

Incentives Monthly Monitoring Meeting

Meeting Minutes (November 2021 Report)

Details

Date:	Thursday 6 January 2022	Location:	Teleconference
Time:	10:00 - 12:00	Meeting Number:	40

Agenda

Ref	Time	Title	Owner
1	10:05 – 10:20	SME slot – Balancing Costs	ESO
2	10:20 – 10:35	SME slot – BSUoS Forecasting	ESO
3	10:35 – 10:50	SME slot – Virtual Energy System	ESO
4	10:50 – 11:00	ESO to highlight notable points from the published report	ESO
5	11:00 – 11:10	ESO to take questions on the published report	ESO
6	11:10 – 11:20	Ofgem to give feedback on ESO performance	Ofgem
7	11:20 – 11:30	Review actions & AOB	All

Participants

Name	Company	Name	Company
Jenny Mills	NG ESO	Joshua Visser	NG ESO
Phil Smith	NG ESO	Luke McCartney	Ofgem
Jess Rivalland	NG ESO	Grendon Thompson	Ofgem
Cathy Fraser	NG ESO	James Hill	Ofgem
Cristian Ebau	NG ESO	Luke Jones	Ofgem
Andrew Richards	NG ESO		

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. Update: ESO to bring an update to the next monthly meeting.	Open

40	115	06/01/21	7/01/21	ESO	ESO to move meeting on 'Mid-year report - feedback on content and structure' back by one week.	Closed
40	116	06/01/21	31/01/21	ESO	ESO to provide an update on the likely timescale for the ESO's cost benefit analysis of procuring balancing services at a GSP level.	Open
40	117	06/01/21	31/01/21	ESO	ESO to provide a response regarding whether the North Sea Link interconnector was restricted in November 2021 and if so, the impact on RoCoF and response costs.	Open
40	118	06/01/21	24/01/21	ESO	ESO to share the definitions for the operating reserve graphs.	Closed
40	119	06/01/21	24/01/21	ESO	ESO to provide more detail on 'making better use of wind power, building on the Power Available phase 2 go-live in March 2021' as mentioned in relation to recent updates to the BM Control Room systems.	Closed
40	120	06/01/21	26/01/21	Ofgem	Ofgem to share contact details of Brian O'Neill, for ESO to contact regarding the Virtual Energy System.	Closed

Discussion and Questions

1. Balancing Costs

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

The balancing costs for November were £541m, the highest on record. During the month there were 23 days where the daily balancing costs exceeded £10m and 10 of these where the cost was over £20m.

Whilst both constraint and non-constraint costs had increased from the previous month, more than two thirds of the spend was on constraint related actions. The significant increase in constraint costs was the result of continued very high wholesale prices, combined with high wind and reduced boundary capability due to system outages. Average monthly margin price rose from £178/MWh in October to £303/MWh in November. This required the ESO to take a large volume of Balancing Mechanism (BM) actions to reduce generation behind constraints, and replace it with alternative generation.

The ESO is undertaking a review of the balancing market and also working with Ofgem to consider options for revising the benchmark for this metric.

RoCoF costs remain much lower than this time last year due to the introduction of FRCR phases 1 and 2

There has been a lower volume of actions this year compared with last year, but due to the higher cost of actions, the overall balancing costs have increased.

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

Question	ESO response
<p>What are the ESO's expectations around RoCoF spending – was November impacted by Phase 2 of the FRCR, or are we expecting to see RoCoF costs reduce further? Is the offsetting increase in response costs expected to continue?</p>	<p>Yes, FRCR Phase 2 was in place from 7 October 2021, and we expect this to continue to drive lower costs. We spend less securing our RoCoF risk, but because we're buying Dynamic Containment, this results in higher response costs. We anticipate that as competition in this area increase, the costs should reduce.</p>
<p>On the operating reserve graphs in the meeting slides, does the red bar for Constrained Operating Reserve contain spend/volume that is classified as Constraint spend or Energy spend?</p>	<p><i>Post Meeting update:</i></p> <p>The graph in question is taken from the November MBSS report and is used to show a different breakdown of cost than is shown in the monthly report. This chart has values that are recorded as both Energy and Constraint spend in the monthly report.</p> <p>In the monthly report all the areas below are included in the Constraint spend category.</p> <p>Constrained Margin Costs are incurred when actions are taken which have the combined effect of:</p> <ul style="list-style-type: none"> • Replacing Sterilised Operating Reserve behind a constraint boundary • Increasing the amount of positive reserve available for operation <p>The action must only partially replace sterilised Operating Reserve and partially increase the amount of positive reserve available. If an action is taken to completely replace sterilised operational margin, then the costs are assigned to constraint costs.</p> <p>Sterilised Operating Reserve refers to BMUs which are unable to achieve maximum output as they are located behind a constraint boundary which cannot transmit all of the necessary power through the available assets</p> <p>Constrained Sterilised Headroom: Headroom represents spare capacity on operating generating units which the ESO can potentially access to meet its reserve requirements. Headroom may become inaccessible due to transmission constraints in the case of generators located behind an export constraint boundary. The cost of replacing this 'sterilised headroom' can contribute materially to overall constraint costs.</p>

Can the ESO share more details on the following point that was mentioned in the Notable Event about updates to the BM Control Room systems:

‘In addition, we can now make better use of wind power, building on the Power Available phase 2 go-live in March 2021, through changes that will improve the economic advice presented to the control room’?

Post meeting update:

The dispatch adviser that is currently in production was designed with thermal generation in mind. When a wind unit was operating above its physical notification (PN) the adviser was unnecessarily suggesting bringing wind down to its PN, seeing this as income and therefore a preferred option to advise. This is because a thermal unit operating above its PN would typically only do so as a result of an instruction by the ESO. Wind units, on the other hand, may operate above their PN for economic reasons in higher than expected wind conditions. This unwanted behaviour meant that the control room users had to ignore the advice given, creating a manual workaround to ensure economic dispatch. In addition, the dispatch adviser applied a compensating uplift spread over the rest of the dispatchable units, which degraded the overall accuracy of advice. This issue was fixed in the November systems update and ensures wind units are correctly placed in the price stack, which has been verified by control room users since the release. This has reduced the workarounds they need to perform, and improved overall accuracy of advice.

We are targeting further improvements to how we treat wind power. In the autumn, a release will contain updates to how our systems produce short-term wind forecasts. Improving these forecasts means that control room engineers have more confidence about levels of wind power and therefore can allocate it for response and reserve more confidently.

Was the North Sea Link interconnector restricted in November and if so, what was the impact on RoCoF and response costs?

Action on the ESO to provide a response.

2. BSUoS Forecasting Accuracy (RRE 2E)

Cathy Fraser and Andrew Richards talked through the background to the BSUoS forecasting models used by the ESO and the planned developments.

In January, the current BUSoS forecasting model will be enhanced with updated Constraint cost data and used for the next forecast issued.

As a further development, a new modelling approach for BSUoS Forecasting has been developed, and will be used to set the BSUoS tariffs for September 2022. Internal and external stakeholder engagement and validation of the model is required before this is used in this way.

This model being developed aims to balance the need for a sophisticated model that can take account of multiple factors, with the need for it to be simple enough that it can be explained clearly.

Cathy and Andrew shared some of the questions on BSUoS that had been raised by stakeholders at the Operational Transparency Forum (OTF) in November and December. The topic will also be covered at the next OTF on 19 January.

Question	ESO response
When will the new model be in place?	The next monthly forecast (the forecast for February, produced in January), will use the current BSUoS modelling process but with the new constraint cost data. The ESO committed to this in the Constraints 5 Point Plan.

We need to make sure that we communicate the new model thoroughly before using it. We expect to be using it by September 2022 ready for the BSUoS fixed cost tariffs. We will discuss internally whether we can use it for the published shorter term forecast earlier than September.

Forecasts have been less accurate in recent months, and it's recognised that this was partly the result of a set of unexpected circumstances. To what extent has the ESO been able to build these new conditions into the modelling that is being developed?

The current model is linear based on history, but with adjustments based on what's happening in the market. This model isn't suitable for making more complex adjustments, but the new model will be more sophisticated and able to take account of more factors.

3. Virtual Energy System

Joshua Visser gave an overview of the launch of an industry-wide programme to develop a Virtual Energy System (VES). With the energy system changing rapidly, achieving net zero requires the ESO and other stakeholders to model the system better and simulate the more complex scenarios through a shared system of data, models, and tools. This can deliver new insights, more efficient outcomes, improved investment decisions and more targeted innovation. Stakeholder engagement is at the core of this project, so the ESO is building advisory groups around three key themes. The first virtual conference was held in December 2021, and a survey has been launched to obtain initial industry feedback.

Question

ESO response

How does the digital Control Room twin, which was part of the ESO's RIIO-2 Business Plan, fit in with the VES?

There are three workstreams: Stakeholder engagement; common framework; building individual use cases. There are currently three ESO digital twin 'use-case' projects planned or in progress using innovation funding. The Control Room twin is a separate 'use case' that was envisioned for digital twin technology in BP1 under Role 1, and could eventually tie into the VES.

Is there a high level timeline for the development of the VES?

The timeline is not fixed, as the programme is still in its early stages and we don't anticipate the VES being a usable resource for industry before the end of the RIIO-2 period. Stakeholder engagement, individual use case projects and the common framework are to be developed further before we are able to establish a longer-term roadmap.

What's been the stakeholder reaction so far?

Overwhelmingly positive, particularly at the senior level, with good attendance at events that the ESO has held to date. There have been some frustrations in that stakeholders are keen to progress quickly, and some misconceptions that ESO is building the system, rather than facilitating the industry-led programme and developing the common framework to guide how energy system digital twins can be developed to better interact.

This project appears to cut across many areas of Ofgem – do you feel you have the right contacts within Ofgem?

We're already talking to Ofgem, BEIS and the ENA, and would welcome any other suggested contacts to engage with. Grendon suggests speaking to Brian O'Neill and will share contact details with the ESO.

4. ESO to highlight notable points from the published report

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

5. ESO to take questions on the published report

N/A

6. Ofgem to give feedback on ESO performance

N/A

7. Review actions & AOB:

The ESO and Ofgem reviewed the previous actions.

ESO will provide an update on the likely timescale for the ESO's cost benefit analysis of procuring balancing services at a GSP level.

Some of the Ofgem incentives team are currently seconded to other areas until at least March 2022. In the meantime, the main contacts should be: Adam Gilham for Role 1, and James Hill for Roles 2 and 3.

Previously Closed Actions

Meeting No.	Action No.	Date Raised	Target Date	Resp.	Description	Status
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