

Summary Briefing Note

Market Update for Industry Stakeholders

Market Update

The energy landscape is rapidly evolving in line with UK net zero ambitions. As the Electricity System Operator (ESO) for GB, we will play our part by delivering on our ambition of zero-carbon operation of the electricity network by 2025. This means that in times of high renewable output, we will be able to fully use renewable generation, reducing and removing constraint payments from network management tools.

This update is to let you know about some of the exciting new changes we are making to the markets we run, as part of our journey to 2025.

Below is a summary of the activities that we have been working on. If you are interested in more detail, please carry on reading to the end of this update:

- **Changes to our frequency response products** – over the last 18 months we have worked closely with our stakeholders, making progress in this area and against our ambition. This is work we started before the 9 August power cut and we've used our learnings to inform our plans.
- We are currently implementing **changes to our reserve services** in line with our Project TERRE¹ commitments. Once these changes are complete we will review our slower acting reserve services.
- We have made some **changes to our delivery schedule**. We've prioritised work on faster response services and flexibility, so that we can build these markets alongside the changes we are making to our IT systems to allow us to aggregate dispatch or dispatch smaller players within the market.
- We have **launched two pathfinders**, one for reactive power and one for stability. We will also be launching another pathfinder to look at constraints management.

More Detail

Delivering on our 2025 ambition

As part of our strategy we are looking for opportunities to develop and create new markets so that by 2025, we have the right solutions in place to support zero-carbon operation of the electricity system.

We are making some changes to how we operate the GB electricity market. Within our response and reserve markets, we will be launching a suite of new frequency response products and further developing existing services.

We are also launching a series of pathfinders that will explore the possibility of new markets for stability and reactive power, potentially creating opportunities for non-network companies to provide commercial solutions to challenges on the transmission system.

Through making these changes and developing new services, we aim to increase transparency around the decisions we make; and increase liquidity in markets to drive competition, innovation and ultimately the most benefit for consumers.

¹ Trans European Replacement Reserves Exchange. A European wide project designed to establish a new platform for trading replacement reserves.

To make sure you are always up to date on any upcoming changes and announcements, follow our twitter account [@ng_eso](#), or find us on [LinkedIn](#).

1.Frequency Response Market Update

Frequency response is a service that market participants can provide to the ESO, to help us balance the electricity system. The purpose of the service is to either increase or decrease generation, in response to frequency deviations away from our statutory operating limits. Over the next few months we are making some announcements within our frequency response markets:

Firm Frequency Response:

In spring 2019, we launched phase 1 of our auction trial to procure low frequency static response. Following on from this, on 29 November 2019, we launched phase 2 of the auction trial to procure dynamic frequency response products. These different types of frequency products are key to helping us manage the electricity system in a world where the energy mix is becoming more diverse and the way consumers use electricity is evolving. You can visit our website [here](#), to get more information on the weekly auction trial results for phase 1 and learn more about phase 2 of the trial.

The launch of a new frequency product – Dynamic Containment

As we move to a world where the energy mix is evolving and we are seeing more renewable generation on the system, we need the market to provide us with products that are quicker at responding to frequency changes. We will be rolling out a new frequency response suite and the first of the new products within this suite, is Dynamic Containment. This is one of the latest developments in our ancillary services products and markets, and was first highlighted in our June 2017 [System Needs and Product Strategy \(SNaPS\)](#).

Dynamic Containment will be designed to operate when the frequency moves outside the operational limits. The product will have a very fast response time and will help us to secure both generation and demand losses. We are hoping to be able to procure this product quickly, currently our preferred approach will be to use the EpexSpot auction platform, but this will be dependent on the success of the launch of the phase 2 of the auction trial in November, as mentioned above.

We are planning on sharing further communications on Dynamic Containment in December and will engage with our stakeholders and industry through a series of workshops in January 2020. We will then share our plans for designing and putting in place the product by the end of March 2020, with an aim to procure the first volumes of Dynamic Containment by April 2020.

In our upcoming Frequency Response and Reserve Roadmap you will be able to find more information on Dynamic Containment, and the other frequency products that we will be looking to procure so that we can make progress against our zero carbon by 2025 target.

2.Reserve Market Update

Reserve is an important service as it helps us to correct imbalances between generation and demand, that can be caused by forecasting errors, or by an unexpected loss of generation or demand. This is a service that we buy from market participants ahead of real time, through auction tenders. The changes we are making to the fast reserve market that we operate are:

Fast Reserve

Based on stakeholder feedback, we will be making some changes to the way in which we procure our fast reserve services. Historically, one of the fast reserve products which we procure from the market (Spin-Gen) has only been provided by a small number of market participants. In line with our strategy to widen access to this market, we will begin buying more volume through our Firm tender to encourage a wider number of participants.

From December through to March we will be running a trial increasing the volume of fast reserve that we procure in the tender, from 300MW to 600MW. The aim of the trial is to increase competition in a more open, fair and transparent market.

We will continue to review the effectiveness of the trial, looking at cost to consumers and taking feedback from operational colleagues and decide on what our future procurement strategy will be. This work will directly feed into the wider reserve work.

Wider access to Balancing Mechanism (BM) and Project TERRE

We are always striving towards delivering more value for consumers and one of the ways we are doing this is by making electricity markets more accessible to encourage competition. In December, we will be rolling out wider access to the balancing market.

We are going to promote wider access to the BM by improving existing routes to market, through removing the barriers faced by some suppliers who want to aggregate together their smaller Balancing Mechanism Units (BMU). This means that smaller flexibility providers can participate in the BM and can compete against larger, traditional BMUs. We have already had a number of providers participate in the accelerated wider access programme and continue to monitor the number of instructions these providers receive.

We are also going to look at creating new routes to market to go alongside the changes being made under Project TERRE, an initiative that is going to create a market for trading European Reserve Services. Again, this will allow a wider range of providers to access the BM.

3. Creating New Markets

Launch of pathfinders

We recently launched two new pathfinders, one for stability and one for reactive power (voltage). To achieve our zero-carbon by 2025 ambition we need to be able to safely operate and manage the transmission network, with increasing amounts of renewables such as wind and solar.

These types of generation do not provide the grid with some of the services that a traditional generator does, such as inertia, so we need to find new ways of being able to procure this.

We also need to find new ways to manage system characteristics such as voltage. Keeping the voltage steady is important for delivering high quality service to consumers. To do this, we need the ability to increase and decrease reactive power, which has a direct impact on the voltage level. We have recently gone to the market and launched a tender for reactive power services in the Mersey region. The purpose of this pathfinder is to explore whether distributed energy resources can provide reactive power services.

By the end of 2019, we will also be launching another pathfinder project which will look at managing congestion on the network. We are expecting to launch a market engagement platform by the end of this year, so that we can get more feedback and input from market participants.

The learning we take from these pathfinders will help to inform our strategies for reactive power, stability and congestion management. Make sure you are following the ESO on social media to stay up to date, or visit the Network Development Roadmap page on our website [here](#).

Upcoming Publications

As we progress through the next five years and onwards, providers of these new products and solutions will become fundamental in shaping and driving our publications and announcements. As well as helping us to succeed against our zero-carbon ambition, they will help us to facilitate competition everywhere and drive more value for consumers.

Throughout the year, we publish various documents looking at future network needs so we can effectively, plan and operate the transmission network. In these documents, we will be letting you know what we need from markets, and what future investment we think is needed in over the next 5-10 years, to get to a place where we can operate an ultra-low carbon electricity network.

Each of these publications look at requirements of the electricity system and sets out what we will be doing to address these requirements.

Publications that set out the changing energy landscape and system requirements:

Electricity Ten Year Statement (ETYS):

Publication date: 29/11/19

- This publication looks at what the requirements will be for the transmission systems across England, Scotland and Wales, over the next ten years to make sure it can continue to transfer electricity around the country. The requirements set out in this document are based on the Future Energy Scenarios. This publication links to our zero-carbon ambition as it looks at what the electricity transmission system needs to continue to operate reliably as the energy landscape changes.

Network Options Assessment (NOA):

Publication date: end of January 2020

- This publication sets out the options available to meet the system requirements that are set out in ETYS, and makes a series of investment recommendations to industry and the transmission owners (TOs).

System Operability Framework (SOF) Reports:

Publication date: 15/11/19

- These reports set out how the changing energy landscape will impact how we operate the electricity system. It gives a more technical view of challenges and identifies medium-term and long-term requirements for operability.

Publications that set out what we are doing to meet system requirements in our role as market operator:

Operability Strategy:

Publication date: December 2019

- Highlights the challenges we face in operating the electricity system and summarises the work that we are doing to meet these challenges.

Frequency Response and Reserve Roadmap:

Publication date: w/c 02/12/19

- This publication sets out our plans for reforming the frequency response and reserve services that we currently procure, to help us balance the electricity system. The purpose of this document is to influence the actions of market participants and provide them with signals so that they can respond to and adapt to market changes.

Timing of activity

