

ESO Response to AFRY Scheduling & Dispatch Case for Change

Introduction:

This 'Case for Change' is the first stage in our wider assessment of dispatch in support of DESNZ's REMA programme. Our objective has been to identify and classify emerging markets-related challenges we are seeing in 'operational' timescales, from day-ahead through to real-time dispatch. These challenges are arising because GB is successfully transforming its electricity mix, moving from a system with dispatchable, fossil fuel supply and price-insensitive demand to one with weather-driven supply and growing price-responsive resources outside of the Balancing Mechanism.

Many of the issues raised are familiar to our stakeholders. We believe that, taken together, they show a system that has transformed beyond what was envisaged when current dispatch arrangements were first introduced. Significant changes include:

- The deployment of new generation capacity, particularly in export constrained regions, has outpaced transmission infrastructure expansion. In this context, the market is not incentivised to position itself in line with the underlying physics of the system, increasing the scale and impact of System Operator balancing actions both in terms of number of instructions and volume of redispatch.
- The nature of supply and demand: development of renewables, retirement of coal and the changing role of gas generation as a complement to renewables have altered the operation of the supply side. Two-way assets such as interconnectors and storage have also been deployed at pace. Price-responsive demand is now a significant driver of flexibility and dispatch uncertainty.
- Low marginal cost renewable generation and flexible demand is leading to a more variable within-day demand profile. 'Scheduling' decisions (when to charge/export/shift/turn on or off) are therefore more significant in determining how controllable assets dispatch.

Key conclusions:

AFRY identified 'case study' days that illustrate particular challenges. Their assessment used a mixture of historical ESO data, analysis of spot market prices and interviews with control room colleagues. This report is therefore primarily a qualitative account of challenges in GB dispatch arrangements, and in several areas further evidence is required to support prioritisation for future decisions; however, we believe the following can be concluded:

- BM redispatch will continue to increase in the absence of price signals which reflect network constraints.
- BM redispatch is not 'zero-sum': asset inter-temporal constraints, where a decision in one period constrains opportunities in future periods, means that imperfect planning by the SO or the market in the hours before gate closure can lead to more expensive overall dispatch.
- The information passing between ESO and the market is incomplete and is leading to inefficient decision-making on both sides. A key driver of this challenge is that technologies which were not present in significant volumes when the current market framework was designed, such as distributed energy resources, are now substantial.

What is the impact of these issues on GB market participants?

We agree with AFRY's assessment of how market parties can be adversely impacted under current dispatch arrangements. For example, it is likely that balancing actions in some cases dampen the System Imbalance Price, reducing incentives for flexible assets. More broadly, we believe growing ESO redispatch for both energy and system services, combined with redispatch actions impacting future periods, makes it challenging for market participants to understand and forecast some BM dispatch decisions. While significant efficiency gains derive from the BM integrating procurement for energy and system services, reduced market predictability and transparency impacts operator, trader and investor decision-making.

What have our stakeholders said so far?

Our initial conversations with stakeholders have emphasised to us several themes:

- In some cases, particularly relating to visibility and access, ESO could propose changes to industry codes and frameworks to improve two-way communication between itself and the market.
- There is an important role for liquidity and fair access in reducing the observed challenges.
- While many stakeholders agree that 'Visibility and Access' and 'Intertemporal Issues' are major concerns, there is less consensus on whether it is appropriate for market players to be exposed to incentives that are not related to energy imbalance but for 'System Operation'.

We will integrate this feedback into the next stages of our Dispatch work. We invite stakeholders to continue to submit the issues they see with current arrangements and potential options for reform.

Any evaluation of options will consider how they cohere with other reforms being considered in REMA and potential wider impacts.

Next steps:

We are holding a webinar to discuss AFRY's findings with our stakeholders in greater depth on 21st May. Further details can be found in the [event website](#). We then plan to share our early identification of possible dispatch models to test with industry in further support of DESNZ's REMA assessment.