

# Incentives Monthly Monitoring Meeting

## Meeting Minutes (October 2021 Report)

### Details

Date:	<b>Tuesday 30 November 2021</b>	Location:	<b>Teleconference</b>
Time:	<b>10:00 - 11:30</b>	Meeting Number:	<b>39</b>

### Agenda

Ref	Time	Title	Owner
1	10:05 – 10:20	<b>SME slot – Balancing Costs</b>	ESO
2	10:20 – 10:35	<b>SME slot – Bridging the Gap to Net Zero</b>	ESO
3	10:35 – 10:50	<b>SME slot – System Inertia Monitoring</b>	ESO
4	10:50 – 11:00	<b>ESO to highlight notable points from the published report</b>	ESO
5	11:00 – 11:10	<b>ESO to take questions on the published report</b>	ESO
6	11:10 – 11:20	<b>Ofgem to give feedback on ESO performance</b>	Ofgem
7	11:20 – 11:30	<b>Review actions &amp; AOB</b>	All

### Participants

Name	Company	Name	Company
Jenny Mills	NG ESO	Anna Blackwell	NG ESO
Phil Smith	NG ESO	Maryam Khan	Ofgem
Jess Rivalland	NG ESO	Alice Siri	Ofgem
Cathy Fraser	NG ESO	James Hill	Ofgem
Cristian Ebau	NG ESO	Luke Jones	Ofgem
Rebecca Hart	NG ESO	Adam Gilham	Ofgem

### Actions

Meeting No.	Action No.	Date Raised	Target Date	Resp.	Description	Status
37	106	05/10/21	23/11/21	ESO	ESO to investigate possible gaps in the data for Operating Reserve trades volume	Open

38	112	02/11/21	22/11/21	Ofgem	Consider forecasting reporting- decimal places and treatment of triads	Closed
39	113	30/11/21	10/12/21	ESO	Ofgem's 6 month report will have an update on the cost benchmark. ESO to confirm with Ofgem if they agree.	Closed
39	114	30/11/21	06/01/22	Ofgem	Ofgem to provide feedback on new market monitoring function set up.	Closed
39	115	30/11/21	10/12/21	ESO	Ofgem queried if energy imbalance costs were high in addition to margin prices. ESO to provide a response	Closed
39	116	30/11/21	10/12/21	ESO	ESO to send through MBSS data once available	Closed

## Discussion and Questions

### 1. Balancing Costs

Cathy Fraser talked through the October balancing costs, highlighting the main drivers of performance and cost saving actions taken by the ESO.

Costs were significantly higher this month driven by an increase in wholesale power and carbon prices. The average monthly margin price fell, and combined with high wind levels this meant that additional actions were taken to manage constraints. October's costs were higher this year than last year due to the increase in energy costs. Constraint costs are also higher, as October 2021 saw higher wind output than the previous year. RoCoF costs increased from the previous month but remain lower than this time last year due to the introduction of the Frequency Risk and Control Report (FRCR) Phases 1 and 2.

Lower demand seen than this time last year, but not substantial. Metered wind output in October was higher than the previous three years. The result of this is constraints becoming active, requiring wind to be pulled back and this energy to be replaced within the Balancing Mechanism (BM), driving thermal constraint costs to be higher than September's values.

Energy costs have increased as a result of increases in BM prices. The biggest increases are in Operating Reserve, Fast Reserve and Response. Higher market prices have pushed the price up on several occasions in September, tight margins required the Control Room to pay up to £4000/MWh for energy to secure the system. The response costs contain the cost of Dynamic Containment which has allowed the ESO to reduce RoCoF spend. Minor components are negative due to SO-SO trades done to assist Ireland.

Cathy also talked through cost saving actions that were taken by the ESO during October.

Question	ESO response
On the high wind levels and constraints in October, is that in absolute terms or relative to the rest of this year. Have constraints picked up because we haven't had a windy year so far, and with normal levels of wind do we expect high constraint costs?	This has been the windiest October in the last three years, so we do see an increase in costs. In previous months wind has been lower, as well as outages combinations being favourable in terms of constraints.
Based on the energy imbalance volumes, expected energy imbalance costs to be higher due to high energy costs, so it is surprising to see that energy imbalance costs were low.	We will take this away and get back to you.

## 2. Bridging the Gap to Net Zero

Rebecca Hart provided an update on Bridging the Gap which is where we look at FES key messages in more depth and identify what industry needs to be doing in the next 5 to 10 years. We hold extensive external stakeholder engagement to make it a collaborative approach. A report will be published in March 2022 which will summarise discussions and highlight actions. This report will build on the 2021 peaks and troughs and how data and digitalisation, technology and markets can help meet the challenges of a decarbonised electricity system. In 2022 we will be taking a closer look at peaks and troughs in the electricity system in 2035 and the actions required for flexibility. Planned outputs would be a week in the life narrative for 2035 energy system, and timeline with milestones showing specific actions.

ESO are looking at what is common across consumer and system transformation and highlighting major differences between now and in the future. ESO will use a modelled peak demand/trough of supply week in 2035 as the basis for a narrative explaining how a flexible energy system works.

Necessary actions and features were discussed on key themes: Digitalisation, Consumer participation, Market reform, Roles and responsibilities, and Levels of infrastructure and investment.

Question	ESO response
How linked are the operability strategy reports to this project. Are they being worked on side by side?	Yes, the ESO are trying to join the dots for industry. Once this has been published the ESO are planning to show how it all links together. The operability strategy report will be integrated in the high level overview. There will be sign posting to various activities across the business.
Ofgem commented on visibility issues and how industry will be interested in seeing a timeline.	The ESO will address this.

## 3. System Inertia Monitoring

Anna Blackwell presented the new system inertia monitoring tools we are introducing. As large synchronous generators are being replaced by renewable generators, inertia has decreased and is expected to continue to drop. This has resulted in increased RoCoF costs.

The ESO are bringing in two new tools to measure the actual inertia on the network. These are first of a kind installations and both have come out of research projects funded by ESO Innovation and European funded MIGRATE.

The first product is being developed by GE Digital which will rely on Transmission Owners installing phasor measurement unit (PMU)s which are high resolution monitoring devices due to roll out over RIIO-2, this will take time and has only been completed in Scotland so far. This product has been running for over a month and providing a live inertia feed for Scotland, it works on a regional basis and every 5 minutes it provides the inertia contribution from that area. This system also provides a forecast of 24 hours ahead by using market data, and also incorporates machine learning which has started to improve and align with actual metered value. It is currently being assessed by ESO operational teams, with a view to rolling it out in the Control Room in spring.

For the second product we are working with Reactive Technology Limited (RTL) whose system uses a modulator device to send small, low frequency signals out onto the network. This method looks at the distortions in that signal with RTL using special measurement devices to detect changes in signal and by performing the analysis on this they can calculate the inertia for the whole GB network. The ESO have purchased a large ultracapacitor which is going through testing, there have been a couple of technical issues

however this should be operational in January 2022, and ESO is then looking to implement it into the Control Room in April 2022.

ESO is planning to work with an external research group to assess these products and understand their overall accuracy and how they compare to our current estimation methods, as well as how we implement them and make the data available to the market.

#### 4. ESO to highlight notable points from the published report

Jenny Mills talked through the key points from the October report.

#### 5. ESO to take questions on the published report

N/A

#### 6. Ofgem to give feedback on ESO performance

Ofgem stated they felt some early October Operational Transparency forums had to take away questions that should have been easily answered on the day.

#### 7. Review actions & AOB:

The ESO and Ofgem reviewed the previous actions and added several.

ESO are doing internal work on revising the benchmarks for the balancing costs metric. Ofgem stated that this will be picked up in January.

Panel and Ofgem reports to be published on 15 December.

Ofgem noted that several members of their ESO regulation team were being seconded to their Retail team.

### Previously Closed Actions

Meeting No.	Action No.	Date Raised	Target Date	Resp.	Description	Status
38	108	02/11/21	04/11/21	Ofgem	Send through questions on Mid Year report	Closed
38	109	02/11/21	08/11/21	Ofgem	Send through Call for Evidence responses	Closed
38	110	02/11/21	23/12/2021	All	Discuss updating deliverables in Delivery Schedule to account for changes due to Brexit and Offshore Coordination	Closed