

The Voice of the Networks



Energy Networks Association

Open Networks Project

**Future Worlds Impact
Assessment Consultation
Webinar**

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Restriction: Public

Introduction

As part of Impact Assessment consultation, this was the first of two webinars ENA held with the view to running through the consultation document and answering questions from stakeholders. Our objective was to provide stakeholders with the opportunity to learn more about this work from our Open Networks Project representatives and also to discuss points of interest in an open forum.

Below is a table shows the questions that were captured during the webinar and the product team’s response.

Question	Answer
How do you see local energy markets fitting in with the five worlds?	All of the Future World could facilitate local energy markets. However, our assessment found that in the near term, Worlds A and B might be more conducive to establishing these markets.
There is no allowance for sub-optimality of balancing for multiple balancing parties i.e. if DSOs are balancing regionally and the ESO is balancing nationally then they may not find the best solution compared to one party (refers to the assumption that all worlds can find the same benefit by 2050).	The qualitative assessment and unintended consequences section of the report highlights this issue. The assessment found that where a single party has visibility of all markets, they have greater potential to co-optimize across those markets and take more of a whole system perspective.
Environmental sustainability was one objective used by Baringa in the qualitative assessment (amongst 30 objectives). How far was decarbonisation / environmental sustainability taken into account? Should this have been a main driver not just a component?	Since this is an initial assessment which is not designed to ‘pick a winner’, we chose not to weight the different criteria. How to balance the competing objectives and trade-offs between the Future Worlds is more of a policy decision for BEIS and Ofgem. The Impact Assessment is designed to provide a body of evidence to help take these decisions.
Do you see a situation where the ESO / DSO coordination gets too complex with just the EHV and HV assets and therefore requires a ‘switch’ to World D early?	In short, Yes. The timeline in the transition paths figure is indicative. The transition to World D could happen at any point. The key trigger is where there are not sufficient benefits of running LV flexibility to warrant the costs of complex DSO/ESO coordination required in World B. This could be because the value in these markets does not outweigh the costs, or that the uptake of distributed energy resources (DER) at LV is low. In either of these circumstances, it would make sense to move to World D, as it is a lower cost way of managing flexibility at EHV and HV.
In Worlds C ‘Granular, dynamic price signals’ – is that using network charges to incentivise dispatch instead of using an extended balancing market?	Yes, World C is based around network price signals and access arrangements, not an extended balancing market. In the Impact Assessment methodology there is recognition that the Access and Forward Looking Charges Significant Code Review initiated by

	<p>Ofgem in late 2018 will deliver from 2023 more granular and dynamic access and pricing arrangements that will drive response behaviours from Distributed Energy Resources to support the efficient operational of the distribution networks. But this may not always deliver the required response and so there is a need to combine the standalone pricing mechanism defined in World C with the actions from other Worlds.</p>
<p>Regarding World E ‘Flexibility Coordinator’, you considered four, nationally. Are there some natural splits in terms of the National Grid network? For example, Scotland is probably a natural split – are there others?</p>	<p>Yes. We assumed that regional Flexibility Co-ordinators would expand out from the geographical areas which currently have the most constraints –Scotland, South West and the South East. In time, it seemed reasonable to assume that this would also occur in the North of England. This led to four regional Flexibility Co-ordinators which we envisaged would expand to cover all distribution networks.</p>
<p>Did you take into account the move to a 2 year funding cycle for the ESO under RIIO-2? For example, World D Stage 2 in 2031 seems to be based on RIIO-2 ET.</p>	<p>No, we didn’t take into account the 2 year funding cycle into account and did base the dates on RIIO-ET.</p> <p>The important part for the modelling is the relative difference in the timing of entering Stage 2 from the other Future Worlds.</p>
<p>Imperial College are often quoted as stating that better flexibility will decrease operational costs – but you’ve stated that costs will substantially increase. Have you considered the trade-offs in costs that can be achieved?</p>	<p>Yes, the co-ordination between parties required to optimise the use of flexibility across different markets is likely to increase operational costs from today, but savings in capital costs would be significantly greater. We found that this is particularly the case in the Future Worlds where responsibilities are split across different parties – Worlds A, B and E.</p>
<p>Can market risks with more operators be mitigated by greater information / data visibility?</p>	<p>In theory yes, but the greater the information exchanges required, the more complex network operation is likely to be. One of the trade-offs in the Future Worlds is the added benefits which can be delivered through greater co-ordination and data exchange between network operators, versus the cost of managing this co-ordination.</p>
<p>Why does the move to World D Stage 1 and World A Stage 2 occur at the same time? Surely, if the HV / EHV coordination is too complex by 2025 we could see a switch to World D earlier than 2028.</p>	<p>The dates in the transition path figure are indicative. One of the key triggers is the uptake of DER. According to the ESO’s Future Energy Scenarios (FES), the uptake of DER is due to increase quite dramatically in the 2030s. Based on these forecasts, the 2030s is the likely time when a move to World A Stage 2 could be required. Although this could be sooner or later, depending on actual DER uptake.</p>

	<p>The move to World D Stage 1 could be earlier, particularly if trials show little value in local flexibility markets at LV. If this is the case, the merits of moving to World D are far greater.</p>
<p>Why are the timescales so long (2030-2050)? Is there scope to develop the paths in a shorter timescale?</p>	<p>The scope of the Impact Assessment was out to 2050 with results captured at 2030 and 2040. As highlighted in the answer above, the triggers to certain transition paths could emerge at any time. However, the main trigger is DER update which forecasts suggest will increase substantially in the 2030s. We also note that Ofgem’s proposed network charging and access reforms are planned for implementation until 2023. This is why those timescales have been chosen as indicative timescales.</p>
<p>Does World E not help if there becomes increase complexity of active resources?</p>	<p>All the Future Worlds are designed to help manage the complexity of active DER. In the short to medium term, the assessment indicated that establishing new Flexibility Co-ordinators could increase the complexity of system operation. The clear benefit of World E is that it removes any perception of conflicts of interest between network operators overseeing market processes.</p>