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Dear Rachel,

We welcome the opportunity to respond to your open letter indicating Ofgem's intention to pursue a 'narrow scope' Electricity Balancing Significant Code Review (SCR), and the intention to consider initiating a new project to design the future electricity trading arrangements.

In our last response to the Electricity Balancing SCR, we were concerned that a narrow approach would not meet all of Ofgem's objectives for the review. While we understand Ofgem's decision to pursue the narrow scope approach to settle some of its long standing concerns with the cash-out price, we strongly believe that the wider scope review is still needed to ensure that the trading arrangements remain fit for purpose in the future. If a decision was taken not to pursue this review now, there would be a missed opportunity for new investors to consider the new trading arrangements when developing projects under EMR. This in turn would risk locking-in sub-optimal capacity into long contract terms, meaning that consumers may be locked into paying balancing costs that are higher than necessary.

We broadly agree with the issues that Ofgem identified in its letter, though we consider that there are more fundamental issues with the underlying trading arrangements that need to be addressed. We also agree that the requirements of the Electricity Balancing Framework Guideline (EBFG) should be given more prominence as these are effectively constraints on the design of the new trading arrangements.

We are pleased to see the inclusion of the integration of renewables in Ofgem's list of issues, as it is a key driver of the demand for flexibility. In our previous consultation response, we demonstrated significant potential savings to consumers from using gas engine technology in place of conventional thermal generators to create the reserve required to integrate wind in the future.<sup>1</sup>

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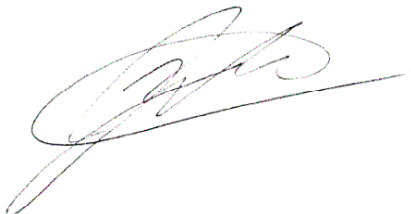
<sup>1</sup> Savings in BSuoS were modelled to be £381m-£545m p.a. in 2020 (low wind/high wind scenarios).

We maintain that the trading arrangements should be made more market-based and transparent, and that system costs should be efficiently allocated through market splitting. We suggest that the combination of a Balancing Energy Market and a Day-Ahead Reserve market should be pursued as a suitable set of arrangements for handling the challenges created by the changing future generation mix under EMR, while at the same time complying with the EU Target Model. In Annex 2 of this letter, we include a copy of our previous strawman model to illustrate how we think these arrangements could fit together.

Timing and clarity will be very important for the review of future trading arrangements. If Ofgem initiates the project, in early 2014 it will need to deliver a clear picture of the trading arrangements that will be established, including key structural changes and implementation timetables. This will be important to enable investors to consider these arrangements ahead of making final investment decisions under EMR – particularly the capacity mechanism, as the first capacity auction is proposed for the second half of 2014. We think that Ofgem could provide this clear picture of the future trading arrangements by producing a set of guidelines that it intends to follow, alongside a rationale for its policy position (for example, similar to ACER's Framework Guideline publications).

The rest of this submission contains responses that are specific to the questions set out in the open letter. We would welcome the opportunity to explain any aspect of this submission, or discuss the merits of other options further at your request.

Yours sincerely,



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## ANNEX 1: Responses to consultation questions

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This Annex provides our response to the individual consultation questions set out in the open letter.

***Do you agree Ofgem should launch a project to create a high level design for the future electricity trading arrangements? If not, why not and how would you see the changes to the industry noted above being managed?***

Wärtsilä agrees that Ofgem should launch a project to provide a holistic review of the future electricity trading arrangements in GB. While we can understand industry concerns that this may increase uncertainty in the short-term, we believe it is prudent to take the opportunity now to assess where changes will be required in the future. The alternative would be to launch a review after EMR has been fully implemented, which could risk another investment hiatus. Given the extent of change required to implement EMR, commencing another review at that time would risk meeting large resistance from new investors, with the potential result that ineffective trading arrangements are locked in for a considerable length of time.

We also broadly agree with Ofgem's identification of the challenges that the electricity trading arrangements will face over the next decade and onwards. In particular, given the UK Government's ambitious plans to decarbonise the electricity system, we see the integration of wind and other intermittent renewables as a critical medium to long term challenge. This issue strikes at the heart of what the trading arrangements should be trying to achieve in terms of the roles and responsibilities of various market participants, the balancing incentives placed upon them, and the products that are available to them to balance. We do not believe that the current arrangements provide the signals for a market-based solution for integrating wind to emerge – that is, the ability and incentive for market participants to provide flexible sources of energy close to real time to balance fluctuations in wind output. Instead, the System Operator (SO) has to perform most of the 'heavy lifting' by creating reserves from plant that are already running at part-load.

In our previous consultation response, we demonstrated how using these current practices of providing flexibility to integrate wind output would be in the region of £381m-£545m p.a. more expensive for consumers in 2020 (and higher in 2030) than using more flexible 'standing' plant or other fast ramping sources of energy such as storage or DSR. It will therefore be critical for Ofgem's review to focus on how the value of these sources of flexible balancing energy can be signalled to the market.

Ofgem's review will deliver at a critical time for industry. The proposed process aims to deliver a high level vision of the future trading arrangements within one year, which we assume will be within H1 2014. The challenge will be for the output to contain sufficient clarity – on the direction of travel, the interaction with EMR, timescales and

methods of implementation – so that investment decisions in the EMR capacity mechanism (proposed first auction in H2 2014) can consider, and ultimately be affected by, the direction of future trading arrangements. The capacity mechanism is proposed to deliver much of the controllable and potentially flexible capacity through to the next decade, but there is a risk of locking-in less flexible plant if the intended design of future trading arrangements is not clear.

Therefore, while Ofgem has clearly stated that it does not envisage the review of future trading arrangements will radically depart from current market arrangements, we would encourage you to be explicit where you envisage that new structures are needed, and how it intends to establish them in licences and codes. Such new structures should include the ‘wider scope considerations’ previously put forward, including the Balancing Energy Market and Day Ahead Reserve Market covered in Ofgem’s previous consultations. In our view, market-based mechanisms such as these would provide the strongest foundations for enabling the market to value and provide flexible balancing energy on a short term basis, while being aligned with the requirements of the EU Target Model. This vision should also include a firm view on whether market splitting will be pursued. Market splitting has the potential to resolve many of the previously held concerns of introducing more market-based balancing and reserve procurement mechanisms; because it would remove a large proportion of system actions from the cash-out price calculation. These actions would be managed by allocating available transmission capacity between zones using market coupling instead.<sup>2</sup>

Finally, it is important that the future trading arrangements are considered as a holistic package, rather than on a piecemeal basis, and therefore we welcome the initiative presented in this current review.

***What key issues should be examined as part of a work stream on future GB trading arrangements?***

We broadly agree with Ofgem’s list of preliminary issues in Annex 2 of the open letter, which are as follows:

1. Integration of renewables
2. Facilitating demand side response
3. Efficient balancing and system operation
4. Effective integration with the wider European market
5. Incentives to maintain and invest in new capability
6. Interactions with gas arrangements
7. Institutional arrangements

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<sup>2</sup> We provided a more detailed consideration of the rationale for market splitting in the context of energy balancing costs in response to the Initial Consultation on the Electricity Balancing SCR (see page 28).

As Ofgem has recognised, the requirements of the recent Electricity Balancing Framework Guideline (EBFG) should be used as a framework upon which to design the future GB trading arrangements. In our view a number of requirements of the EBFG are not currently satisfied by the current GB arrangements, and therefore it is appropriate to consider how alignment will be achieved in future. We interpret the key requirements of the EBFG as follows:

- TSOs must procure as many reserve products as possible in the short term,
- TSOs must implement a pricing method based on pay-as-cleared pricing unless they can demonstrate to NRAs that a different pricing method is more efficient,
- TSOs must to prepare a list of standardised balancing products,
- TSOs must develop a common merit order list for energy used for replacement reserves for the exchange of balancing reserve products across borders.

Further, there are other more fundamental issues that Ofgem should focus on resolving as a priority, which may in turn alleviate or remedy some of the issues in the list above. We describe these issues below.

*Lack of market based imbalance pricing:* the narrow scope Electricity Balancing Significant Code Review is unlikely to facilitate more market-based balancing arrangements as the existing balancing mechanism structure will be retained (which is not a market). Further, industry stakeholders have raised some genuine concerns about the residual uncertainty in the system action flagging methodology and the potential misallocation of reserve costs polluting the cash-out price, so it is likely that a degree of ‘averaging’ will still be required in the price calculation to reduce the impact of marginal system bids and offers setting the cash-out price. This means that Ofgem may have to compromise on increasing the marginality of PAR, which is also a compromise on cost-reflective pricing.

We maintain that a Balancing Energy Market with pay-as-cleared pricing is required to comply with the EBFG. Further, cost-reflective pricing is key to the market being able to value flexible resources and facilitate demand side response, which will contribute to the efficient integration of renewables.

*System pollution in energy prices:* as described in the point above, while the flagging of system actions is designed to remove these from cash-out prices imposed on generators, there remains a residual risk of pollution which may prevent the adoption of a fully marginal pricing approach. This issue directly affects the integration of renewables, because without more marginal pricing, cash-out prices will not reveal the true value placed on flexible energy for balancing fluctuations in intermittent generation close to real time. The market will be expected to provide less flexibility as a result. As system pollution is a barrier to moving towards a more marginal price, it also affects other issues from Ofgem’s list, including efficient balancing and system operation, integration with the European market and the incentives to maintain and invest in new capability. It is therefore encouraging to see

that Ofgem is considering market splitting as per the Target Model, which if implemented, could provide zonal prices and allocate these costs more efficiently.

*Lack of visibility on cash-out price formation:* under the current arrangements, generators will only be able to know cash-out prices after an imbalance has occurred. This reduces intra-day liquidity ahead of gate closure, as market participants are unaware of their likely exposure, and thus will not know whether some trading actions are worth taking. This affects longer contract prices, particularly PPAs, which often need a reference price that is reflective of supply and demand fundamentals, but which cannot credibly reference the intra-day market due to relatively low levels of liquidity. Therefore, this issue hinders the integration of renewables (both from an ability to balance and PPA perspective), the facilitation of DSR, efficient balancing and system operation and the incentives to maintain and invest in new capability. Market participants need to be able to react to these signals so they can efficiently balance their positions ahead of the SO stepping in. A Balancing Energy Market using a clearing mechanism to price energy is in our view the most robust way of stimulating within day liquidity and demand for short term flexibility in the market.

*Lack of a dynamic short term reserve market:* reserve procurement needs to occur on a more dynamic and short term basis if costs to consumers are to be minimised as the penetration of intermittent renewables increases (in line with the EBF requirements). We believe that a day-ahead reserve market is a robust way to align procurement volumes with the actual reserve volumes required, and that this would also create a liquid market for flexible resources from all market participants to compete on a level playing field without the commitment and transaction costs involved with longer term reserve contracts. Addressing the lack of a dynamic short term reserve market would help alleviate issues with integrating renewables and facilitating DSR.

***What form should the process take? How can the process help increasing certainty about the impact of the EU TM and its interactions with EMR while limiting any unintended detrimental effect on investors' certainty? What structures should we use to maximise the opportunities for stakeholder involvement?***

Ofgem suggests an objective of being able to draw a high level picture of framing the trading arrangements within one year. We agree that the year-long timeline is appropriate, but we think Ofgem should be more ambitious in its objective, and should instead aim to deliver:

- A holistic picture of the trading arrangements, encompassing all key interdependencies<sup>3</sup>, with
- A decision on whether market splitting will be pursued, and if so to what extent,

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<sup>3</sup> We recognise that some of the arrangements may not ultimately sit with Ofgem for implementation (e.g. reserve markets), but these should nonetheless be considered as part of this holistic review.

- A high-level description of the key structural changes that will be required, such as new platforms and markets for short term products,
- How the arrangements will interact with EMR (where relevant),
- Timelines for implementation, and
- Institutional arrangements for implementing the new arrangements (e.g. what licences will be used for; what codes will be used for).

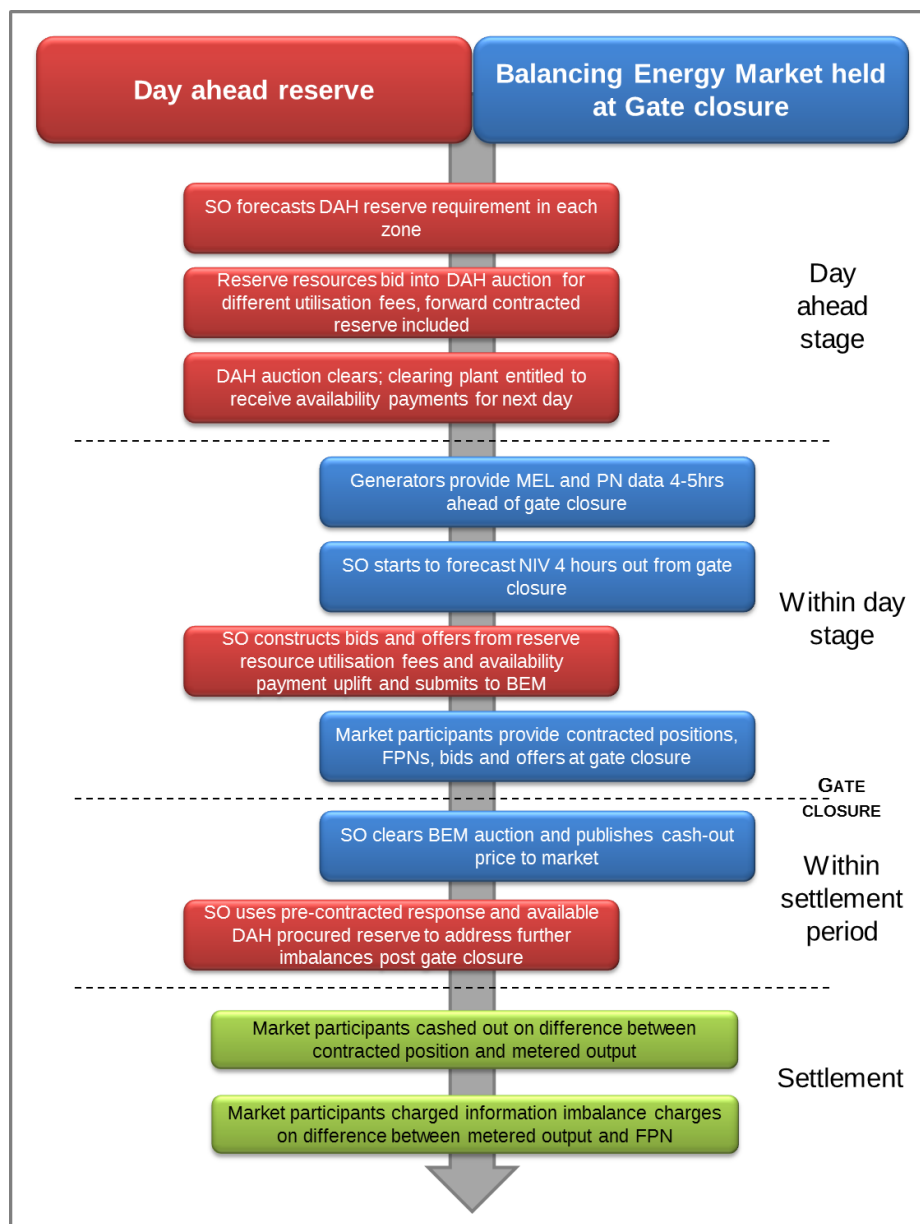
As we discussed above, if Ofgem's review of future trading arrangements is to make a noticeable difference to the types of resources that investors develop under EMR, then it is crucial to deliver sufficient certainty on these aspects of the review as early as possible, and preferably in H1 of 2014.

We think that a good precedent for setting out the intent for future arrangements and the rationale behind them is ACER's Framework Guideline model. Ofgem could consider producing a document with a similar level of detail and commitment as a Framework Guideline for setting out the future of GB trading arrangements to investors and affected parties. The rationale for the overall framework and specific policy options could then be set out separately in an accompanying document, in a similar way to how ACER sets out its decision making process in an accompanying impact assessment. The EBFM is a particularly good example of how this format works (and we note that this process was completed in just under one year).

We suggest that the process for setting out the high level picture of the trading arrangements, and key structural changes should be initially conducted in open fora with industry stakeholders in the months following this consultation. The options for reform could be shortlisted and published for consultation similar to a draft Framework Guideline, and then revisited in further fora before Ofgem publishes its final proposals.

## ANNEX 2 – Possible strawman for FTA

We envisage this strawman working in a market that has been split along major constraint boundaries, to minimise the number of system actions that could pollute the balancing energy price.<sup>4</sup>



<sup>4</sup> Note that colours used correspond with actions required to run each of the Day Ahead Reserve market and the Balancing Energy Market. Note also that the Day Ahead Reserve market in this strawman is envisaged to begin as a platform on which the System Operator is a single buyer, though once established in the longer term we would expect this to become a fully functioning two sided market.