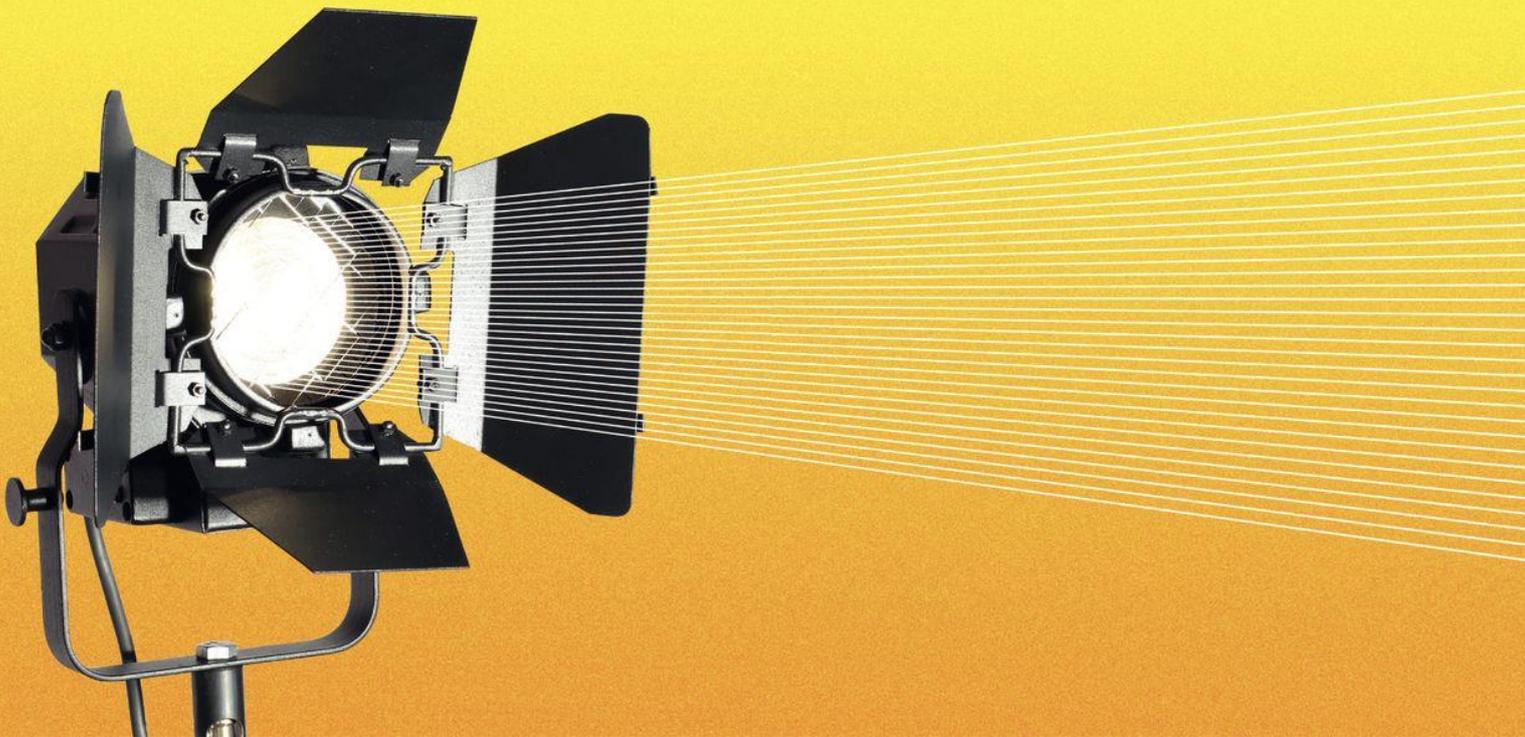


Electricity System Operator 2030 Ambition

Outputs from our Stakeholder Workshop

November 2018



Foreword

As the Electricity System Operator (ESO) we want to understand how we can work together with the industry to achieve our ambition of delivering the best value to energy consumers now and into the future.

We are currently developing our strategy and business plans for the coming years including our Forward Plan for 2019-21 and our RIIO 2 Business Plan for the next regulatory period, 2021-2026. It is vital that we listen to stakeholder views to inform these plans.

On the 28th September we held a workshop to discuss the future of the electricity system. We wanted to facilitate a national conversation and hear a wide range of views on what the industry should look like in 2030 and how to get there.

We were joined by over sixty stakeholders including representatives of demand side flexibility providers, investors, electricity transmission and distribution network owners, generators, suppliers and consumer bodies, as well as BEIS and Ofgem.

We held highly productive structured round table discussions that provided us with good insight into what stakeholders want the industry to look like and what role they want us to play in that future.

This document is intended to provide a summary of the conversations that were held at the event.

In order to facilitate conversation on the day we presented our initial thinking on what the electricity industry could look like in 2030. We also shared our thoughts on some of the big things (potential enablers) that we, as an industry, need to deliver to achieve that industry ambition. Materials presented from the day are not repeated in this document but can be found [here](#).

The topics on the day, and in this document, are divided in to the four roles of the ESO as outlined in our current regulatory framework:

- **Managing system balancing and operability**
- **Facilitating competitive markets**
- **Facilitating whole system outcomes**
- **Supporting competition in networks**

Key themes also repeatedly emerged across the conversations in the different topics, these can loosely be summarised as:

- Data transparency and information sharing to inform operability and decision support
- Harmonised mechanisms to facilitate efficient wholesale, capacity and flexibility markets
- Effective and agile governance to enable rapid change

We would value any [feedback](#) on this document and the ideas discussed within it.

Many thanks for your ongoing support in our work to transform how we facilitate networks and markets to drive value for consumers.

Kayte O'Neill

Head of Strategy and Regulation, System Operator

Managing system balancing and operability

Discussion topic: Data management and an Open architecture portal

There was a broad consensus on the fundamental importance of transparency and access to data to facilitate the efficient operation of competitive markets

- Stakeholders want more data including market dynamics, such as real time market data, and a strong emphasis on “problem statements” such as locations of constraints and how these problems are being solved.
- Some stakeholders called for all possible market and operational data to be made available in its rawest form for those who want it.
- In addition to the raw data which can be difficult to use, analysis and insight is also required to facilitate a level playing field for all parties to participate equally in markets.
- We need to be mindful of unintended consequences of enhanced data sharing, as well as cyber security and data privacy risks.
- There is a strong desire for “one source of the truth” as multiple platforms could develop adding unnecessary complexity.
- There was a clear call for the ESO to share all of its data and to explore playing a proactive role in this space.
- We need to be mindful of risks and unintended consequences of sharing more data such as cyber security, data privacy and the potential for market gaming

Discussion topic: System operation and the 21st Century Electricity Control Room

We need to know how to operate the system in the new world and market participants need clarity on how to respond - following detailed price signals or priority between ESO and DSO instructions

- We are looking at one big system. *Market design* and control may need different balancing timescales but the interaction of local, national and international control rooms and markets is key. Clarity is required on accountabilities and what action should take precedence over another if a player can act in more than one market.
- We want to put as much system operation on to the market as possible but certainty of response is crucial. We need to optimise assets across the systems, considering the attributes of the different assets.
- Stakeholders want *transparency in contract costs* to ensure that *information facilitates efficient markets* and a reduced role for the residual balancer. The market needs to know why the ESO uses the services and providers it uses.
- The ESO should be sharing the “problems” through *information provision* and looking to the *market to provide the solutions*.
- We need to get better at understanding more actors making more short-term decisions and predicting the consequences of their responses to having *access to a lot more data*.
- A different control architecture is required as we move to a digital platform where the world is connected more peer to peer with parties contracting with a central organisation, with a distribution network or with each other.

Facilitating competitive markets

Discussion topic: Short-term, liquid balancing services markets and infrastructure that supports parties to make efficient decisions across a range of markets

Markets should be the default option for solving system problems and market design needs to be coherent across services, timescales, geographies and networks

- These *markets should be shorter-term*, technology neutral and operating closer to real-time, at least in day ahead timescales, greater insight is required in to the future needs for these markets.
- *Transparency* was identified as the key principle both to stimulate markets and also provide foresight in to future ancillary services requirements.
- Participants need *better information on market structure and liquidity* to decide which markets they should be investing in.
- Locational price signals were generally considered necessary to promote efficiency in markets.
- Market arrangements need to be flexible and delivery of change should be agile.
- Whilst change should be delivered incrementally, it is important to set out a clear strategic direction of intent. The ESO's System Needs and Product Strategy (SNAPS) was agreed to meet this requirement.
- Complexity was holding back progress because the industry was aiming for a perfect solution and that we should just get on with delivery of something that is "good enough".
- The ESO was considered well placed to take a leading role in defining future markets.

Discussion topic: A governance model which works for a large number of market participants, allowing sufficient pace of change whilst maintaining investor confidence

The current industry governance model was universally acknowledged as unfit for purpose, lacking agility, inclusivity, and transparency. The current pace of change is too slow

- The current regulatory regime is too fragmented and needs to be aligned across assets, services and markets.
- Code management and code change need to be more accessible including adoption of plain English and a move to web-based processes. There needs to be more sign-posting and better provision of information.
- The ESO should be helping market participants to access codes and make changes.
- It was generally agreed that the ESO and Ofgem are best placed to lead the required change with Ofgem driving and coordinating this.
- The ESO should be judged on its actions to determine whether it is suitably independent to play a leading role in this space.

Facilitating whole system outcomes

There was some general discussion on “whole system”.

There was a clear call for clarity on what we mean by “whole system”. That it includes electricity transmission and distribution was acknowledged and the need to consider interactions at local/regional level and how this impacts local planning was emphasised. It was also suggested that demand side technologies such as batteries, electric vehicles, behind the meter and private networks should be included.

There was also a call to consider arrangements across both gas and electricity as well as decarbonisation of heat.

Discussion topic: Aligned commercial, technical and regulatory arrangements across transmission and distribution

There is strong support for whole system thinking from the plug up through transmission

- Codes need to move from a predictable engineering environment to one that can manage risk in a data driven system whilst maintaining a robust engineering standard. They need to accommodate innovation.
- There is a risk that an uncoordinated approach to the future ESO/DSO model means that industry cannot effectively engage with and respond to the change. A lot of frustration was expressed on this topic.
- There was a call to *simplify and unify governance* to drive alignment across transmission and distribution. We need to look at the synergies across the two models and pull it all together under *one governance structure*.
- The ESO has visibility of the impact of code changes and that there is an opportunity for the ESO to promote alignment across the codes.

Discussion topic: Provision of information and tools to enable efficient whole system decisions across operational and investment timescales

Markets should be free and open across transmission and distribution

- *Markets* should facilitate a common understanding on costs for all decisions across transmission and distribution including a clear articulation of the needs required.
- Data is currently segmented and certain elements are only available in certain areas. *All transmission and distribution information should be transparent* and open to all to avoid fragmentation.
- *All data on transmission and distribution network costs and constraints* need to be available together. We need to be brave and publish the data.
- *Full transparency* of how the ESO, ETO and DNOs conducts cost-benefit analysis, on network investments for example, is very important to allow parties to understand how best to use the information. Parties felt that they currently lacked the necessary understanding and sufficient quality of data to build an investment case.
- Network operators would need to have the ability to respond quickly to unintended consequences or any emerging behaviours resulting from *enhanced data sharing*.
- There is currently no one party in place to facilitate the “new world”, the ESO could play a “facilitate and connect” role inclusive of large and small.

Supporting competition in networks

Discussion topic: Driving competition so that all parties can offer solutions and participate

Network competition needs to be open to as many market participants as possible. We need to look across frameworks to break down barriers.

- Technology choice should be considered in terms of what is the best value solution for the consumer.
- Lifetime costs and locational services should both be considered.
- Competition should be opened for all assets and solutions across transmission and distribution.
- The interactions between transmission and distribution need to be clearer. ESO, ETO and DNO timescales need to be considered together with greater clarity provided on when opportunities will come to the market.
- The earlier in the network development process competition is introduced the more opportunity for innovation and cost reduction.
- The challenges for investors need to be considered. They need certainty over the longer term and to be able to stack revenue streams to make this inviting.
- The ESO should be taking the role to encourage network investment

What happens next?

In January 2019, we will be publishing our draft Forward Plan for 2019-21. This will outline our activities and deliverables for that period as well as how we will engage stakeholders and measure our performance.

The draft Forward Plan will be a consultation that we really hope many of our stakeholders will respond to, telling us what you want us to do for you in this period. Based on feedback to this consultation, we will then publish our final Forward Plan in March 2019.

Looking further ahead, in Q1 2019 we will be publishing our RII02 Business Plan.

In the meantime, we would value any [feedback](#) or input on any of the topics discussed in this document or the our future business plans.