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Wholesale Markets
Ofgem
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London
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24 October 2012

Dear Andreas

Electricity Balancing Significant Code Review initial consultation

EDF Energy is one of the UK's largest energy companies, with activities throughout the energy chain. Our interests include nuclear, coal and gas-fired electricity generation, renewables, and energy supply to end users. We have over five million electricity and gas customer accounts in the UK, including residential and business users.

As a general principle, we agree that cash-out prices should reflect the costs incurred by the system operator in residual balancing. Ideally, cash-out should place incentives on electricity wholesale market participants that result in economically efficient balancing of the electricity system. By reflecting the cost of residual actions taken by the System Operator on to participants with imbalance, those participants receive the correct signals to incentivise them to take cheaper actions where they can.

However, actual real time balancing is highly dependent on complex interacting features of electricity production, consumption and transport. In practice, it is difficult to determine the appropriate price(s) for balancing over any given half-hour, given that the cost of balancing actions might be incurred over only a few minutes, or might be the result of actions spanning many half-hours, or might be taken partly or wholly as a result of transmission constraints.

Therefore, there are many complexities for which trade-offs between conceptual ideals and practical approaches are unavoidable. If individual participants face extreme risk from imbalance, with no effective means of managing that risk, they may incur inefficient costs in attempting to manage it, or suffer loss or even failure. Before determining the best package of options, the broader effects on competition and investment to meet customer demand must be considered.

Our overriding view is that there is no compelling evidence of systematic market failure in relation to balancing and, faced with these complexities, we believe the current cash-out arrangements will continue to give a firm, but not excessive, incentive on electricity wholesale market participants to balance their own position. We see no requirement for fundamental changes to current balancing arrangements at this point in time. Other market initiatives are more pressing.

Lastly, we note that imbalance prices provide short-term signals for participants to make available the generation capacity that exists, to procure energy from the available capacity, and to encourage willing consumers to respond to shortages. However, we do not believe cash-out alone, or through its influence on forward market prices, is an efficient means of delivering long-term investment in plant capacity. Future imbalance prices and short-term market prices could fluctuate between three levels: those set by competing sources with very low short-run operational costs; prices set by fossil generators, and those based on consumers' value(s) of lost load if there is insufficient usable capacity. These present contrasting, volatile and uncertain indicators for future long-term investment. An effective cash-out regime delivering efficient short-term balancing should complement the efficient long-term procurement of capacity through Electricity Market Reform FIT CfDs and a Capacity Mechanism, but it cannot replace them.

The key points of our response are as follows, in relation to the eight key issues identified in the consultation document:

- **More marginal prices.** We believe an averaged price using "PAR500" should be retained at least until we have a clearer understanding of requirements arising from the Framework Guidelines on Electricity Balancing. We acknowledge that in ideal circumstances marginal pricing should incentivise participants to make efficient choices between self-balancing or relying on central balancing by the System Operator. But there are complexities on which trade-offs must be made and we have not seen compelling evidence to suggest a move towards more marginal prices is required at this stage.
- **Single or dual cash-out.** We support retention of the dual cash-out regime because it provides participants with incentive to balance their own position. It forces participants to trade in advance, ensuring liquidity in support of Ofgem's liquidity objectives. We acknowledge the potential benefits of single cash-out price in ideal circumstances, but, as for marginal price, many complexities surround the determination of that price.
- **Single or separate trading accounts.** We support measures to permit the consolidation of energy into a single electricity trading account. Netting generation with demand for the purpose of energy balancing would reduce transaction risk and costs and reduce complexity. It would allow natural consolidation benefits, particularly for participants with smaller portfolios. We would not expect any significant change in companies' balancing behaviours as a result of such a change.
- **Pay-as-bid or pay-as-clear.** Unless and until it is possible to distinguish reliably between the different types of service provided during a particular half-hour, we think the existing pay-as-bid arrangement should be retained. Pay-as-bid reduces the possibility of balancing providers being settled at the price of a different service from that which they are providing. We acknowledge the theoretical appeal of pay-as-clear, especially when coupled with a single marginal price for

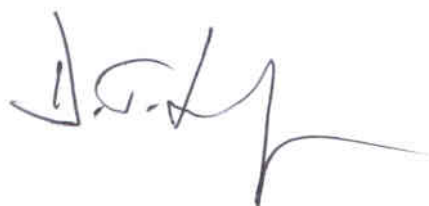
imbalance, but have concerns that it would be difficult in practice to determine the correct price and exactly who should pay/receive it.

- **Attributing a cost to non-costed actions.** We do not support introduction into the balancing arrangements of a generic high value of lost load (VOLL) for demand curtailment. There are very real practical difficulties in doing this effectively. We recognize that it could increase short-term incentives to secure energy from available capacity, and to identify consumers willing to reduce demand. However, we consider that procurement of long term capacity and voluntary demand reduction requires a mechanism or market specifically for that purpose.
- **Improved allocation of reserve costs.** While the current arrangements are not perfect, to do this properly is difficult, and we think the resulting benefit in terms of changed allocation of costs and incentives to balance would be small.
- **Balancing Energy Mechanism (BEM).** We do not support the introduction of a new BEM. The forward market effectively provides a balancing market and the EU target model envisages within-day auctions. It would be costly and inefficient to introduce another mechanism with no clear advantages.
- **Alternative arrangements for renewables.** We do not support the proposal to establish an administered central aggregator. This would be discriminatory and is likely to contravene the EU Framework Guidelines on Electricity Balancing. However, we are supportive of the development of commercial aggregation services as a market response to manage a risk for intermittent generators.

Our detailed responses are set out in the attachment to this letter. Should you wish to discuss any of the issues raised in our response or have any queries, please contact Mark Cox on 07875 115499, or myself.

I confirm that this letter and its attachment may be published on Ofgem's website.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'D. Linford'.

Denis Linford
Corporate Policy and Regulation Director

Attachment

Electricity Balancing Significant Code Review initial consultation

EDF Energy's response to your questions

CHAPTER 2: Approach

Q1. Do you agree with the approach and the proposed stakeholder engagement throughout the SCR?

We agree with Ofgem's proposed high level-approach to the SCR, which includes the need to be *realistic and practical, evidence-based, flexible, and consistent with future market changes*. However, in accordance with these stated aims, we would welcome a more open and transparent development of the proposals, with more opportunity to engage and comment before initial proposals are formally published. For example, although we are aware that Ofgem is working closely with DECC officials to ensure the SCR proposals are compatible with the capacity mechanism (CM) and Feed-in Tariff Contracts for Difference (FIT CfDs), and with ACER in relation to the European Target Model and Electricity Balancing Framework, it is not entirely clear how and to what extent the interactions between them will be considered and developed in practice. A joint statement or a presentation at a stakeholder workshop explaining the overall vision, including projected timescale, would be a good way to show how the approaches *flexible and consistent with future market changes* are being implemented in practice.

It is clear from the series of well-organised workshops that Ofgem has expended considerable time and effort in preparing the stakeholder engagement events. As stated in the consultation, it is important that Ofgem work closely with stakeholders and industry to make best use of available experience and knowledge. Similarly, to demonstrate that the SCR is *evidenced-based*, there should be full transparency of the models and methodology used by Ofgem in conducting its analysis.

Q2. Do you have any evidence that you would like to submit that may be relevant for any aspect set out in this document?

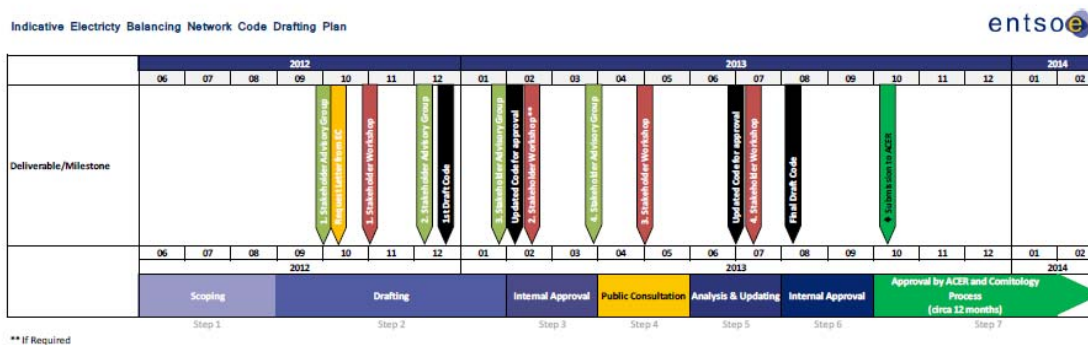
None at this time.

Q3. What is your view on the interactions between our considerations and aspects of the EU target model?

There are interactions between the considerations in the scope of the SCR and elements of the EU target model (TM) but it is too early to specify the extent of the significance. The TM requires the system operator(s) to consider structural congestions on the network and to propose price zones to reflect the different value of energy at different locations. The potential need for market splitting may require significant changes if the review of geographical boundaries resulted in Great Britain (GB) being split into multiple bidding

zones. This may mean that cash-out prices would need to be calculated separately for each bidding zone. Conversely, further coupling of the GB market to other EU markets will have implications and it will be important that these markets are not distorted by particular market features.

There will be important interactions with the Network Code on Electricity Balancing (BAL), which has yet to be developed. The Electricity Balancing Framework Guidelines indicate an aspiration for harmonised balancing products with a single marginal cleared price determined by the selection of actions from a common merit order list. This rationally leads to the possibility of the same single price for clearing of imbalances. However, the Guidelines are not explicit, and much remains to be decided. In the SCR consultation, Ofgem states that it is aiming to publish its draft policy decision in spring 2013; setting out any proposals for potential reforms. We note, from the indicative BAL drafting plan published by ENTSO-e, their public consultation is not expected to start until spring 2013.



While the BAL focuses on the principles for cross border imbalance settlement pricing it is important, in areas of overlap, that the BAL and Ofgem’s proposals are consistent to reduce unnecessary uncertainty.

If the TM and BAL are implemented successfully and their objectives are met, then sharing of generation and demand-reduction capacity with Europe should increase security of supply and also optimise balancing costs at an EU level. In the on-going impact assessment of the SCR, it will be useful to build on Ofgem’s Electricity Capacity Assessment 2012 by incorporating the anticipated impacts of the TM and BAL on the GB electricity market.

CHAPTER 4: Primary considerations

Q4. Do you feel there are any further alternatives to the reform options presented under our primary considerations?

None at this time.

Q5. What other benefits or drawbacks can you identify for each of our primary considerations? Please provide any evidence you may have to support your position.

Our overriding view is that there is no evidence of systematic market failure requiring fundamental changes to existing arrangements.

Once we have a clearer understanding of EU requirements, there may be a need to make some changes.

1. More marginal main cash-out

EDF Energy supports the baseline i.e. average pricing based on PAR 500.

We acknowledge the theoretical benefit that marginal price would give in incentivising participants to take cheaper balancing actions than the system operator, if they can.

However, in practice, there are many approximations and assumptions inherent in determining the price from realtime actions and applying it to half-hourly aggregate imbalances. Overall, we feel a partly averaged price as at present reduces the impact of potential errors and anomalies in the determination and application of imbalance price to half-hour imbalances.

- Current arrangements already provide strong incentives to balance.
- More-marginal (e.g. PAR 100) may be slightly more representative of the marginal cost of balancing, but increases susceptibility of cash-out prices to any deficiencies, or errors, in the “tagging” and price-formulation process – which is recognised as imperfect.
- Deficiencies in the flagging/tagging arrangements are much reduced under P217A. However, if a more marginal approach were to be taken, the tagging process would need to be monitored more carefully, and refinements made where shortcomings are identified.
- There would be increased scope for small volumes of expensive balancing actions to influence imbalance prices. More consideration of the reasons why particular actions are taken might be required. Opinions vary on what should be considered a shared cost and what should be targeted (in shared BSUoS, averaged imbalance prices, or marginal imbalance prices respectively).
- It might be possible to match procurement by the SO to individual events creating the total net requirement in chronological order. But after gate closure, participants cannot procure themselves, so it would be unfair to discriminate at this level.
- The regulator would need to be more alert to potential abuses of market power, especially in situations of shortage of suitable flexible capability.
- More marginal prices could eliminate small suppliers over time and, to a degree, slow down progress towards renewable generation targets.

- It is not clear that smaller players could or would respond to heightened short term price signals. Under dual price, imbalance charges become a penalty, or extra cost.
- Small players could be exposed to relatively larger imbalance risks compared to their size, because of the relative difficulty forecasting volume for a small portfolio.
- New suppliers may have more uncertainty about their customers' demand
- Therefore it could cause barriers to entry.
- Opportunities for gaming would be increased due to the greater sensitivity of cash-out prices to a single accepted bid or offer.
- Sometimes generator imbalances are caused by de-energisation due to issues on the transmission system. Imbalances for generators in this situation are unfair, and a more marginal imbalance price could make the situation worse.
- Generators may be more cautious about selling forward the output of less reliable plant, for example peaking plant that runs infrequently. This could exacerbate the undesirable tendency for peaking plant to not participate in the wholesale markets or the BM at all, and to be reliant solely on formal reserve contracts with National Grid. This is not good for wholesale market development and liquidity.

2. Single or dual cash-out price

- **EDF Energy continues to support dual cash-out pricing.**
- Dual price incentive is a policy tool tailored to enhance relatively accurate forward trading, subject to the known tendency to "go long" due to cash-out price asymmetry. This incentive to contract, or in fact to slightly over-contract, aligns with Ofgem's liquidity objectives.
- Ofgem cite a wide spread between SBP and SSP as evidence of a possible deficiency, but this is simply a reflection of asymmetric incentives, not market failure.
- We agree with Ofgem that "free headroom" is an interesting issue which needs to be explored further. The best party to procure reserve (headroom or footroom) is NG, which knows all the plant characteristics, and the best collective combination in relation to national response need at any given point in time.
- NG is also aware of locations where response and additional synchronised generation at particular levels may have more value than another, e.g. for voltage support purposes. By contrast, market participants choosing to "go long" on their portfolio as a response to increased asymmetric imbalance energy exposure risks will not necessarily select to over-produce from the most useful generation for NG.
- The Nord Pool model is an interesting case study. However, given that the Nordic market is considerably different to GB, we are not convinced a like-for-like adoption of the Nordic model will be appropriate, or even feasible given the other differences.
- Ofgem rejected P74 which proposed a single price because of concerns it could weaken incentives for parties to balance their positions prior to gate closure, and might increase volatility in cash out prices. It was also thought that a single price could encourage parties to speculate on the overall direction of the system imbalance.
- Single imbalance price could become an alternative reference for traded energy, especially in conjunction with cleared balancing price. If participants think the SO can

balance more efficiently than themselves, short term physical trading liquidity could reduce (but could be replaced by financial trading?)

3. Single or separate trading accounts

- **EDF Energy supports changes that would allow consolidation of energy to a single trading account**
- Separate trading accounts were a regulatory tool created with the intention of offsetting the natural advantages of vertical integration. The advantage has turned out to be relatively minor or non-existent, and the requirement for separation can actually act against smaller vertically integrated new entrants.
- Allowing generation and demand to be netted in a single trading account would reduce transaction costs, reduce notification risks, and reduce complexity.
- We would not expect significant change in companies balancing behaviour.
- The complexity associated with the requirement to separately balance production and consumption accounts of the same party has created significant administrative and process effort, as well as opportunity for error, both centrally and within party businesses, with little obvious benefit.
- The greatest proportionate benefit in consolidating production and consumption accounts would appear to be for certain smaller participants that are active in both. The proportional benefit is relatively small for the largest parties, for whom the main benefit is probably simplicity and reduced opportunity for error.
- We believe the market has developed sufficiently, with a diverse range of portfolios among large and small parties alike, so that removing the separation between Production and Consumption accounts won't have a detrimental impact on competition.
- The current arrangement creates complexity that has caused problems for small, new, large and established parties alike, with little or no impact on physical balancing efficiency.

4. Pay-as-bid or pay-as-clear for energy balancing services

- **EDF Energy supports pay-as-bid.**
- Some balancing actions have more value to NG than others, due to response characteristics in relation to system need. Some actions, even if lacking locational value and even if accepted for >15 minutes (CADL) delivery, will have more value than others due to their particular dynamic characteristics, and can command a premium rate. Paying the same rate to all accepted actions in the half-hour would over-reward other actions, and would be inappropriate.
- We acknowledge the theoretical benefits of pay-as-clear, in providing efficient benefits to beneficial providers of a homogenous product, promoting investment in new entry in flexible balancing services. Also, in association with the same single cleared imbalance price for energy imbalances, the theoretical benefit of a shared reference

price for potential financial transactions between balancing service providers and imbalance users. And in simplicity.

- But until homogenous balancing products and the users of those products can be distinguished and matched with each other, we think there could be risks in adopting pay-as-clear. The cleared price could be paid to providers that are not providing the same service as the marginal provider that sets the price.
- Also, careful attention would be required to monitor for portfolio participants taking advantage of the potential for the price of one of their balancing units to set the price for all others.
- In the short term, Pay-as-clear is likely to increase BSUoS charges on participants when the system is short, and reduce the implicit credit on BSUoS charges when the system is long. Contrast this with the opposite effects that would arise from use of a marginal imbalance price.

5. Attributing a cost to non-costed actions

- **EDF Energy does not support the introduction of Value of Lost Load (VOLL) in electricity.**
- **If Ofgem decides it will introduce a VOLL into electricity balancing and imbalance, we suggest a cautious value be used to avoid unintended consequences for unavoidable and special circumstances.**

We acknowledge potential benefits of attributing a cost to non-costed actions:

- It would increase incentives to avoid shortfall when demand control is a risk.
- It would encourage suppliers to identify consumers that are willing to have demand curtailed at a lower price in order to avoid involuntary demand curtailment. However, achievement of this on a large scale would require technological advances, for example the facility to send instructions to smart meters.
- Most consumers place a high value on continuity of electricity supply, and there should be incentives that reflect this.
- VOLL is a convenient tool to allow government and the regulator to signal the value of customers' reasonable expectation.
- Balancing is the energy of last resort, and VOLL over a half-hour can be set on this basis.
- Suppliers (and generators) individual responsibility should be capped at this level.

However, there are risks and potential unintended consequences if VOLL is introduced because:

- VOLL varies by customer, time, duration and frequency. A single VOLL suitable for use in short-term balancing might be different to a VOLL used for other purposes.
- Implementation would be necessarily approximate, and fraught with difficulty:
 - How to determine the total amount of demand that has been lost
 - How to allocate the total amount between suppliers
 - How to identify affected consumers so that suppliers can provide them with compensation

- Demand Control tends to be applied by distribution area(s), so a mechanism will be needed to transfer money between short suppliers and those suppliers, within affected distribution areas, who have to pay compensation to consumers whose demand reduction has avoided reductions elsewhere.
- Use of extreme VOLL would incentivise avoidance of demand control, but if all companies individually took measures to avoid their own positions being short at such a time, the collective procurement could be inefficient.
- Emergency demand control (voltage reductions and power cuts) initiated by National Grid in accordance with the Grid Code is likely to remain exceedingly rare in practice.

6. Improved allocation of reserve costs

To do this properly would be difficult, and we think the resulting benefit in terms of changed allocation of costs and incentives to balance would be small. We acknowledge that some of the fixed costs of carrying reserve are currently allocated to shortfalling parties in periods of historic usage rather than the actual periods in which the reserve is most required or used.

- Having an operational Grid benefits all users regardless of location. Reserve provides insurance for everyone against unexpected imbalances. Therefore sharing some or all of the costs is appropriate.
- The current method does not target the fixed costs of reserve particularly well on those that tend to be short when the reserve is utilised.
- Improvements have been considered previously, but no particular method seems to be without problems. For example:
 - A correlation between utilisation of particular fixed reserves and the participants that tend to be short at those times can only be made after the event. How statistically significant should a correlation be? How should the correlation relate to charging for fixed costs?
 - If fixed costs are converted to an ex-ante utilisation price on the basis of expected utilisation, but actual utilisation at operational cost turns out higher, there could be large and damaging over-recovery, especially if expected utilisation was low, so price is high. Again, retrospective adjustments might be required.
 - Unpredictable retrospective charges, or changes to prices, provide poor signals for incentivising efficient behaviour, and create complexity.
 - Reserve capability might have more value at some times than others, for example at peaks compared with off-peaks. But how can that be measured, and should it be reflected in imbalance prices?
- There is fundamental difficulty in allocating the cost of an option between parties sharing it. If those calling most on the insurance provided by reserve pay more towards it, the incentives to avoid the need for the insurance might be improved.
- However, revision of the current method could be complex and could divert resources from more important and material issues.

- Note that firm reserve procured by the System Operator may not be available for use bilaterally by market participants.
- This proposal may interact with EU balancing if reserve providers have to harmonise products with those offered to TSOs in other EU systems.

7. Balancing Energy Market (BEM)

EDF Energy does not support the creation of a new BEM.

- The forward market effectively creates a continuous balancing market. It is difficult to see what products a market would offer that are distinct from it.
- It would be costly to implement with no real proven advantages, unless it becomes the norm in the rest of the EU.
- The EU target model includes day-ahead and within-day implicit auctions intended to facilitate cross-border trade. This should facilitate balancing through trade, provided it is informed by good market and system information.
- The Balancing Energy Market appears to be a kind of final “clearing” of expected imbalances and balancing offers.
- The allocation of balancing costs arising from imbalances occurring after gate closure still remains. Some would like to share these, as for frequency response, but it seems unlikely this would be economically efficient, or acceptable to regulators

8. Alternative arrangements for renewables

EDF Energy supports the development of commercial aggregation services as a market response to manage a risk for intermittent generators.

EDF Energy does not support the establishment of alternative arrangements for renewables. This would be discriminatory and is likely to contravene EU Balancing Framework Guidelines.

- We do not support the creation of a centralised aggregator, or pooling system, that is run (or otherwise directed) by the System Operator.
- This would be special treatment of a particular category of generation. It would create market distortions. It may remove incentives on intermittent operators to forecast accurately, to schedule maintenance efficiently and to manage the risk of intermittency through contractual arrangements.
- Generators are best placed to determine how to manage the risks of generation, which may include engaging the services of other parties on a commercial basis.
- It may well make sense to aggregate renewable generation - but this can already be done outside of the BM.
- It is dangerous to not charge generators if they genuinely create costs for the system, especially if their subsidy arrangement encourages production but does not make the distinction between useful and spilled energy, with a risk of distorting the forward market through the creation of negative market prices.

- Discrimination that favours certain classes of participant relative to others is generally economically inefficient, unless it allows new participants or new technologies to overcome initial obstacles to future efficient competition.
- We are not aware of anything that would prevent renewable generators from entering into agreements with each other to consolidate balancing provision or imbalance risks.

Q6. Which of the reform options considered under each of our considerations do you believe would provide the most efficient balancing incentives and why?

The marginality debate is likely to shape the rest of the policy options but it is not necessarily the solution to achieving the objectives of the SCR. The complexity arises because marginal prices may be the most efficient balancing incentive at a theoretical level, but in practice, could cause a number of unintended consequences owing to uncertainties.

Ofgem presented its analysis of the impact of having more marginal prices by comparing the system buy price (SBP) with different PAR values. The graph(s) shown at the third workshop suggest that to see significant systematic changes to SBP, the PAR level would have to be reduced to 1. Moving from PAR500 to PAR1 would increase price volatility and increase investors' perception of imbalance risk. It is not clear whether this would be outweighed by potential small changes in forward prices as participants adjust their forward trading strategies. Investors with a broad portfolio might be able to manage this risk but it is unclear what impact PAR1 would have on new entrants, existing peaking plant, and intermittent generators (who have difficulty in forecasting). More sensitivity analysis is necessary before any conclusions can be drawn.

Until there is clear evidence that impact on investment, particularly, in intermittent generation will not be unduly affected, we think it would be sensible to maintain the baseline of PAR500.

Dual cash-out price has a successful track record in incentivising participants to self balance, and we recommend retaining it for the time being.

Pay-as-clear for energy balancing services is the reform option which would have most direct impact on balancing providers, and in the short term would be likely to increase BSUoS charges for all participants when the system is short, and reduce the credit within BSUoS when the system is long. Theoretically, there could be long term benefits from increased efficiency and promotion of new entry into balancing provision. However, we have concerns that different balancing products have different value, and a single price should only be applied to products of the same type. The Balancing Framework Guidelines aspire to harmonised balancing products, but we think considerable work is required to identify those products which are equivalent, for which it might be suitable to have a single price. Note that imbalance and balancing actually occur instantaneously, while trading and settlement occur in steps at an aggregate half-hour level. There are

numerous approximations in trying to match the costs of realtime balancing actions with an average half-hourly settlement position.

The option to allow energy to be consolidated to a single account is effectively BSC modification P282 which was proposed before the SCR was launched. We do not believe the policy decision needs to be made as part of the overall package of options.

Q7. Alongside this initial consultation we have published preliminary analysis of the last modification to the cash-out arrangements, P217A. Do stakeholders agree with the initial findings of this analysis?

The results of the analysis indicate that flagging/tagging has been reasonably successful since P217 was introduced, and indicates changes to cash-out prices that might have occurred with different imbalance price scenarios. However, the analysis does not consider or make quantitative estimates of the possible effects of behavioural changes in response to rule or parameter changes. Nor does it consider the potential impact on different types of BSC party. If a more marginal imbalance price approach were to be taken, the tagging process would need to be monitored more carefully, and refinements made where shortcomings are identified.

Q8. What additional analysis could be done as part of the SCR around Modification P217A and the flagging methodology it introduced?

Ofgem could investigate the incidences of more extreme prices to identify whether the causes of them were attributable to particular imbalance events, constraints, balancing performance, and/or balancing actions for which cheaper alternatives might have been available in an unconstrained system.

Some investigation and analysis in detail of potential behaviour changes that might result from potential changes, and their impact on balancing and prices, should be undertaken.

Q9. Do you agree with our rationale for considering making cash-out prices 'more marginal'?

We understand Ofgem's rationale for considering making cash-out prices more marginal but are not persuaded that it is the right decision to make now, given other current developments underway in the electricity markets and, in practice, it would be difficult to deliver effectively.

There are a number of compromises within the current arrangements. These include the trade-off between the value of small new entrants and the desire to sharpen up cash out prices. Sharper cash-out prices could deter new entrants.

The consultation helpfully sets out some of the criteria Ofgem could use in its impact assessment but the sensitivities of the criteria to assess policies against could be improved so that the benefit of any proposed changes can be properly measured. We would

suggest prioritising the criteria and showing interactions/dependencies with other policy areas. For example, ensure a *secure and reliable electricity supply* and *impact on investment* are closely linked to the EMR Capacity Mechanism. Cash-out prices are arguably more relevant in securing short-term reliable electricity supply than incentivising investment in capacity. Similarly, *integration of European markets* will interact closely with the need to ensure a *secure and reliable electricity supply*.

CHAPTER 5: Secondary considerations

Q10. Do you agree with the circumstances we have identified in which the secondary considerations are important?

Improved information

We agree that improved provision of information should help participants to balance efficiently. In particular, improved information from the System Operator (SO) on expected demand, generation, total availability, balancing availability, imbalances and reserve would be useful. Better information should lead to better understanding and hence better actions, and improved market and system efficiency.

Improved information could potentially be used to implicitly collude or exploit niche market power. However, transparency should make such behaviour visible to the market, and regulatory attention could be applied if required.

Creating a reserve market

We see no need for more frequent auctions for reserve in GB at the current time. We understand that this is a method used by some System Operators in Europe as a primary method of pre-contracting balancing reserves. In GB, the current periodic tender procurement of short term operating reserve provides some pre-contracted reserve, and half-hourly bids and offers effectively provide reserve. However, we are aware that there are references to this in the Framework Guidelines on Electricity Balancing and would welcome further insight from Ofgem regarding its applicability in GB.

Amending gate closure

We would support changes that allow notification soon after gate closure of contracts made before gate closure, provided the cost of change is reasonable and there are protections against abuses. This would effectively be equivalent to a small reduction in gate closure.

In principle, we see potential benefits in amending gate closure to allow trading and self-balancing even closer to real-time. However, we acknowledge this could create difficulties for National Grid in giving it less time in which to resolve any imbalance that remains, and it would not be a priority for us at the present time.

Residual Cashflow Reallocation Cashflow (RCRC)

Mismatches between RCRC and the energy balancing component of BSUoS are a consequence of the use of dual imbalance price, mandatory Production/Consumption balancing, non-marginal imbalance price and pay-as-bid for balancing actions. These features were originally intended as a package to guarantee forward trading and reduce opportunity for exploitation of any lack of competition when NETA was first introduced. With an idealised single cleared price between balancing provision and imbalance, RCRC and the energy balancing component of BSUoS would cancel each other. We think surpluses and deficits arising from the current arrangements should continue to be shared between parties on a per MWh basis, and while this is the case, we remain relatively neutral to issues regarding RCRC. We think any other allocation, to use the surpluses and deficits to incentivise other behaviours, would complicate the arrangements unnecessarily. However, we recognise that changes may arise as a result of decisions made on other primary considerations.

Reverse Price

If dual price continues, which we support, we are comfortable with current Market Index Price as a reasonable reflection of short term market price that parties with “helpful” imbalance might have been able to trade. Details of the reverse price are subject to periodic review under the BSC, and any proposals can be raised by parties as part of that review.

Setting an information Imbalance charge

We think current Grid Code obligations concerning the provision of accurate information including Physical Notifications have been effective to date, and information imbalance charges should continue to be held “in reserve” and only brought into use if a real need is demonstrated.

The quality of information provided to the SO and the market is vital to efficient planning and balancing as inaccuracies in the information provided over various timescales carry a cost. For example, inaccurate physical notifications (PN) information at or after the day-ahead stage could incentivise trades and reserve holding that turn out to be unnecessary or counter-productive, and require unwinding at cost.

If a single imbalance price were to be adopted, uncontracted imbalance “helping” the system could get the same price as balancing actions. If the advance information was accurate, it can be argued this is reasonable, but if not, it might result in unnecessary actions by the system operator, that furthermore could benefit the imbalance party. An information imbalance charge could help to prevent any such activity, with revenues used to offset additional balancing, and hence imbalance, costs.

The level of charge, and how it is reallocated, would need careful consideration to avoid arbitrary outcomes.

Q11. Do you have any other comment on the secondary considerations presented here? Please provide any evidence you may have to support your position.

The full impact of reform of any of these secondary issues should be carefully considered to ensure there are no unintended consequences. An important consideration is generators' strategy in their assessment of risk to production and their physical notification. Changes to cash-out that sharpen imbalance prices might incentivise some generators to nominate positions only at the last minute, once they have more certainty of likely outcomes.

**EDF Energy
October 2012**