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30th April 2019

Open Networks Project – Consultation on Future Worlds Impact Assessment

Dear Sir/Madam.

SmartestEnergy welcomes the opportunity to respond to the Energy Networks Association's (ENA) consultation on Future Worlds Impact Assessment.

SmartestEnergy is an aggregator of embedded generation in the wholesale market, an aggregator of demand and frequency services and a supplier in the electricity retail market, serving large corporate and group organisations.

Please note that our response is not confidential.

Summary

Our views may be summarised as follows:

- This Impact Assessment is a very intelligent piece of work, especially with the Stage and Transition approach. We agree that World B is the place to start. However, the end game needs to be as competitive as possible and identified now (or at least the reasons which would dictate the direction of travel should be identified now).
- It would not be satisfactory to drift into World A just because DNOs have been acting (or incentivised to act) in a manner which makes this a foregone conclusion.
- Flexibility markets need to be as centralised and homogenised as possible so that commercial participants need only bid into one system and so that conflicts between ESO and DNO requirements are minimised.
- Worlds C and E can exist in conjunction with the other worlds and are more facilitative than fundamental.
- The above leads us to conclude that the real and only choice is between Worlds B and D, almost certainly moving from the former to the latter over time.
- We would not be happy with any arrangements centred around World A which we see as leading to piecemeal and inconsistent arrangements.

We answer the questions below in the order in which they appear in the consultation.

Q1. Please confirm which stakeholder group you believe that you belong to; this will enable the Open Networks Project to understand the spectrum of respondents to this consultation.

SmartestEnergy is an aggregator of embedded generation in the wholesale market, an aggregator of demand and frequency services and a supplier in the electricity retail market, serving large corporate and group organisations. In short, we are a supplier and an aggregator of flexibility/embedded generation.

Q2. Please provide your views on Baringa's interpretation of the Future Worlds, detailed in Section 2, for the purpose of this impact assessment and the overall approach, highlighting any key strengths or weaknesses, or areas which should be explored in more detail?

We agree that it is correct to assess World A on the basis that the DSO was required to aggregate DER under each GSP to offer flexibility into the Balancing Mechanism and Balancing Services Markets, but not responsible for energy balance at each GSP. However, this is an area which will require greater exploration in the future.

Q3. Do you agree with the conclusions and insights within the Executive summary? If not, please explain your rationale. Please provide reference to more detailed comments against individual sections if this is appropriate.

We agree that World B is the place to start and that the decision to move to any of the other worlds (World D would be our preference) may seem to depend on how things develop i.e. if there is little uptake of DER. The inference would be that it is worth waiting before deciding which World to transition to. However, there is a danger that in the intervening period DNOs could establish systems and processes which are difficult to unwind. This would not be efficient in the longer term. Ofgem need to acknowledge this now. We also believe that more investigation needs to be conducted sooner rather than later into the use of assets such as Active Network Management System and even capacitors as the conflicts associated with these are on a par with ownership and operation of generation and storage.

Q4. Do you agree with the options set out as potential transition paths?

We disagree with the document when it states that Transition Path 3 (Move to ESO led co-ordination, World D) that this is "likely to be triggered when there is little value in running local flexibility markets." Even if there is value in local flexibility markets, the whole system can and should still be co-ordinated through the ESO because of the benefits of consistency of products and avoidance of conflicting actions.

We are also not convinced that we should move from World B to World A on the basis that the interactions are not working. Either way, NGESO are going to have to manage the transmission system.

We note that it has been said that the model assumes that DNO priorities take precedence (i.e. local constraints are solved first.) On the face of it, this seems sensible. However, economically and practically, this may not be a hard and fast principle which

should be adopted as there could instances where the "greater good" should be considered first i.e. it may be better to constrain at a lower level on the network if it avoids a wider black-out.

Q5. Do you believe there are any other viable transition paths? If so, please explain why.

No

Q6. Do you agree with the assumption that all transition paths start in Stage 1 of World B?

Yes

Q7. Do you agree with the areas identified for further work in the 2019 workplan and the further work ideas in the impact assessment or do you feel there are other areas of work that should be prioritised to progress in this area?

Please see our answer to Q17. In short, we believe that trade-off analysis across transition paths rather than static worlds would be most instructive.

Q8. What future work do you believe would enhance the debate and body of evidence around transitioning to the potential Future Worlds?

Please see our answer to Q17. In short, we believe that trade-off analysis across transition paths rather than static worlds would be most instructive.

Q9. Do you agree or disagree with the four categories of system operation benefits identified? Are there areas that should be excluded from the list and/or other areas that should be included?

This all looks sensible.

Q10. Do you agree, disagree on the key benefits assumptions contained within Appendix B (eg all Worlds, apart from World C, achieve the same benefits by 2050 etc) and used in the impact assessment? If you disagree, please explain your reasoning. Do you have any other comments?

We do not agree with the assumption that when Worlds A, B, D and E mature into Stage 2 of development they are all capable of delivering all of the potential benefits if well designed and effectively implemented. Without being able to put any numbers on this we believe that, even when fully implemented, the competitive aspect will be increasingly more effective for the worlds in this order: A, B, D and E. Clearly, the more independent a market the more competitive it is.

Q11. Do you agree or disagree on the approach used to assess the overall potential benefits of improved system operation?

We think that the overall approach is good.

Q12. Do you agree with the assessment of the proportion of benefits which each Future World is capable of delivering in Stage 1 and Stage 2?

Without spending a lot of time analysing the model it is difficult to comment. However, we are concerned that using broad percentages of how a network is constrained seems to us not to be granular enough. After all, we have been told that the problems with local constraints in future scenarios with a preponderance of EVs go down to street level.

Baringa have freely admitted that a lot of assumptions have been made on the proportions of services required in the future and the economies of scale achievable. It is difficult for us to engage with this or be confident of independent scrutiny. We can only hope Ofgem will become more involved in this.

Q13. Do you agree or disagree on the approach taken to deal with the uncertainty/range of benefits? If you disagree please explain your reasoning.

We are unclear on how the ranges have been chosen. They seem a bit random. In addition, all this will do is add to the range of results. We wonder, therefore, whether it is better to stick to mid-cases for each variable.

Q14. Do you agree or disagree with the areas identified for quantification of the implementation costs that will be faced by DSOs and ESO in Appendix C? If you disagree please explain your reasoning.

We wonder whether it is entirely appropriate to focus on the degree to which DSO functions (and subsequent resources) are duplicated across actors within each Future World as a starting point. This will bias the result towards a World A scenario, whereas currently, little expenditure has been committed thus far. Similarly, with the volume of information exchanges required between actors in each Future World a bias may be introduced if it is assumed that the starting point is the DSO model.

Q15. Do you agree or disagree with the approach used to assess the costs of each world? If you disagree, please explain your reasoning.

We agree with the approach and are pleased that economies of scale have been used in the more centralised scenarios.

Q16. Do you agree or disagree with the approach to dealing with the uncertainty/range of costs? If you disagree please explain your reasoning.

No comment.

Q17. Do you agree with the trade-offs of each of the Future Worlds identified against each of the high-level criteria in Table 1 of the Executive summary?

We agree with the assessment although further analysis of this nature when looking at the Transition scenarios rather than just the worlds in isolation would yield some interesting results. We would highlight, for example, that the trade-offs associated with World D on cost (potentially less conducive to local energy markets in the short term) and the trade-offs associated with World B on minimising structural change (likely to lead to higher long-term costs) all fall away when considered in the round under Transition Path 3.

Something else which needs to be pulled out of this analysis (whether it is pros and cons of a transition or a steady state world) is a distinction between drivers which are market related and those which are political/socio-economic/environmental which strictly speaking should be incentivised outside of the market. Distinguishing between the nature of drivers will help to narrow down the options.

Q18. Do you agree or disagree with the Appendix A approach of ranking of worlds to help identify the strengths and weaknesses of each World against each criteria? If you disagree please explain your reasoning.

We note the following words within the document: "We should stress that the point of this exercise was not to find a 'winning' World but to understand the trade-offs in performance between the Worlds and where advantages and disadvantages lie. As such, we would caution against reading anything into the total scores for each World across the criteria (not least because not all criteria should be ranked equally)." Whilst this is undoubtedly an interesting exercise there is a danger of encouraging a decision based on something which is almost too scientific. It is always better to be roughly right than precisely wrong. We feel a broader brush approach along the lines of analysis of the pros and cons of the various transitional options would yield a more nuanced decision.

Q19. Do you agree or disagree with the rankings and whether they are suitably justified? If not, please comment on which ones and why?

Please see our answer to Q18.

Q20. Do you agree or disagree with the list of potential unintended consequences identified in Section 4.5, and their prioritisation and potential mitigation as charted in Figure 20? If you disagree please explain your reasoning. Should the Open Network project progress further work on unintended consequences?

We think that this list covers the main potential unintended consequences well.

Should you require further clarification on this matter, please do not hesitate to contact me.

Yours sincerely,

Colin Prestwich
Head of Regulatory Affairs