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- Click 'Turn on live captions'

ESO Operational Transparency Forum

19 July 2023

## Introduction | Sli.do code #OTF

Please visit [www.sli.do](http://www.sli.do) and enter the code #OTF to ask questions & provide us with post event feedback.

We will answer as many questions as possible at the end of the session. We may have to take away some questions and provide feedback from our expert colleagues in these areas during a future forum. **Ask your questions early in the session to give more opportunity to pull together the right people for responses.**

To tailor our forum and topics further we have asked for names (or organisations, or industry sector) against Sli.do questions. This is also helpful if we need to ask for more information before we can answer.

If you do not feel able to ask a question in this way please use the **Advanced questions** option (see below) or email us at: [box.NC.Customer@nationalgrideso.com](mailto:box.NC.Customer@nationalgrideso.com)

These slides, event recordings and further information about the webinars can be found at the following location:

Advanced question can be asked here: <https://forms.office.com/r/k0AEfKnai3>

Stay up to date on our new webpage: <https://www.nationalgrideso.com/OTF>

## Future deep dive / focus topics

### Future

Scottish Oscillations – date tbc

If you have suggestions for future deep dives or focus topics please send them to us at:  
[.box.NC.customer@nationalgrideso.com](mailto:.box.NC.customer@nationalgrideso.com) and we will consider including them in a future forum

# Winter Balancing Costs Review

On 7<sup>th</sup> June the Winter Balancing Costs Review was published to identify the drivers of balancing costs and their trends across the winter period (November to March)

It is split into a summary report linked with the ESO balancing costs strategy and a detailed and independent report by LCP

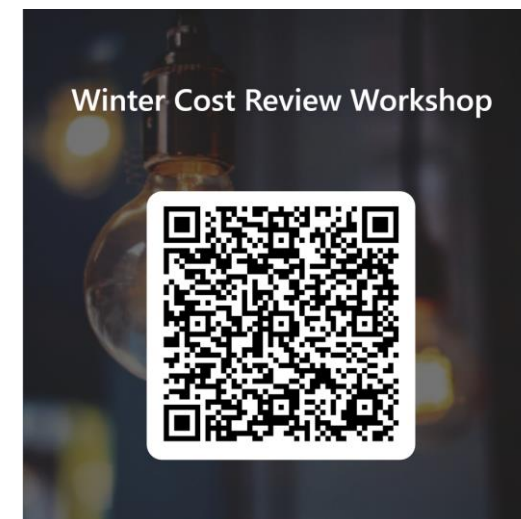
<https://www.nationalgrideso.com/document/281776/download> (Summary Report)

<https://www.nationalgrideso.com/document/281781/download> (Full LCP Report)

We invite you to join a workshop on the ESO balancing costs strategy, detailed review and response to your feedback on this winter balancing costs report and opportunity to have your qualitative views captured and added to an appendix.

The workshop will be held on **25<sup>th</sup> July 13.30 – 16:00.**

Please register using the QR code.



# GC0154 Workgroup Consultation

- A code change modification to include interconnector ramping in the Grid Code has been raised
- Purpose is to comply with retained EU Law and to resolve the operational challenges as a result of fast simultaneous interconnector ramping
- Current arrangements allow interconnectors to ramp up to 100MW/min
- Reduced ramping rates aims to increase security of supply and to reduce GB balancing costs both now and as more interconnectors connect in the future
- A CBA conducted suggested a saving of £865m in balancing costs over the study period of 2023-2030 by reducing interconnector ramp rates.
- The Workgroup Consultation opened on 11th July 2023

## ESO Proposed

Reduce the current arrangements to a max fixed rate of 50MW/min

## Workgroup Alternate

Keep the current arrangements of a max fixed ramp rate 100MW/min

The code modification page can be viewed [here](#)



# Stability Mid-term Market Request for Information (RFI)

In 2021 National Grid Electricity System Operator (ESO) launched the Stability Market Design innovation project to explore the design for the enduring stability market with a focus on value for consumers.

Earlier this week, on 17 July 2023, ESO hosted a conclusion webinar to summarise the output of this project and next steps. During this webinar we set out the proposal to procure stability services across several timescales:

- **Long-term Y-4**
- **Mid-term Y-1**
- **Short-term D-1**

The first step to launch the Stability Market is to **initiate the mid-term (Y-1) market**, with the intention to undertake the first mid-term (Y-1) tender round later this year (2023).

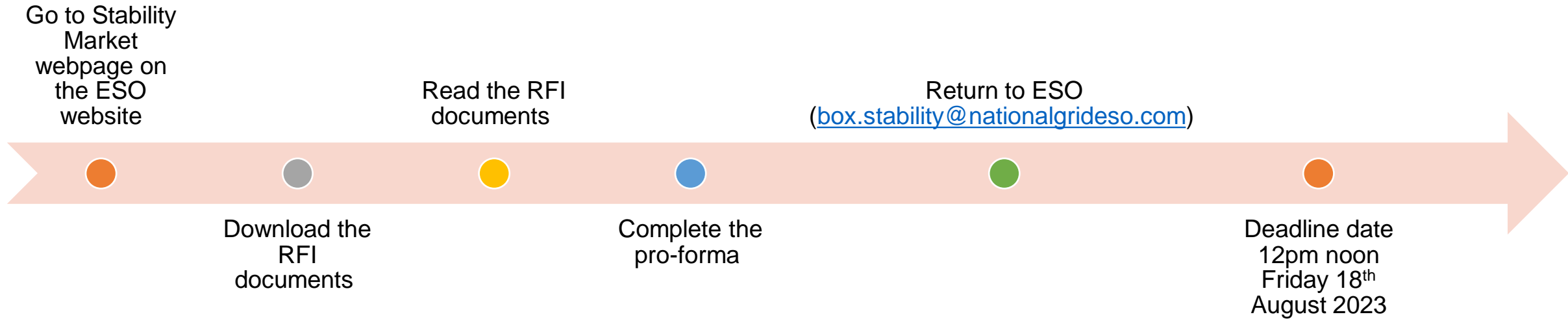
Prior to the launch of a mid-term market, ESO have launched **a request for information (RFI)** are **seeking industry perspectives** on a variety of topics that will help ESO to design and launch a mid-term market.

ESO are particularly interested to hear from parties that can provide stability services and are interested in a Stability mid-term market.

The launch of this RFI represents a further step in our evolution from ad-hoc Pathfinder tenders to a more regular, structured Stability Market.

**Please Note:** This is a Request for Information (RFI) only and not part of a formal tender process. **A contract will not be awarded through a response to this RFI.**

# How to participate

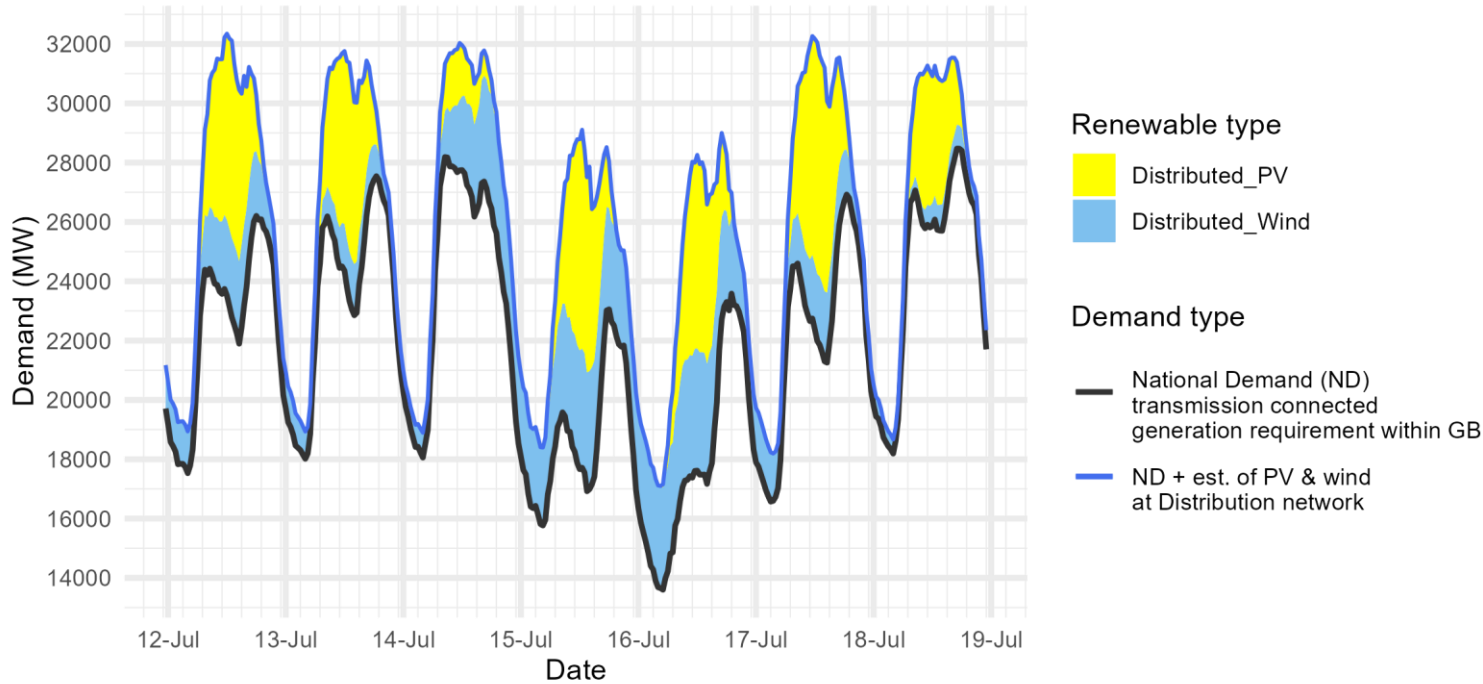


Milestone	Date
RFI Launch	17 July 2023
RFI Close	18 August 2023 12pm noon

- The Stability Market webpage can be accessed using this link:  
<https://www.nationalgrideso.com/industry-information/balancing-services/stability-market>
- If you have any questions, please contact [box.stability@nationalgrideso.com](mailto:box.stability@nationalgrideso.com)
- If you are interested in a one-to-one conversation with ESO, please contact with [box.stability@nationalgrideso.com](mailto:box.stability@nationalgrideso.com) to organise a meeting

# Demand | Last week demand out-turn

ESO National Demand outturn 12-18 July 2023



The black line (National Demand ND) is the measure of portion of total GB customer demand that is supplied by the transmission network.

ND values **do not include** export on interconnectors or pumping or station load

Blue line serves as a proxy for total GB customer demand. It includes demand supplied by the distributed wind and solar sources, but it **does not include** demand supplied by non-weather driven sources at the distributed network for which ESO has no real time data.

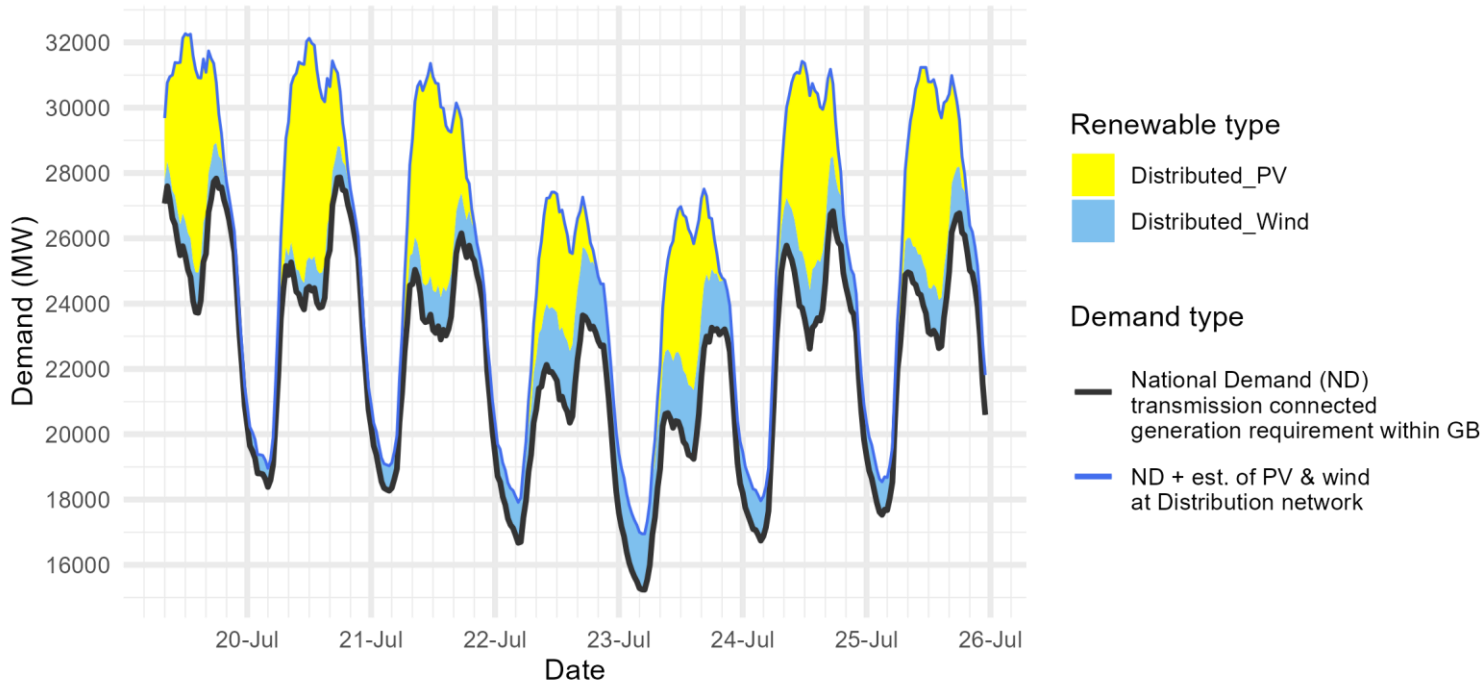
Historic out-turn data can be found on the [ESO Data Portal](#) in the following data sets: [Historic Demand Data](#) & [Demand Data Update](#)

Date	Forecasting Point	FORECAST (Wed 12 Jul)			OUTTURN		
		National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
12 Jul	Afternoon Min	22.7	2.9	5.8	21.9	2.8	5.8
13 Jul	Overnight Min	18.0	1.0	0.0	18.0	0.9	0.0
13 Jul	Afternoon Min	23.0	1.8	6.4	22.9	1.7	5.5
14 Jul	Overnight Min	18.0	0.7	0.0	18.1	0.8	0.0
14 Jul	Afternoon Min	24.1	2.4	3.1	26.2	3.1	1.4
15 Jul	Overnight Min	14.7	2.9	0.1	15.8	2.6	0.0
15 Jul	Afternoon Min	15.3	3.9	6.4	16.9	4.0	6.6
16 Jul	Overnight Min	13.2	3.2	0.2	13.6	3.4	0.1
16 Jul	Afternoon Min	14.7	4.3	7.2	17.2	4.1	5.4
17 Jul	Overnight Min	15.7	2.1	0.0	16.6	1.7	0.0
17 Jul	Afternoon Min	21.7	2.7	6.6	21.3	2.4	6.4
18 Jul	Overnight Min	17.1	1.5	0.0	18.2	0.5	0.0
18 Jul	Afternoon Min	21.9	2.4	6.0	25.7	0.9	4.2



# Demand | Week Ahead

ESO Demand forecast for 19-25 July 2023



The black line (National Demand ND) is the measure of portion of total GB customer demand that is supplied by the transmission network.

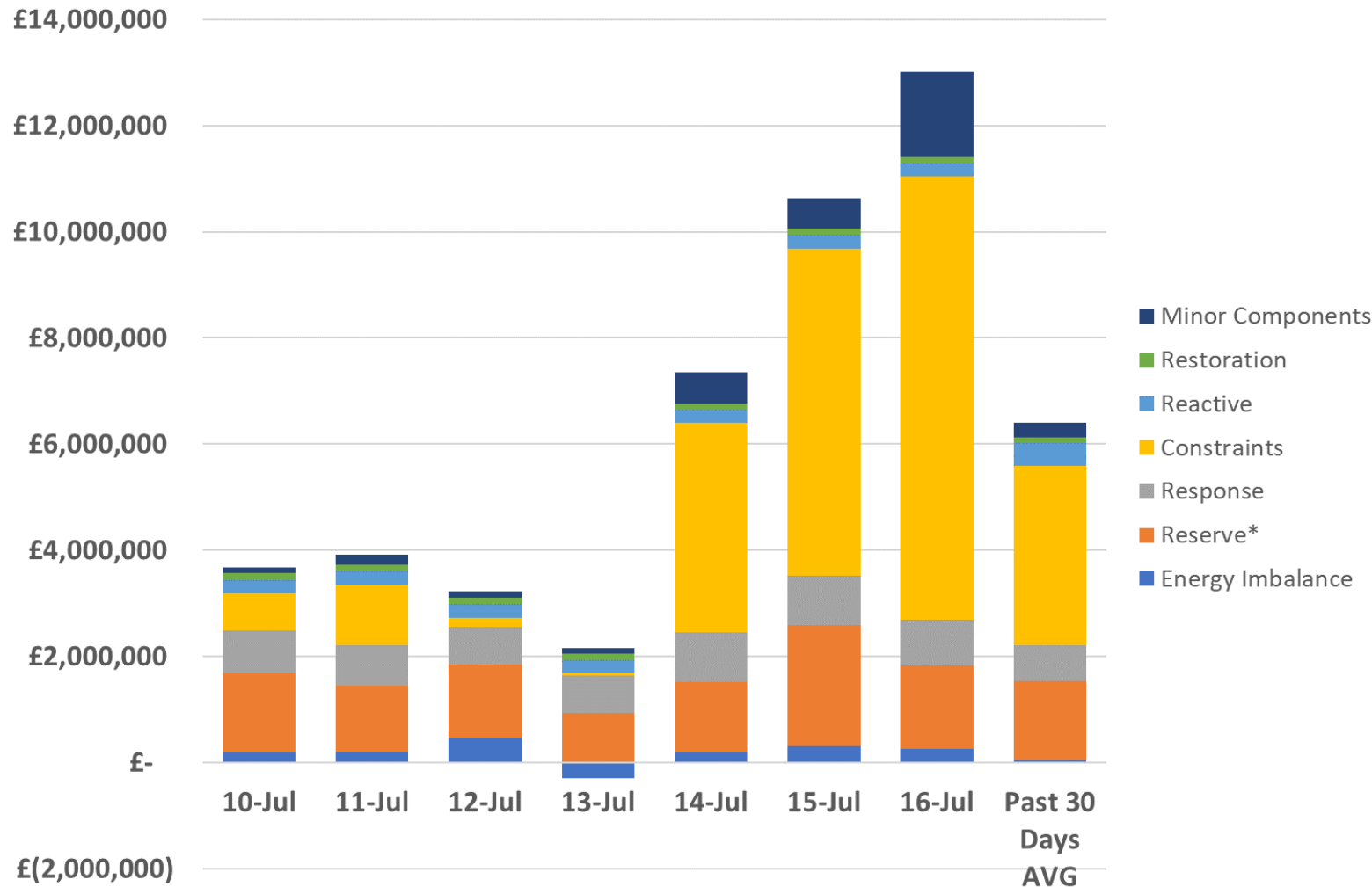
ND values **do not include** export on interconnectors or pumping or station load

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Historic out-turn data can be found on the [ESO Data Portal](#) in the following data sets: [Historic Demand Data](#) & [Demand Data Update](#)

Date	Forecasting Point	FORECAST (Wed 19 Jul)		
		National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
19 Jul 2023	Afternoon Min	23.7	1.2	6.0
20 Jul 2023	Overnight Min	18.4	0.6	0.0
20 Jul 2023	Afternoon Min	23.9	1.1	5.7
21 Jul 2023	Overnight Min	18.3	0.8	0.0
21 Jul 2023	Afternoon Min	22.9	1.3	5.8
22 Jul 2023	Overnight Min	16.7	1.2	0.0
22 Jul 2023	Afternoon Min	20.4	2.2	3.0
23 Jul 2023	Overnight Min	15.2	1.7	0.0
23 Jul 2023	Afternoon Min	19.2	2.1	4.5
24 Jul 2023	Overnight Min	16.7	1.2	0.0
24 Jul 2023	Afternoon Min	22.6	1.8	6.0
25 Jul 2023	Overnight Min	17.5	1.0	0.0
25 Jul 2023	Afternoon Min	22.6	1.5	5.8

# ESO Actions | Category costs breakdown for the last week



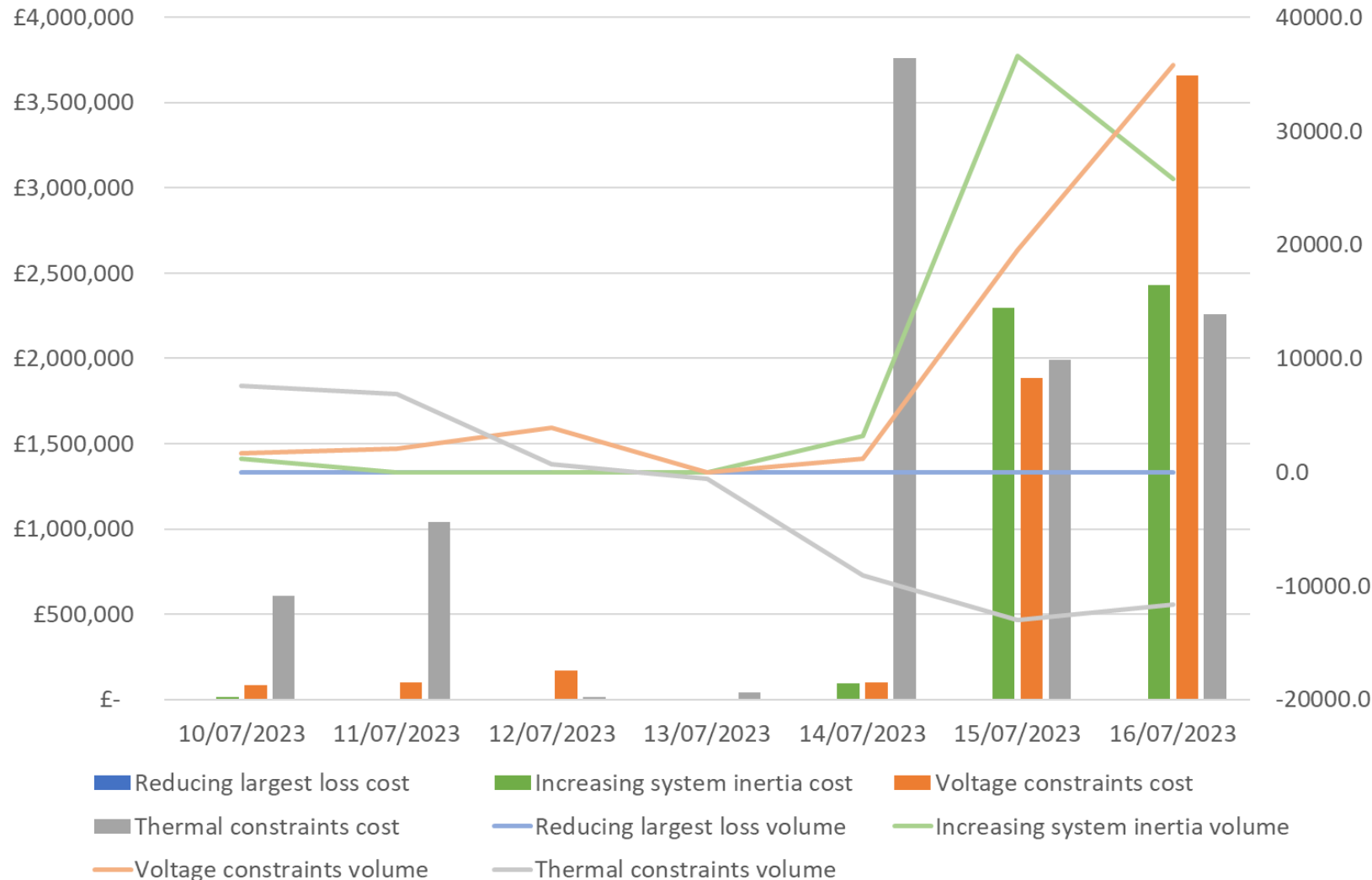
Date	Total (£m)
10/07/2023	3.7
11/07/2023	3.9
12/07/2023	3.2
13/07/2023	1.9
14/07/2023	7.4
15/07/2023	10.6
16/07/2023	13.0
<b>Weekly Total</b>	<b>43.7</b>
<b>Previous Week</b>	<b>62.8</b>

Constraints costs were the key cost component for the week.

Please note that all the categories are presented and explained in the MBSS.

**Data issue:** Please note that due to a data issue on a few days over the last few months, the Minor Components line in Non-Constraint Costs is capturing some costs on those days which should be attributed to different categories. It has been identified that a significant portion of these costs should be allocated to the Operating Reserve Category. Although the categorisation of costs is not correct, we are confident that the total costs are correct in all months. We continue to investigate and will advise when we have a resolution.

# ESO Actions | Constraint Cost Breakdown



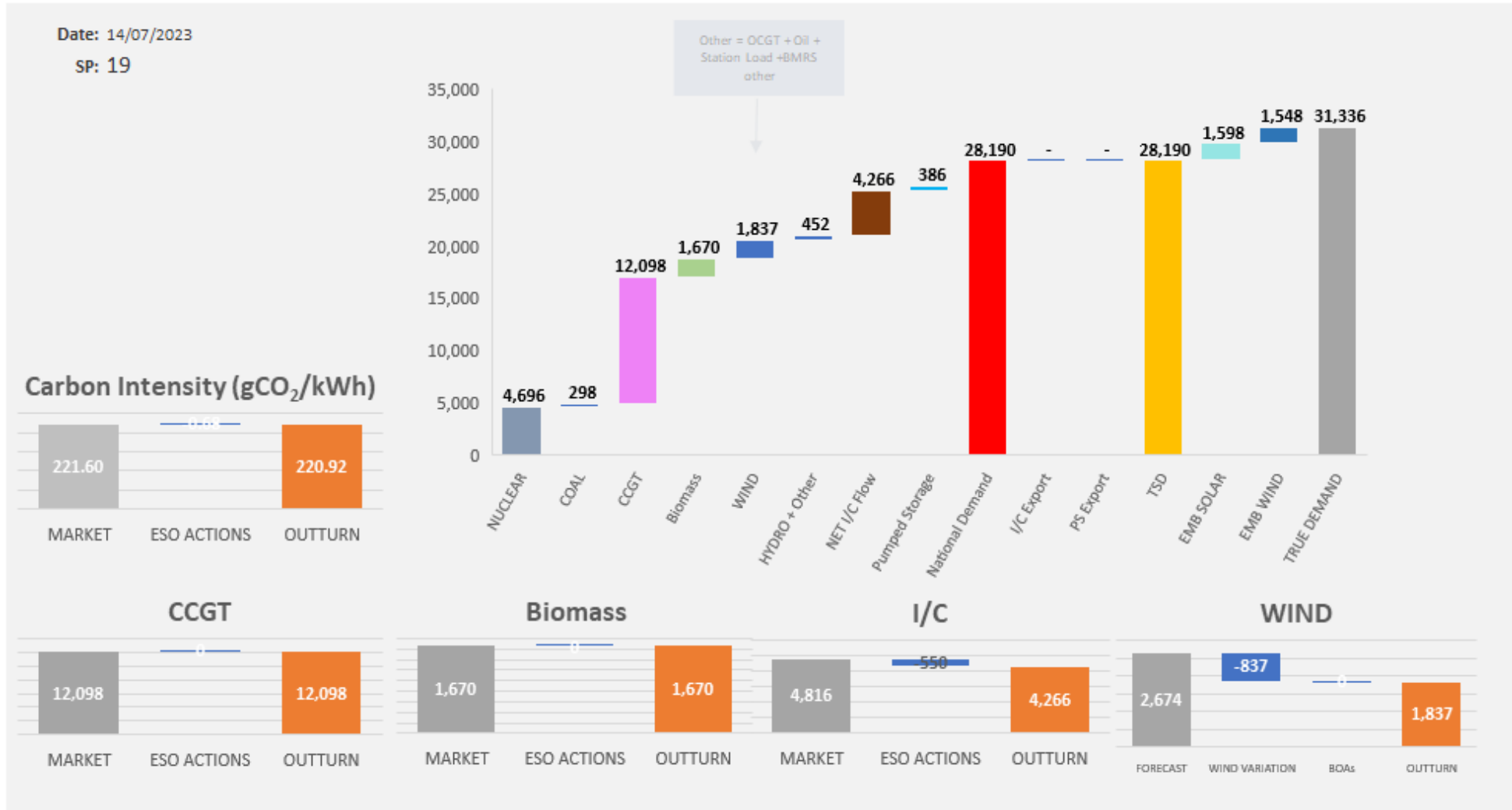
**Thermal – network congestion**  
 Actions were required to manage thermal constraints every day with the most significant costs on Friday.

**Voltage**  
 Intervention was required to manage voltage levels throughout the week except Thursday.

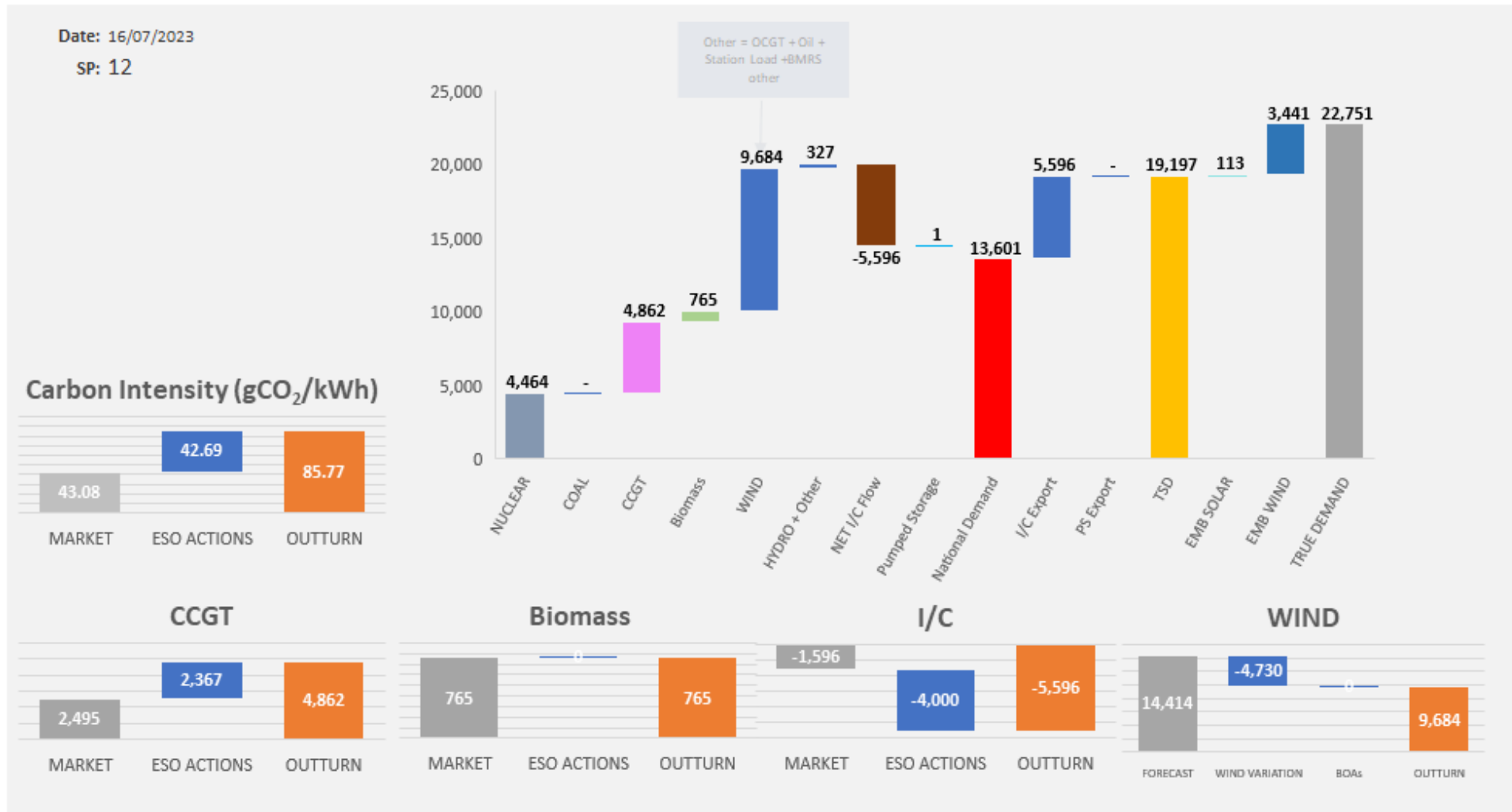
**Managing largest loss for RoCoF**  
 No intervention was required to manage largest loss.

**Increasing inertia**  
 Intervention was required to manage system inertia on Mon, Fri, Sat and Sun.

# ESO Actions | Friday 14 July – Peak Demand – SP spend ~£24k

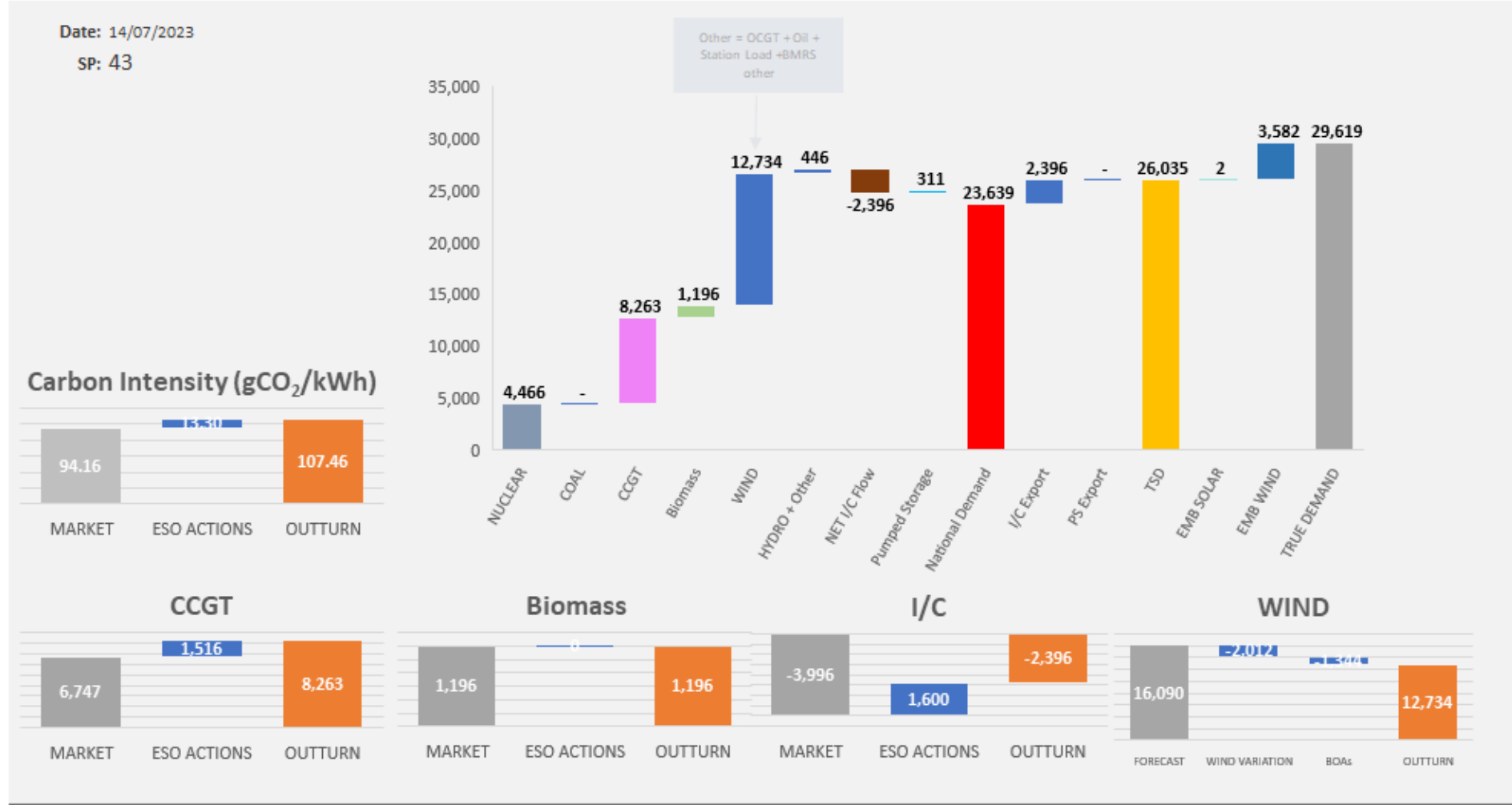


# ESO Actions | Sunday 16 July – Minimum Demand – SP Spend ~£335k



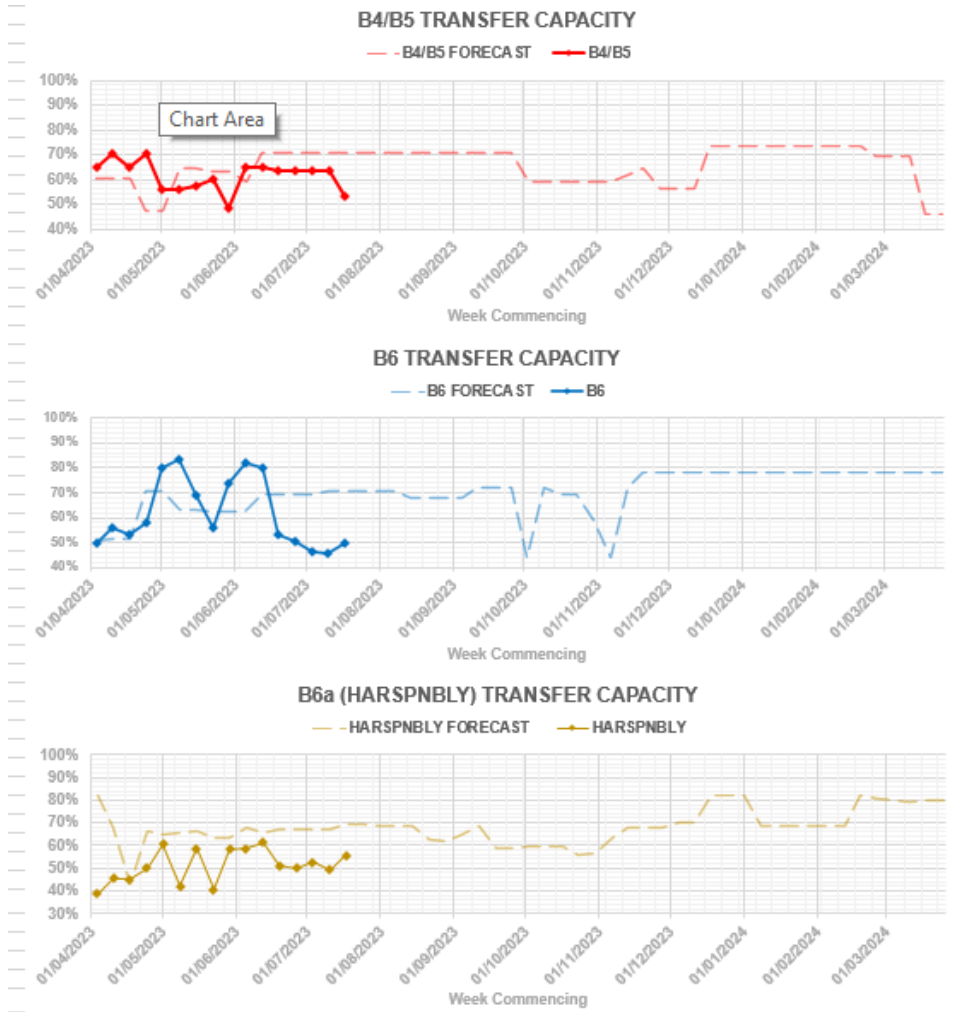
Carbon Intensity data on data portal: <https://data.nationalgrideso.com/carbon-intensity1/carbon-intensity-of-balancing-actions>

# ESO Actions | Friday 14 July – Highest SP Spend ~£380k

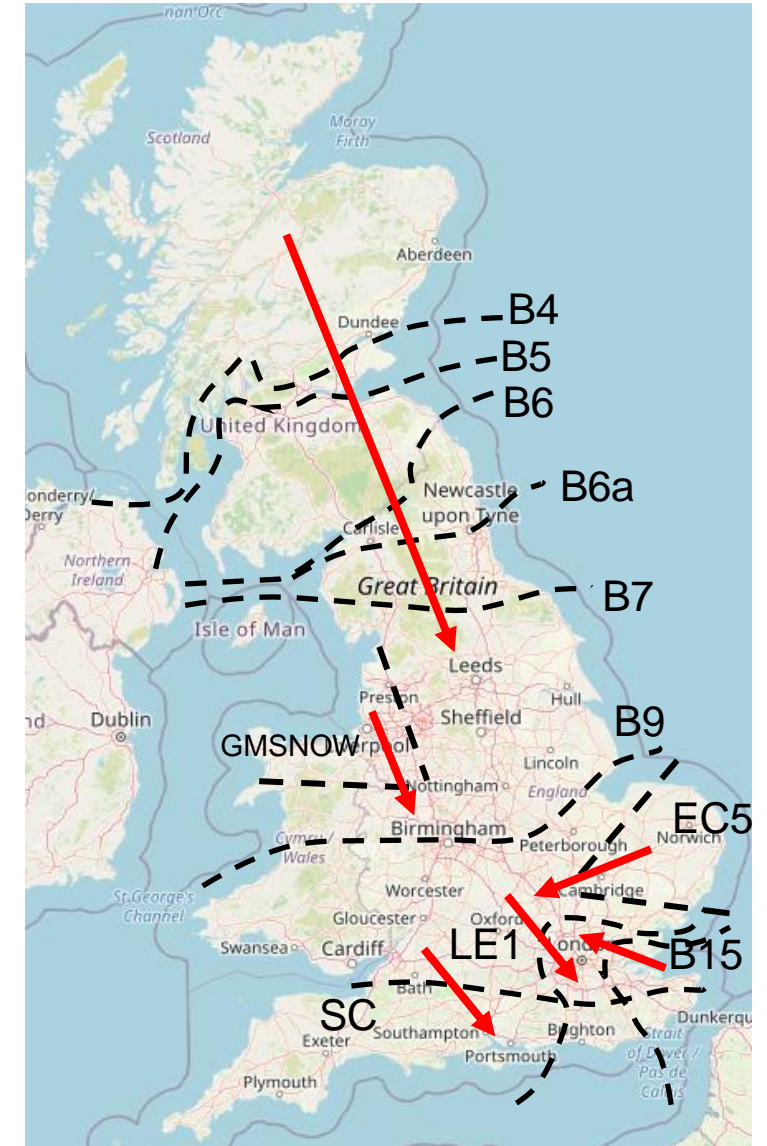




# Transparency | Network Congestion

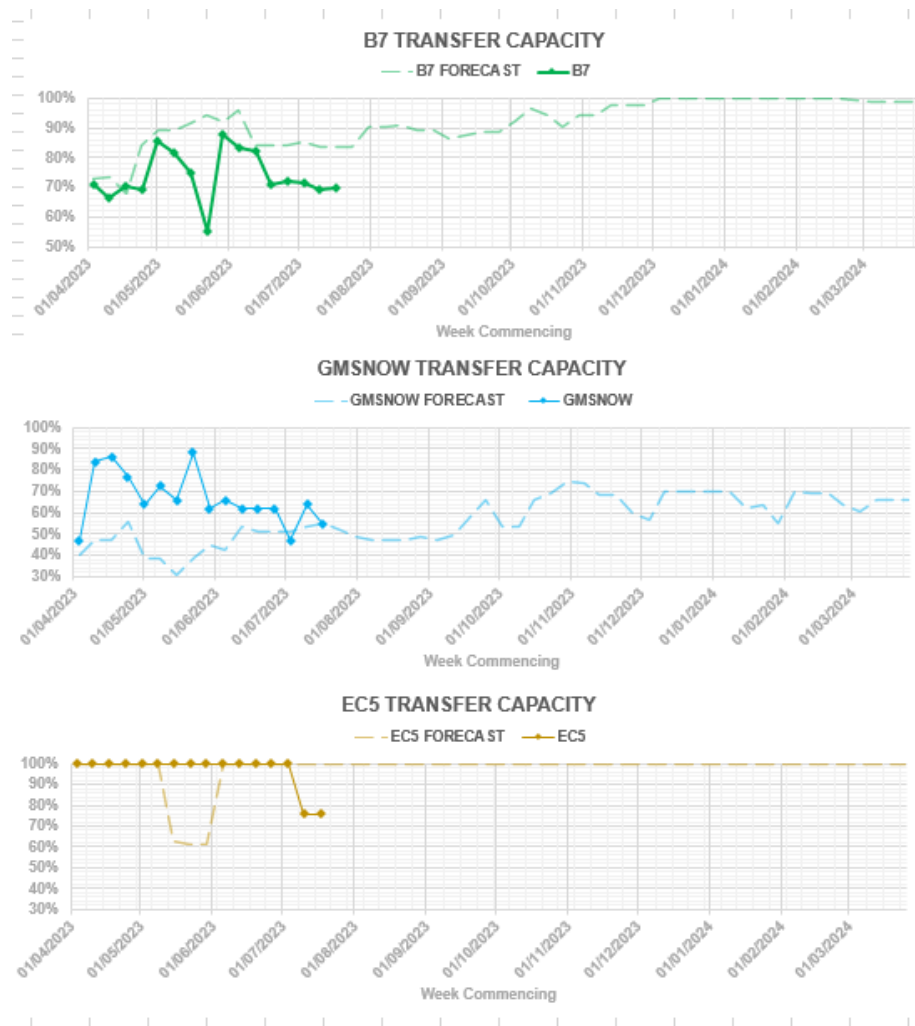


Boundary	Max. Capacity (MW)
B4/B5	3400
B6	6800
B6a	8000
B7	8325
GMSNOW	4700
B9	10600
EC5	5000
LE1	8500
B15	7500
SC	7300

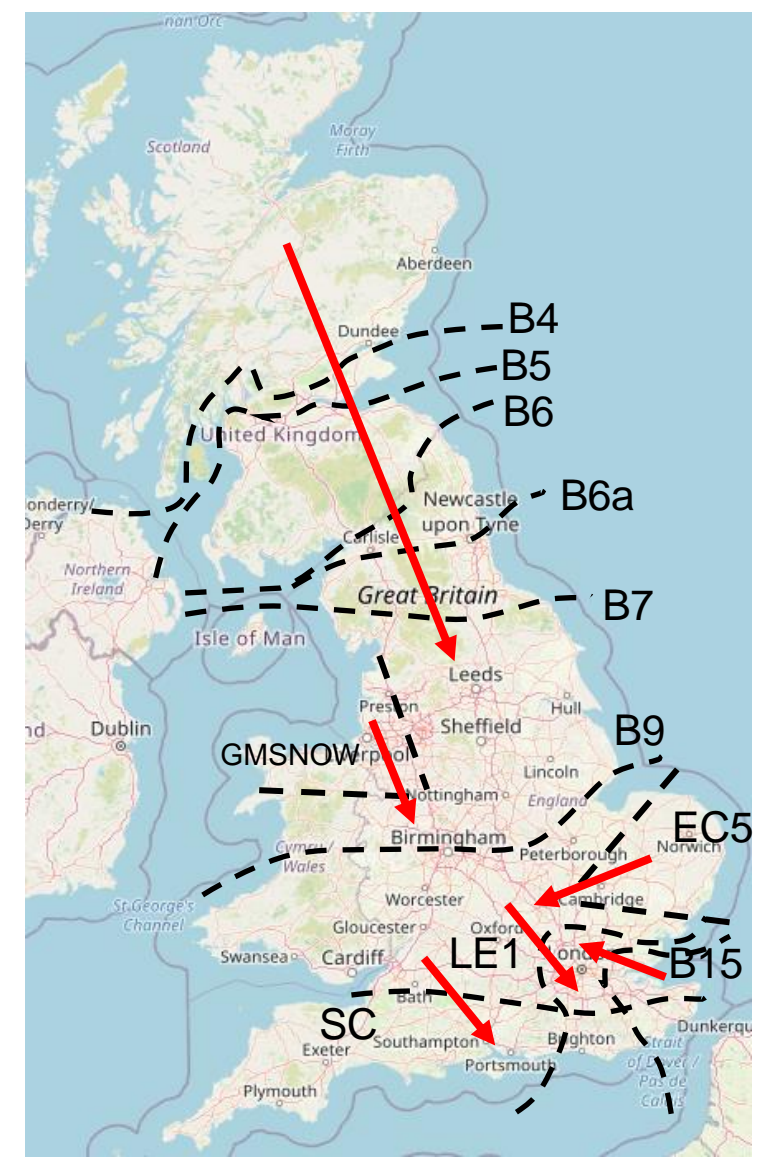


Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal:  
<https://data.nationalgrideso.com/data-groups/constraint-management>

# Transparency | Network Congestion

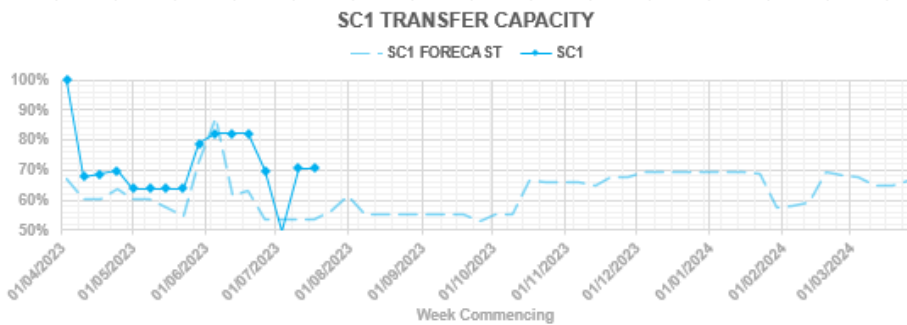
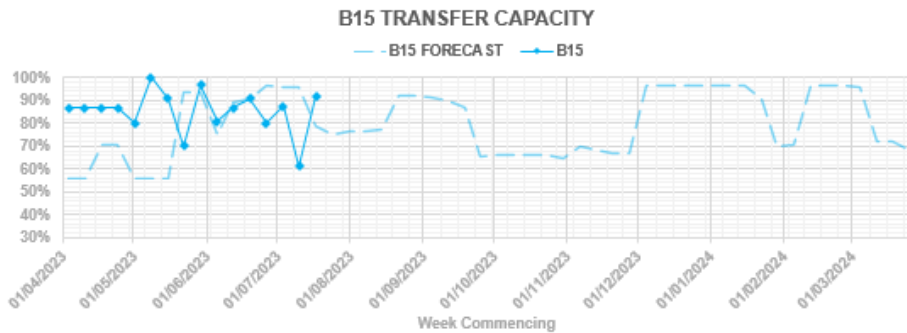
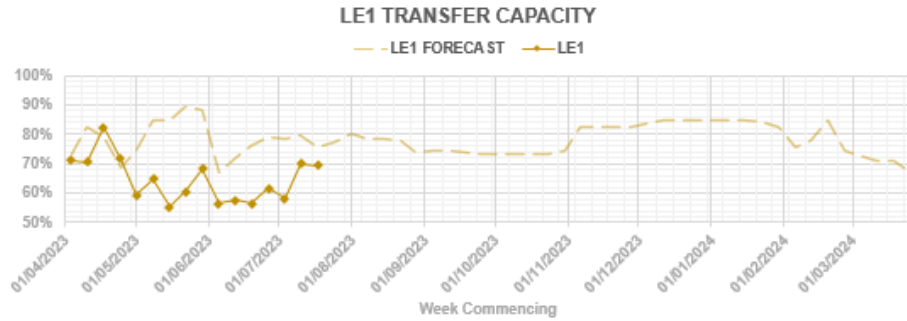


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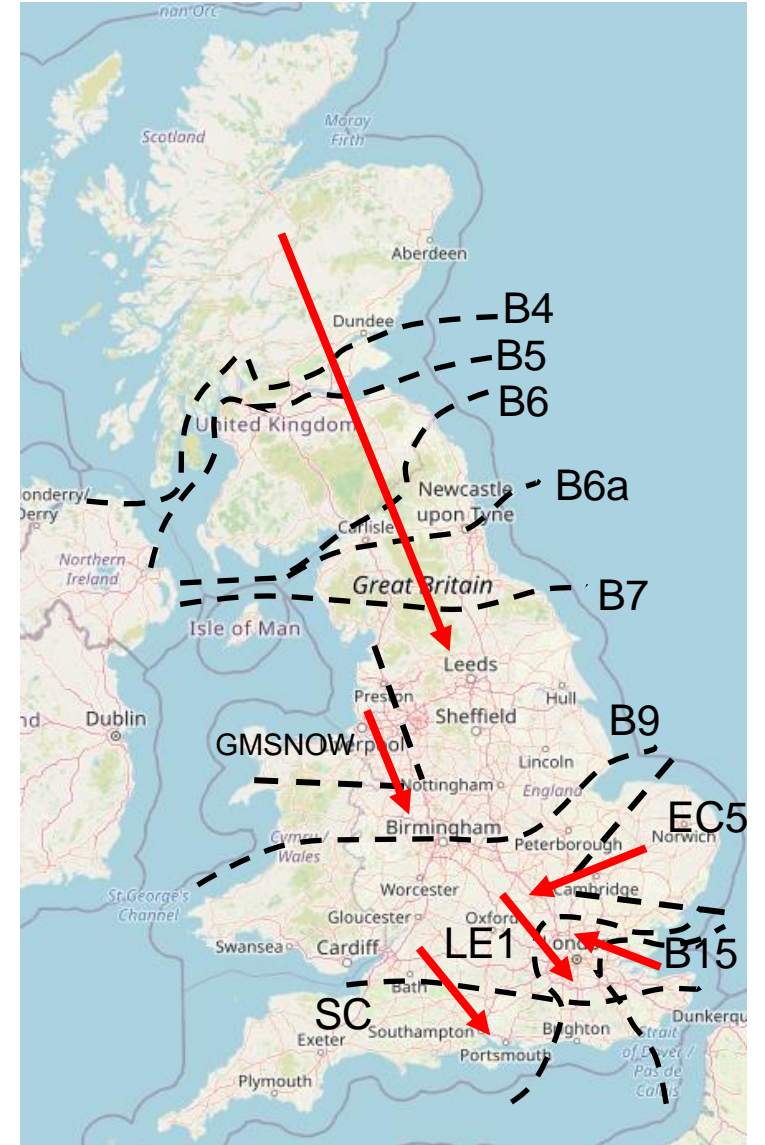


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# Transparency | Network Congestion



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## Questions from last week

Q: Is there any reason why forecasted DC requirements cannot be published nearer to the auction time? Monday (3/7) saw an overprocurement of DCL between 15-28% compared to forecasted procurement volumes. What fundamentals are changing from forecast time to the auction time to justify this?

A: Thank you for the question. The recent changes to DCL requirements to cover different losses as a consequence of the oscillations experienced in Scotland, has led to a decrease in accuracy of the rolling 4 day DC requirement forecast.

We have taken steps to improve these forecasts, however, since the inputs include wind power, interconnector and system condition forecasts there will always be more accuracy the closer to real-time these forecasts are made.

We are investigating the process changes required and data availability to publish an updated DC requirement forecast closer to auction gate closure time.

Q: Where are MFR results published? Are they available on the Data Portal too?

A: The monthly submitted prices are published here: <https://www.nationalgrideso.com/industry-information/balancing-services/frequency-response-services/mandatory-frequency-response#Document-library>

## Advance Questions

Q: Apologies if this is covered during the session, I am asking in advance as I cannot join live.

What are the long-term implications of low frequency oscillations for DC procurement? Do you expect these to persist or do you think the stability pathfinders will increase stability in Scotland sufficiently?

A: The long term requirements for DC procurement are set out in our operability strategy report, along with our requirements for stability. whilst we complete our investigation we have taken actions to ensure system security as a prudent system operator, including increasing our response procurement. The ongoing impact to response requirements will depend on the outcomes of the investigation, and we will ensure we communicate this to the market through our various channels for sharing response requirements (OSR and monthly response market information report). In the mean time, we will ensure the 4 day rolling DC forecast is up to date to reflect response requirements in line with the latest system conditions.

# Outstanding Questions

Last week there was a comment about a previous question had disappeared.

We believe this relates to a detailed set of questions that was asked about Project CLASS.

At the OTF on 8<sup>th</sup> Feb (at approx. 29 mins) we said the following:

We will not be bringing these questions back to OTF as they are very detailed project specific questions. Instead these questions have been passed onto the relevant team who will use these questions to inform their work. We will provide an update on Project CLASS at a future date.



# Outstanding Questions

Q: My question at OTF re the system outage, there were a few things I had in mind:

- Can NGENSO explain what happened and what has been done to increase resilience going forward?
- Can IT people in the industry learn any lessons from what happened to NGENSO's system? Sharing any lessons would be sensible?
- While the systems were down NGENSO had to balance the system. Did it use any small plants, or did it have to concentrate on large plants as the reliance on faxes (which I know are going by 2025) means using smaller plants is impractical? If faxes were not practical for smaller plants then should we stop them needing to buy them now, not wait for 2025?

**slido**

## **Audience Q&A Session**

ⓘ Start presenting to display the audience questions on this slide.

# Feedback

Please remember to use the feedback poll in sli.do after the event.

We welcome feedback to understand what we are doing well and how we can improve the event for the future.

If you have any questions after the event, please contact the following email address:  
[box.NC.Customer@nationalgrideso.com](mailto:box.NC.Customer@nationalgrideso.com)