

19 February 2021

National Grid ESO response to Forward Work Programme 2021/22 consultation

We welcome the opportunity to respond to your Forward Work Programme for 2021/22.

National Grid ESO is the electricity system operator for Great Britain. We move electricity around the country second by second to ensure that the right amount of electricity is where it's needed, when it's needed – always keeping supply and demand in perfect balance. As Great Britain transitions towards a low-carbon future, our mission is to enable the sustainable transformation of the energy system and ensure the delivery of reliable, affordable energy for all consumers. To support our mission, we have set ourselves an ambition that by 2025 we will be able to operate a carbon free electricity system. We therefore support the development of Ofgem's strategic framework with a focus on those key workstreams for 2021-22 which will deliver the greatest impact to net zero.

With the conventional generation mix changing at an ever-increasing pace and traditional generation being replaced by small-scale renewables, storage and demand-side participation, how we operate the system becomes very different. Our RIIO2 Business Plan¹, sets out our clear vision of how we and the industry must evolve, and we acknowledge and appreciate Ofgem's focus on transformative change across the energy system within the 2021/22 Work Programme.

As we note in our recently published Future Energy Scenarios², reaching net zero carbon emissions by 2050 is achievable. However, it requires immediate action across all key technologies and policy areas, and full engagement across society and end consumers.

We welcome Ofgem's ongoing scrutiny, challenge and support across industry and look forward to working closely to support the transition to net zero. Our response to this consultation focuses on those elements relevant to the ESO and therefore are by exception only.

Enable investment in low carbon infrastructure at a fair price.

We support Ofgem's continued focus on low carbon infrastructure and welcome the noted activity to take a coordinated approach to the expansion of the offshore network and interconnectors. We are working closely with Ofgem and BEIS on the Offshore Network Transmission Review and have identified significant benefit in moving quickly to an integrated approach for all offshore projects to be delivered from 2025.

We note that there are important interdependencies between the offshore review and other areas within your work programme, such as efficiently transforming the onshore electricity network and the System Operator Review. We would encourage Ofgem to think holistically across these various areas and develop a clear understanding of interdependencies. For example, decisions on who will be performing certain planning and coordination functions in both onshore and offshore network planning, appear entwined with possible changes to system operator arrangements following the System Operator Review. The order, pace and alignment across regulatory activities and conclusions will be key in working towards a target of 40GW of wind by 2030.

In addition, our Business Plan sets out our ambitions for Early Competition and the benefits this can bring to consumers. We believe that the best outcome for consumers will be achieved through early models of competition in onshore transmission network build; whereby competition can be used to drive innovation in the options proposed to meet future need, enabling large scale, low carbon investment, at a more economic price.

¹ <https://www.nationalgrideso.com/our-strategy/riio/riio-2-final-business-plan>

² <https://www.nationalgrideso.com/document/174541/download>

We are continuing to work iteratively with Ofgem to develop Early Competition proposals and are engaging widely with stakeholders to ensure proposals are practical and maximise consumer value.

Finally, we look forward to Ofgem's decision on cross-border electricity methodology. We believe now is the right time to consider the wider costs and benefits from the next tranche of interconnection, in order to maximise the value to the consumer. We support Ofgem's focus on flexibility within this work programme as noted below, and interconnectors play an increasingly important role in providing flexibility in the net zero scenarios. For the ESO, trading services enacted through interconnectors have been a significant commercial benefit to the consumer through the avoidance of running expensive alternative units. However, as the number of interconnectors on the system continues to rise, we need to ensure they continue to enhance the operability of the system, as opposed to inadvertently causing material system disturbance. We therefore support Ofgem's focus on a coordinated approach to the expansion of interconnectors and other low carbon infrastructure.

Deliver full chain flexibility in how we generate, use and store energy.

To meet net zero emissions targets, system flexibility will become increasingly fundamental in all areas of society. As the need for renewable generation increases across the energy system, this will lead to greater variability in generation output, increasing the need for flexibility to manage the differences in generation and demand. These challenges are central to the ESO's role and we therefore strongly support Ofgem's focus on flexibility throughout the 2021/22 period.

We would encourage Ofgem to consider the different timescales for flexibility. The type of flexibility required to effectively manage the energy system will vary and the timescales for system balancing requirements can range from second by second for example in sudden surges in TV use or up to months at a time managing the differences in energy demand and supply between different seasons, for example higher gas network demands in winter. When considering the 'full chain flexibility programme' we believe it is important to consider both immediate and longer-term flexibility requirements. Types of flexibility will vary according to how much energy they can deliver, the length of time they can deliver this for and how quickly they can respond, all of which is fundamental for operating the system effectively.

In addition, we welcome Ofgem's consideration of unlocking demand-side flexibility and how this can be best enabled. Historically, most flexibility has come from supply side changes in the electricity system however, demand side flexibility will become increasingly important in future years, specifically in the shorter timescales. The impact of any individual action is low; however, aggregating large numbers of simultaneous consumer responses can have a significant impact. Growth in technologies like domestic battery storage, electric vehicles and smart home energy management systems will allow residential demand to become more flexible and demand profiles to respond to price signals and align with variable generation patterns. This needs to be coordinated and Ofgem's support and focus on facilitating domestic flexibility will be key in delivering value to all energy consumers.

Unlock the benefits of data and digitalisation.

As the energy landscape evolves, the digitalisation of our electricity system is key to driving innovation and to capturing the benefits of our transition to zero carbon. Open data access is fundamental for the rapidly growing number of energy market participants, too, changing the way they interact with one another and enabling them to innovate and make informed choices. We welcome and appreciate the focus on data and digitalisation that Ofgem provide in this Forward Work Programme.

We acknowledge that in our role as the system operator, we're custodians of a lot of data on the electricity network, and that it's our responsibility to collect, analyse and share it transparently and responsibly – allowing its value to be unlocked. We have made commitments in our Business Plan to put data at the heart of our strategy. We have already begun to evolve our data platforms with our first milestone being the development of our data portal³, which went live in December 2020, making our data easier to discover, understand and consume. We believe the activities noted in your Forward Work Programme are appropriate and focus on the key activities required to transform the grid and allow us to operate a secure, zero carbon network. We look forward to continuing to work with Ofgem in this space.

³ <https://data.nationalgrideso.com/#>

Promote energy system governance arrangements that are fit for the future, including Ofgem's role.

We have worked closely with Ofgem during the development of the System Operator review and will continue to provide our perspective and expertise on the industry arrangements required to meet net zero. We are supportive of the review of energy system arrangements noted for the 2021/22 period and, like all market parties, want to ensure the industry is set up correctly to achieve the overarching ambitions of operating the system at zero carbon by 2025 and provide the best consumer outcome.

We hope the comments above are of use to Ofgem. Should you require further information or clarity on any of the points outlined in this paper then please contact Laurence Barrett in the first instance at Laurence.barrett@nationalgrideso.com.

Yours sincerely

Craig Dyke

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