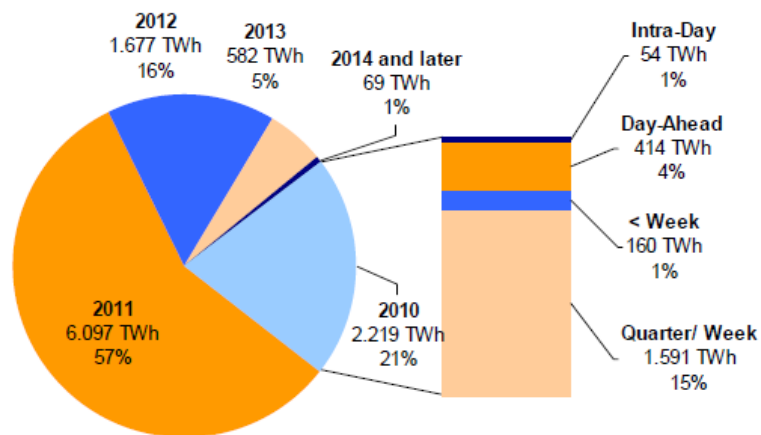
**Table 1 French VPP auction results**

	12 months or fewer	12-24 months	24-36 months	36-48 months
<b>Baseload</b>	63%	22%	11%	5%
<b>Peak</b>	45%	30%	25%	N/A

Note: the data covers all of the auctions in the last 3 years of the VPPs.  
 Source: Frontier Economics, based on EDF data.

- **German market** – Similarly in the German market the bulk of the volumes are traded for delivery within 24 months. In 2010, 21% of volumes traded were for delivery within the year, 57% were for delivery in 2011 (ie 12 months forward on average), and 16% were for delivery in 2012 (ie 24 months forward on average) – see Figure 6.

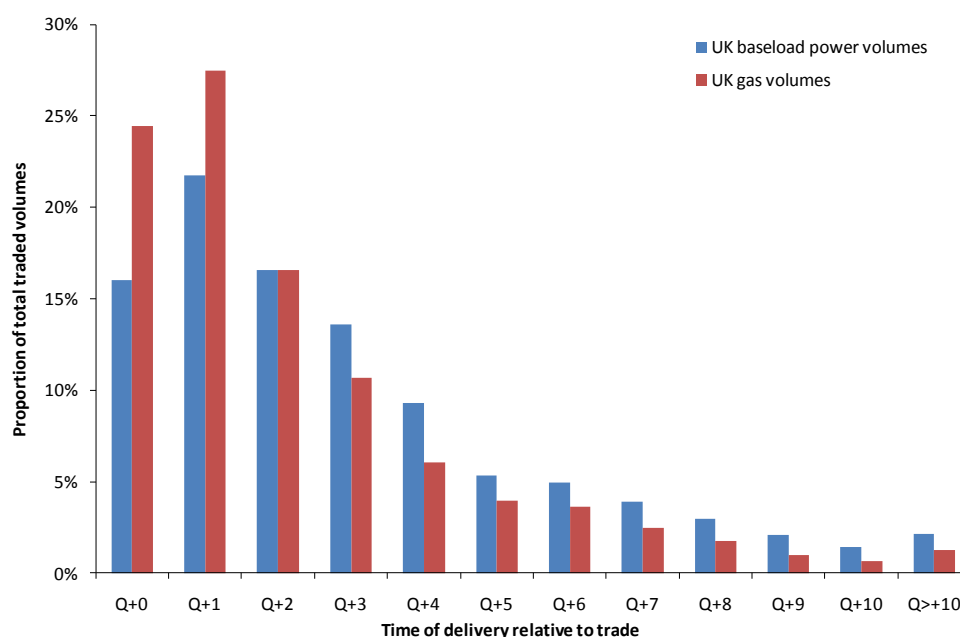
**Figure 6 Term structure of German power trades (2010)**



Source: Bundesnetzagentur Annual report to CEER 2011

- **GB gas market** – in the GB gas market, considered by Ofgem as very liquid, only 5% of all traded volumes are for delivery beyond 24 months, a proportion that is actually lower than for the GB power market (where it is 8 %).

**Figure 7 Term structure of GB gas trades vs power trades (2011)**



Source: Trayport data, Centrica Energy analysis.

**Additional safeguards would be necessary if Ofgem wishes to mandate trading for long-dated products**

Our conclusion is that the MAs should not cover long-dated products (beyond 24 months), at least until sufficient evidence emerges that there is a viable market for these products. If such evidence emerges, Ofgem should only phase in the obligation gradually, increasing obligated volumes progressively and allowing obligated parties to use additional safeguards against the risk of inefficient outcomes. We propose that the ‘must sell’ requirement would be suspended for such products and that obligated parties would be free to set their reserve prices.

**4. Frequency: long-dated products should be auctioned less frequently than short-term products**

We believe that Ofgem should consider auctioning different products with different periodicity (and potentially with different auction formats). A possible approach would be to auction short-term products monthly through a simple auction format, and long-dated products quarterly through a more sophisticated format.

**5. Governance: governance arrangements should be tightly controlled**

We are not convinced that the governance arrangements proposed by Ofgem would give adequate protection to obligated parties. Under both approaches (The Industry Liquidity Document, and the Principles Document), Ofgem would have substantial control over key design parameters, and the rights of appeal for obligated parties remain unclear. Unless governance is tightly controlled, the licence modification will turn into a ‘blank cheque’, which imposes a significant risk on obligated parties.

Ofgem seems to believe that it would be possible to keep the scheme relatively flexible while avoiding the need for detailed regulatory intervention in its administration. This would only be possible if modification proposals could be expected to be relatively consensual. In reality, the governance of the MAs is likely to be an inherently antagonistic process, especially if the

obligation is only placed on the Big 6. Non-obligated parties will have a natural interest in seeking to expand the scope of the MAs, by requesting larger volumes or additional products to be brought into the scheme – this would give them free options to trade. Obligated parties will have a natural incentive to resist such demands. This misalignment of interests will make it necessary for Ofgem to intervene constantly to arbitrate disputes, which will, in turn, increase the risk of regulatory ‘tinkering’ with the MAs.

Overall, the risk that a flexible governance process imposes on obligated parties (and on the platforms delivering the MAs) would be very significant. In our opinion, this is a further reason why Ofgem should adopt a voluntary approach to developing liquidity.

Should Ofgem still wish to intervene, the governance arrangements should be tightly controlled. Our recommendations are that: (i) Ofgem set up a dispute resolution process with an independent arbiter; (ii) Ofgem refrain from intervening unless this dispute resolution process has failed; (iii) Any intervention by Ofgem should be subject to public consultation; and (iv) there should be clear rights of appeal for obligated parties.

We note that in the French VPP scheme, EDF had substantial discretion with respect to the administration of the auction (subject to their high-level undertakings).

## **6. Credit: transactions should be centrally cleared with full cash margining of mark-to-market exposures**

We note that the proposals do not address the issue of credit in much detail. This is a fundamental aspect of the mechanism, and we would like to emphasise that any design choice that would expose obligated parties to the credit risk of other participants would be completely unacceptable. This would include any scheme that would effectively socialise the credit risk of participants among obligated parties. Ofgem should not use the MAs to cross-subsidise credit.

We believe that the only viable solution in this context is central clearing with full cash margining of mark-to-market exposures. If the MA is not centrally cleared, there would be significant auction design issues because there would be multiple products that are close substitutes but not homogenous. Sellers would need to agree credit with buyers, which creates issues as to whether sellers are fairly restricting buyers, and there would be no clear price resulting from the MAs.

## **7. Auction format: the auction format should be relatively simple and lead to efficient prices**

The proposals do not discuss the format of the auction. This is a very important aspect of the mechanism that could condition other design choices. It should therefore be discussed in parallel with these other parameters.

Ofgem could potentially consider three broad auction formats:

- clock auction;
- sealed bid, uniform price auction (based on simple, single bid per product per bidder); and
- sealed bid, uniform price auction (based on bidders submitting a demand curve or multiple bids for each product).

We discuss briefly some advantages and disadvantages of these formats.<sup>11</sup>

### **Clock auctions**

The overwhelming majority of VPP/ capacity release scheme auctions in Europe have been as clock auctions. The essence of the format is that:

- the auctioneer sets the ‘price clocks’, ie the price of each product;
- bidders declare the volume of product that they would like to buy at the announced prices;
- aggregate information on demand at those prices is fed back to bidders;
- activity rules constrain bids to be economically rational in order to drive convergence of the auction process (eg demand can only stay the same or reduce as the price rises); and
- each product (or group of products) clears when demand falls beneath the supply.

The key advantages of clock auctions are:

- at least in their simplest form, they are simple to understand;
- they provide price discovery and will therefore give comfort to independents / new entrants that they are only paying the real market price;
- depending on the activity rules, they allow some response to the prices of substitutes and complements; and
- outcomes are generally relatively efficient.

The key disadvantages of clock auctions are:

- they are time consuming relative to a one shot ‘sealed bid’ format. Typically clock auctions take ½ -1 day to run. (This can be reduced if price clocks can be started quite close to market clearing prices.); and
- there can be market movements during the course of the auction that mean that commitments to ‘closed’ products can go ‘out of the money’ before the auction is closed.

### **Simple sealed bid – one bid per bidder/product**

We refer here to ‘sealed bid’ in the sense that in relation to any individual product there is a single bid submission and no feedback to the bidder.

The key advantage of this format is its extreme simplicity. Like the other formats considered it can produce clear price outcomes, with all bidders paying, for example, the price of the lowest bid not accepted. This would be a ‘second price’ auction. It will be substantially faster to run than a clock auction.

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<sup>11</sup> This section is based on advice we have received from Frontier Economics.

The key disadvantages of this format stem from the fact that there is no price discovery mechanism. In particular, bidders will not:

- get any information about what other bidders think the product is worth before they have to commit to their only, hence final, offer; or
- be able to see the emerging prices of substitutes and complements which may feed into their valuations of particular products.

However, we note that neither of these would necessarily be viewed as a major problem if the products being auctioned turn out in due course to have market prices reasonably well established through other trading activity (as well as preceding auctions).

### **Sealed bid - multiple bids per bidder per product (demand curve)**

In this format bidders effectively construct a demand curve by placing a set of non-mutually exclusive bids for each product. In the case of mandatory sellers, this could be in the form of incremental demand (positive or negative) relative to the quantity it is obligated to sell.

This auction format resembles a hybrid of the clock auction and the simple sealed bid auction. Although it does not provide price discovery in the normal sense of a dynamic auction, the submission of demand curves coupled with a clearing price has the effect of allowing bidders to submit contingent bids. If the total volume of a product offered is  $V$  and a bidder demands volume  $v$  at a price  $p$ , this bid is contingent on their being other participants who in aggregate demand volume  $V-v$  at price  $p$ . If they did not, the bidder would never have to pay price  $p$ . In that sense the bidder has made an offer contingent on information about how others value the product.

The key advantages of this format are:

- it is quicker than a clock auction given the ‘one shot’ submission;
- it would be expected to be significantly more efficient than a simple sealed bid auction and gets closer to the efficiency of a clock auction; and
- it is quite simple to understand.

Its key disadvantage is that it does not allow bidders to take into account the emerging prices of substitutes and complements.

### **Conclusion regarding auction format**

We think that either a clock auction or an auction where bidders submit full demand curves could be designed to deliver the arrangements as they are presently conceived by Ofgem. There could be a case for starting mandatory auctions with a clock auction and then migrating to one with one shot demand curve submission as soon as wider market information makes it possible to price all products within a reasonably narrow band.

We think that a very simple sealed bid auction would not be appropriate as participants would have relatively little control over the volume that they transacted. For similar reasons it would leave obligated parties with particular uncertainty on volumes because they would only be able to place one buy side bid and this might typically be quite large to offset the sell obligation.

## Question 9: Do you consider it appropriate to have buy-side rules in place and do you have any comments on the detail of such rules?

No, we do not see any clear rationale for buy-side rules in general, and we believe that the specific rules proposed by Ofgem are unnecessarily complex. We propose that Ofgem do not impose any buy-side rules unless there is objective evidence that they are needed.

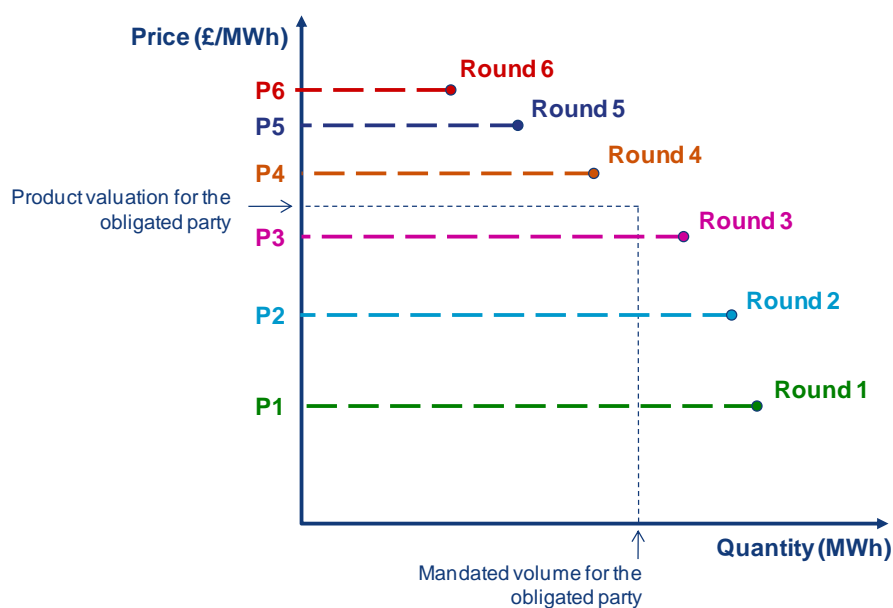
### There is no clear rationale for buy-side rules

The rationale for the buy-side rules seems to be that obligated parties might seek to ‘evade’ the requirement by systematically buying back all the power they sell in the auction. We believe that this type of strategy is extremely unlikely, if only because it would deliver no tangible benefit to the party adopting it. Even if the Big 6 do not support the MAs, the likelihood is that they would adopt a normal commercial behaviour if the scheme was implemented and try to ‘make the most of it’ instead of boycotting the scheme.

This is best explained with a simplified example. Suppose that an auctioneer ‘pools’ the mandated volumes made available by obligated parties and then sells these volumes through a ‘clock auction’. Under this auction format, the auctioneer progressively increases the price of each product, and the bidders declare the volume that they would like to buy for each price; each product clears when aggregate demand falls beneath supply.

In this setting, the rational, profit-maximising behaviour for all buyers (including obligated parties) is to submit bids reflecting their ‘true’ demand for each announced price. In the initial auction rounds when the price is low, obligated parties would bid large volumes exceeding their mandated sales (ie they would seek to be net buyers). As the price clock increases and gets closer to their valuation, obligated parties would submit smaller bids, until the price exceeds their valuation and they become net sellers (Figure 8). This would be the profit-maximising strategy for any participant in the auction, and there is no obvious reason why an obligated party would want to depart from this strategy.

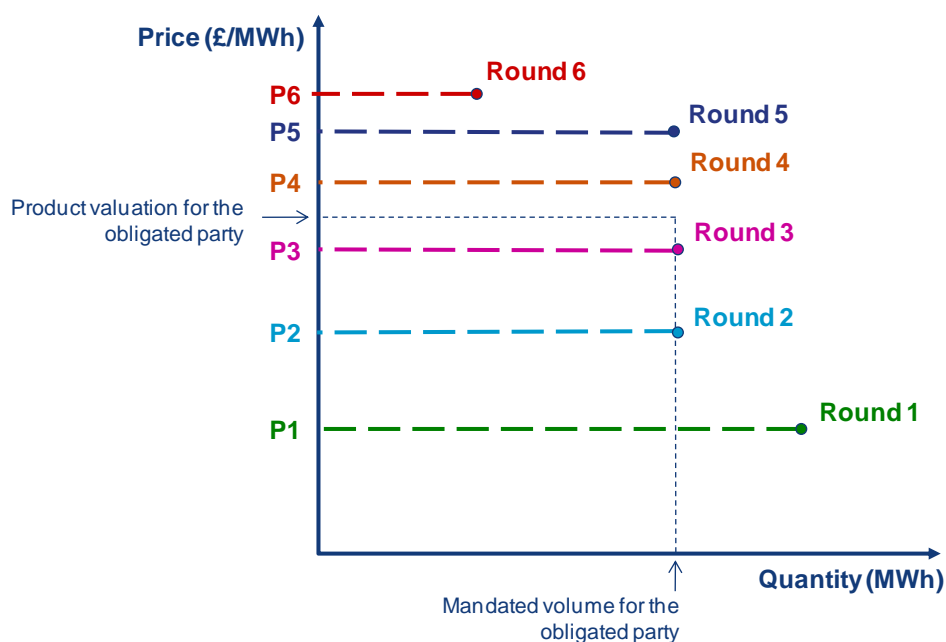
**Figure 8 Rational bidding strategy for an obligated party**



Source: Centrica Energy, based on advice from Frontier Economics.

Ofgem seems to be concerned that obligated parties could seek to ‘evade’ the obligation by systematically submitting bids equal to their mandated volumes, irrespective of the price (or at least over a large section of the price range). The parties adopting this strategy would, over a very wide range of prices, procure exactly the same volume as they are obligated to sell, and hence would be indifferent to the price outcome (Figure 9). In essence, these parties would not participate in the auction; they would contribute neither to liquidity nor to price formation.

**Figure 9 ‘Avoiding’ bidding strategy for an obligated party**



Source: Centrica Energy, based on advice from Frontier Economics.

We believe that this type of behaviour is extremely unlikely in practice, if only because it would not be beneficial for the party following it. An obligated party adopting this strategy would forego the possibility to buy products at prices below its valuation (eg in rounds 2 and 3 in Figure 9), and the option to sell products at prices above its valuation (eg in rounds 4 and 5 in Figure 9). It seems to us that an obligated party would only adopt this strategy if it was desperate to ‘sabotage’ the MAs as a matter of principle. This seems rather unlikely, and at any rate this behaviour would be fairly easy to detect and address through subsequent intervention if it occurred.

Overall we do not see any clear rationale for constraining the bidding strategy of obligated parties. Ofgem should not impose buy-side rules unless: (i) it identifies more precisely the type of behaviour that it wants to prevent; (ii) it can demonstrate that this type of behaviour is not just a mere theoretical possibility but a real threat to the effectiveness and integrity of the MAs; and (iii) this risk cannot be addressed more effectively through ex post intervention rather than ex ante rules. If Ofgem is concerned about the risk of gaming and market manipulation, it might be more effective to use conventional market manipulation prohibitions.

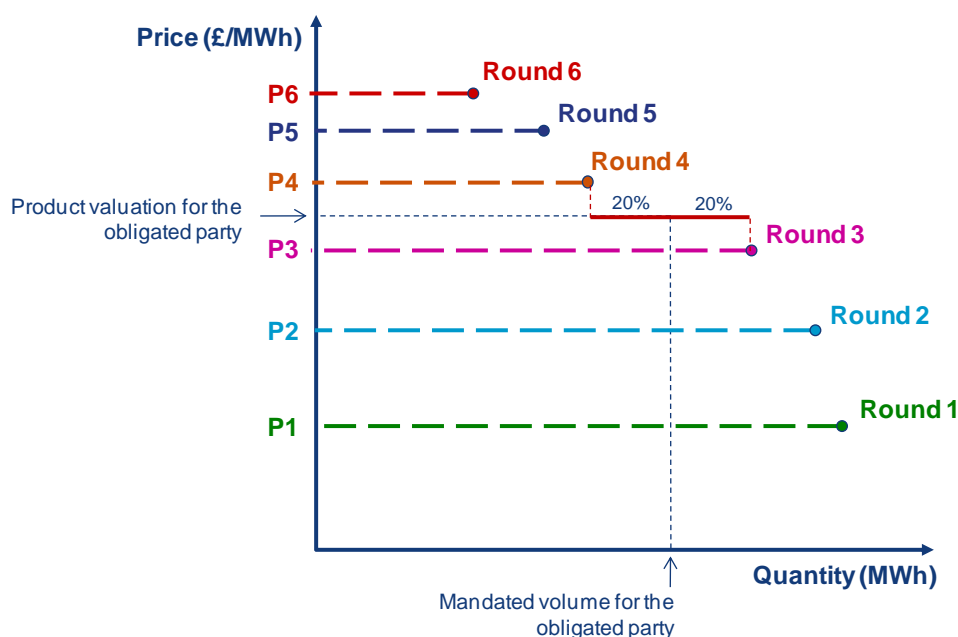
### **The buy-side rules proposed by Ofgem are unnecessarily complex**

Our best interpretation of the buy-side rules proposed by Ofgem is that obligated parties would be required to signal to the auctioneer a price at which they would be indifferent



between buying 80% of their obligated volume and buying 120% of this volume. Presumably this price would correspond to the obligated party's valuation of the product (Figure 10).

**Figure 10 'Constrained' bidding strategy**



Source: Centrica Energy, based on advice from Frontier Economics.

The rationale for these rules is unclear, and we are not quite sure how it would work. Having a flat section of this magnitude in the demand curve is unlikely to correspond to the natural commercial behaviour of obligated parties. We have two important issues with this.

- Firstly, this rule is in effect equivalent to imposing a market making obligation with a zero bid-ask spread, an option that in relation to a possible MMM obligation Ofgem considers to be overly intrusive.
- Secondly, this rule could make it possible for the market to identify the valuations of the products by obligated parties (by identifying swings in the demand curve). This could affect the efficiency and integrity of the MAs.

**Question 10: Do you consider that there are benefits and risks to the approaches that we have not identified?**

We think that Ofgem has potentially understated certain disadvantages of approach two (with obligated parties running separate auctions).

- We do not see how this approach could accommodate buy-side participation. If obligated parties have separate auctions, by definition they cannot buy more than 120% of the volume released.
- Separate auctions would also create a significant risk that all buyers do not make the effort to bid in all auctions and some sales are accidentally made at distressed prices.
- Having separate auctions also makes it more difficult to produce a single price reference per month unless some form of 'virtual hub' arrangement is set up. Presumably this function would have to be procured for and monitored by Ofgem, which

would seem to reintroduce aspects of approach one (and, therefore, a significant layer of complexity)

- Ofgem seems to associate this approach with looser governance arrangements, which would increase regulatory risk.

Ofgem has identified the main issues with approach one. There is a significant risk that this approach might reinforce the competitive position of a single platform in the GB market. We do not think that it would be practicable to re-tender for this service on a regular basis: once the systems are in place, the incumbent would have a very significant advantage over any challenger; also it might be difficult to transfer positions from one clearing house to another. Ofgem is also right to point out that this approach would involve Ofgem intervening shaping a commercial relationship between third parties (ie, between market participants and platforms). The OFTO regime presents a similar issue (with Ofgem shaping a commercial relationship between generators and transmission operators), and this illustrates the difficulties involved.

In general, Ofgem should not underestimate the time and costs that would be required to deliver the MAs (under either of these two approaches). By way of illustration, the Market Design project that led to the creation of N2EX took more than 4 years and cost several millions of pounds.

**Question 11: Which approach do you consider is best placed to deliver our objectives at least in terms of cost and risk?**

Given the above, we think that approach one is the ‘least worst’ option, in the sense that it is the only workable approach even though it involves considerable risks.

**Question 12: Do you consider that both approaches are able to meet our objectives?**

As discussed above, we think that approach one is the only workable solution.