

Bridging the Gap 2021 progress update

Looking back at peaks and troughs

Our [report](#) published in March 2021 outlined an industry view on how to start addressing the peaks and troughs of intermittent renewable energy supplies. Using three focus areas, **markets, technology and data and digitalisation**, we worked with stakeholders to identify key actions and recommendations for the ESO and industry to take to help operate a system with high levels of renewable generation.

Below we summarise progress across the ESO and wider industry for the three focus areas.

Markets

A key next step for the ESO from our March report was to share expectations for market change over the next five years.

- **Our next Markets Roadmap is due to be finished in February 2022.** The roadmap will aim to draw out how reforms may benefit providers and what these would mean for them. It will also include a more detailed analysis around market insights and what ESO reforms may mean for wider market interactions. The Roadmap will explore market trends and aim to indicate the direction of travel for some of our markets out to 2030.
- **Alongside this, our net zero market reform project that looks out beyond 2030 to 2050** is coming to the end of phase two where investment, location, flexibility and operability stakeholder workstreams have been understanding what the current and future challenges are in the electricity market and what is the case for change. Phase three is due to start in October 2021, analysing options then forming recommendations and pathways for what the system landscape could look like, which are due to be published in Quarter 4, 2021/22.

From a wider industry perspective, via discussions with BEIS, the ESO contributed to the formulation of BEIS's Smart Systems and Flexibility Plan published in July 2021. The plan sets out a vision, analysis and work programme for delivering a smart and flexible energy system that will underpin energy security and the transition to net zero. Regulatory market reform will play a key role in facilitating flexibility.

Key actions in the Smart Systems plan that link to next steps for the ESO within Bridging the Gap include;

- The ESO delivering balancing and ancillary service reforms to the timelines outlined in its 2021-2023 RIIO-2 Business Plan;
- The ESO delivering credible plans to deliver reforms by 2023 and to achieve the objectives of zero carbon operations and market solutions across all services by 2025;
- By March 2023, the ESO will develop and publish lessons learned from its Pathfinder projects and Early Competition Plan.
- **Flexibility market recommendations from Bridging the Gap are also reflected in Ofgem's 2021/22 Forward Work Programme within their Full Chain Flexibility Work.** Ofgem will focus on electricity network access and flexible/wholesale market reforms, and endeavour to do this whilst working with BEIS, the ESO and wider stakeholders. One-way Ofgem are doing this is via their Full Chain Flexibility Forum, which the ESO is an active member of.

Technology

From our March findings, we identified that we wanted to use our internal research and trials on new technologies to help us understand better what can assist with managing peaks and troughs.

- Since March, the ESO has started the **CrowdFlex** project, where we are working with DNO/DSO partners to explore the opportunities for households to provide reliable support to the network through aggregated energy flexibility within the growing domestic Electric Vehicles market.
- Further research and collaboration with other networks will be needed to help us understand how these new flexibility markets for local distribution networks will work efficiently alongside the transmission markets in future.

From a wider industry perspective, we recommended that action was needed to unlock more investment in the wide range of decarbonisation assets on the supply and demand side, and to ensure that all new products and infrastructure are digitally enabled.

- BEIS's Smart Systems and Flexibility Plan takes direct action on the investment side by **establishing a £1bn Net Zero Innovation Portfolio for funding low carbon technology and systems**. At least **£100m of the funding will be allocated to storage/flexibility** innovation programmes.
- BEIS has also committed to regulating energy smart appliances to set requirements underpinned by principles of interoperability, data privacy, grid stability and cyber security. This is a direct link to our call to ensure infrastructure is digitally enabled.
- Additionally, Ofgem's Electricity Retail Market-wide Half Hourly Settlement (MHHS) full business case and decision were published in April 2021. MHHS will place the right incentives on retailers to develop and offer new tariffs and innovations that encourage and enable more flexible use of energy, such as time of use tariffs, automation, vehicle to grid solutions and battery storage.

Data and digitalisation

In March we committed to driving greater data availability and digitalisation throughout the energy system.

- Since then we have **listened to stakeholder feedback, and as a result in June 2021 refreshed our Digitalisation Strategy and Action Plan**. The ESO's digital transformation is not just an enabler, but a core component of our transition to reach net zero carbon operability.
- An example project taken from our Strategy is our Digital Engagement Platform that will enable a single point of access for all ESO data and services including the markets, connections, digitalised Grid Code management and data analytics platform. Initial functionality for the engagement platform is expected to be delivered by Quarter 4, 2022/23.

Across the industry, we recommended that standards are needed to ensure that different systems and products can work together and allow interoperability across data, services and technologies. BEIS's Smart System's and Flexibility Plan directly links to this by identifying the absence of shared digital infrastructure, common practices and standards as barriers to system digitalisation.

- To tackle industry barriers and identify policies needed, BEIS are funding a new Energy Digitalisation Taskforce, led by Laura Sandys and the Energy Systems Catapult. We will continue to work closely with BEIS, Energy Systems Catapult and the Digitalisation Taskforce to enable the ESO digital transformation.