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ESO Operational Transparency Forum
20 March 2024

Introduction | Sli.do code #OTF

To ask questions live and provide us with post event feedback go to Sli.do and join event code #OTF.

- **Ask your questions as early as possible** as our experts may need time to ensure a correct answer can be given live.
- **Please provide your name or organisation.** This is an operational forum for industry participants therefore questions from unidentified parties will not be answered live. If you have reasons to remain anonymous to the wider forum please use the advance question or email options given on the slide.
- **Questions will be answered in the upvoted order whenever possible.** We will take questions from further down the list when: the answer is not ready; we need to take the question away or the topic is outside of the scope of the OTF.
- **Sli.do will remain open until 12:00**, even when the call closes earlier, to provide the maximum opportunity for you to ask questions.
- **All questions will be recorded and published.** Questions which are not answered on the day will be included, with answers, in the slide pack for the next OTF.
- **Ask questions in advance** (before 12:00 on Monday) at: <https://forms.office.com/r/k0AEfKnai3>
- **Ask questions anytime** whether for inclusion in the forum or individual response at: box.NC.customer@nationalgrideso.com

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

Future deep dive / focus topics

Today

Future

We are currently reviewing the large number of requests we received via the OTF survey feedback. We will be updating in April with outcomes of the survey.

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

Balancing Programme Webinar

Date: 27 March 2024

Time: 14:00 – 15:30 PM

Hear the latest on:

- Progress to transform our balancing capabilities
- Upcoming releases and their anticipated impact
- Opportunities for proactive collaboration

To sign up to the webinar, click [here](#)

To stay up to date with the latest information from the Balancing Programme, subscribe to our newsletter by clicking [here](#)

If you have any questions, please contact the team at:
box.balancingprogramme@nationalgrideso.com

Enhancing the use of storage assets in our balancing activities

Change to extend the 15-minute rule to 30 minutes – transition initiated on 11th March 2024

- This will allow energy storage units to be instructed for up to 30 minutes, depending on system conditions. Units must ensure they can sustain their declared available energy for the length of the instruction (up to 30 minutes + 2 minutes ramping), this will be monitored as per normal process. The new 30-minute rule will be in place until new energy storage parameters are introduced as part of GC0166
- Providers have started their transitions since 11th March 2024. The transition period will run for two weeks until 25th March 2024. After this date, we expect all battery providers to be following the 30-min rule in their submissions
- We are asking providers to inform us of their intended date and time of transition, including the applicable Balancing Mechanism Units. To date, we have received plans for about 34% of registered units. Please send us your proposed transition plans as soon as you can
- New MEL/MIL guidance has been issued with details of the 30-minute rule and how to inform us of your transition date
- Get in touch by emailing box.balancingprogramme@nationalgrideso.com

Link to the updated MEL/MIL
guidance

Link to questions & answers from
the Storage event & webinar

Operational Separation Cutover - Billing System Changes

System Outage	What this means to you and your business	Direct questions to email below
TNUoS	No impact. Invoices will be raised as normal for May Variable Direct Debit customer collections will be delayed until restoration of system	Contact here
Connections	No impact. Invoices will be raised as normal for May Variable Direct Debit customer collections will be delayed until restoration of system	Contact here
BSUoS	The last run of BSUoS will be the 25th April. The next run is expected to be 21st May	Contact here
AAHEDC (Hydro)	Invoices will be raised in advance with payment date reflecting the standard due date	Contact here
Settlement providers	Payments will be made earlier than the current published payments calendar. May payments will be made in line with the current billing calendar	Contact here
App Fees	Invoices will be raised before outage if applicable and manually via offline process should this be required	Contact here

As we approach our new role as The National Energy System Operator (NESO) in July, there will be a requirement to update our billing systems. This means that there will be an outage from **26th April to 21st May 2024**.

During this we will not be able to produce or send billing information and invoices during this period.

We will share more detailed communications regarding this, including the revised BSUoS calendar shortly.

New Data Set for Constraint Management Intertrip Service

Background

ESO has contracts in place with a number of generators to be used for intertrip to manage the B6/Anglo-Scottish constraint boundary.

ESO will instruct SPT of the units and circuits to arm and subsequently what to disarm. No action is required of the generator for arming and disarming.

New Data Set

A new Data Set is available on the Data Portal with information when units have been armed to the Intertrip scheme.

Where arming crosses midnight, this will be shown as two records.

Cost for utilisation = Current Arming Fee in £/SP divided by 30 to give Arming Fee per minute.

This is multiplied by the number of minutes between Disarming Date Time and Arming Date Time.

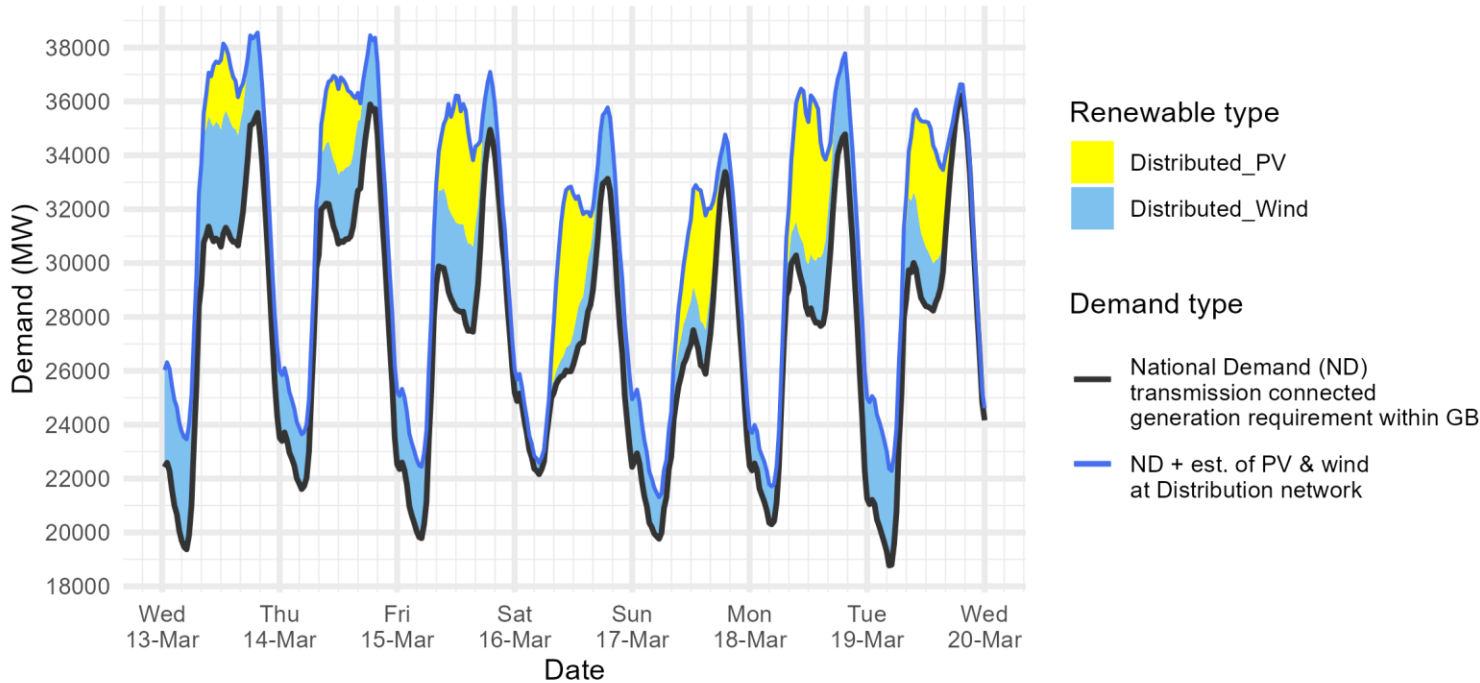
A	B	C	D	E
BMU ID	Arming Date Time	Disarming Date Time	Current Arming Fee (Â£ / SP)	Cost for this utilisation (Â£)
WHILW-1	2022-04-03T17:11:00+00:00	2022-04-04T00:00:00+00:00	3809.45	51935.5
WHILW-1	2022-04-04T00:00:00+00:00	2022-04-04T20:05:00+00:00	3809.45	153012.91
BLLA-1	2022-04-03T17:11:00+00:00	2022-04-04T00:00:00+00:00	1408.92	19208.28
BLLA-1	2022-04-04T00:00:00+00:00	2022-04-04T20:05:00+00:00	1408.92	56591.62

The data set will be updated monthly and new files will be created for each financial year.

<https://www.nationalgrideso.com/data-portal/constraint-management-intertrip-service-information-cmis>

Demand | Last week demand out-turn

ESO National Demand outturn 13-19 March 2024



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

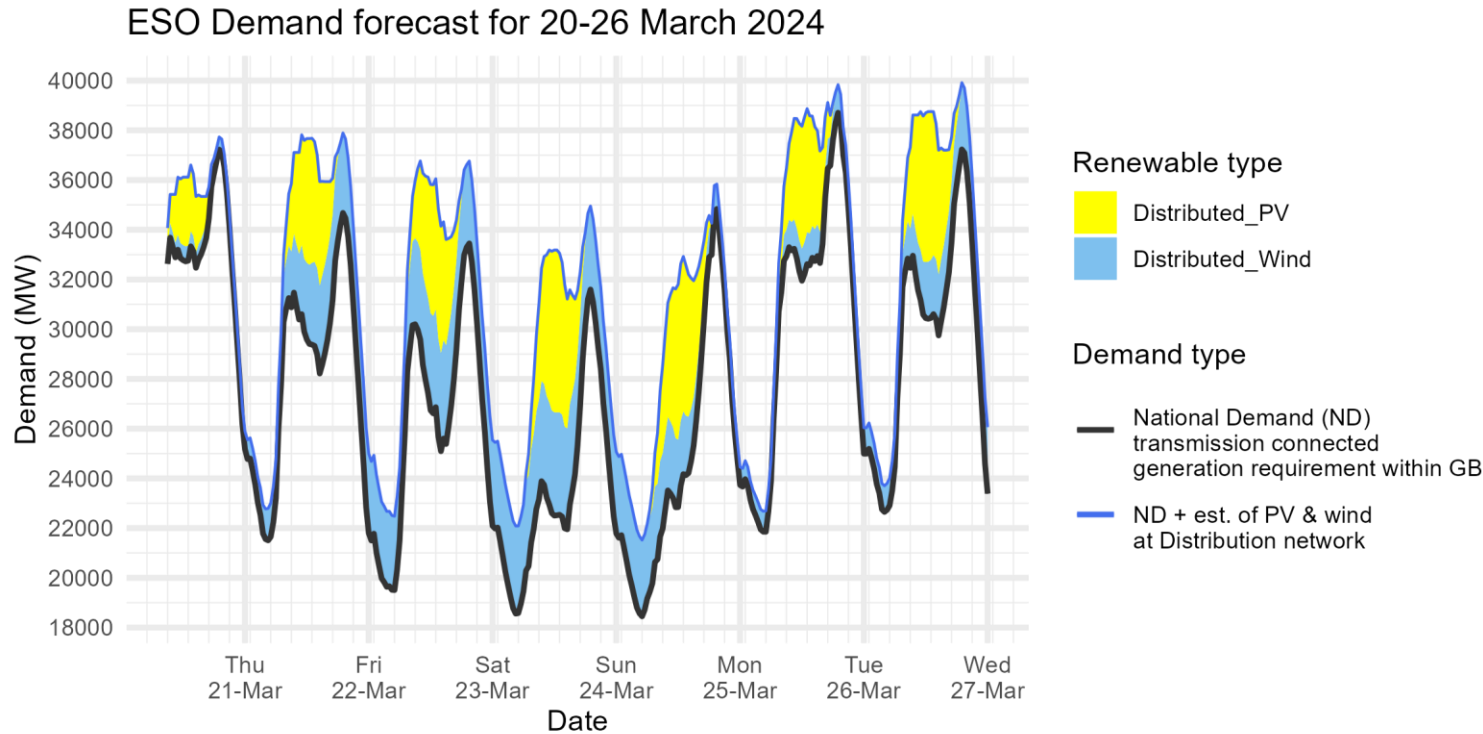
ND values **do not include** export on interconnectors or pumping or station load

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.

Date	Forecasting Point	FORECAST (Wed 13 Mar)		OUTTURN	
		National Demand (GW)	Dist. wind (GW)	National Demand (GW)	Dist. wind (GW)
13 Mar	Evening Peak	35.6	3.2	35.6	3.0
14 Mar	Overnight Min	20.8	2.0	21.6	2.0
14 Mar	Evening Peak	35.7	2.6	35.9	2.6
15 Mar	Overnight Min	20.0	2.6	19.8	2.7
15 Mar	Evening Peak	34.9	2.3	35.0	2.1
16 Mar	Overnight Min	20.9	1.0	22.2	0.4
16 Mar	Evening Peak	32.2	2.1	33.1	2.6
17 Mar	Overnight Min	18.5	2.2	19.8	1.5
17 Mar	Evening Peak	32.8	1.8	33.4	1.4
18 Mar	Overnight Min	20.1	1.5	20.3	1.4
18 Mar	Evening Peak	36.8	1.6	34.8	3.0
19 Mar	Overnight Min	20.7	1.8	18.8	3.6
19 Mar	Evening Peak	35.7	2.3	36.2	0.4

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

Demand | Week Ahead



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

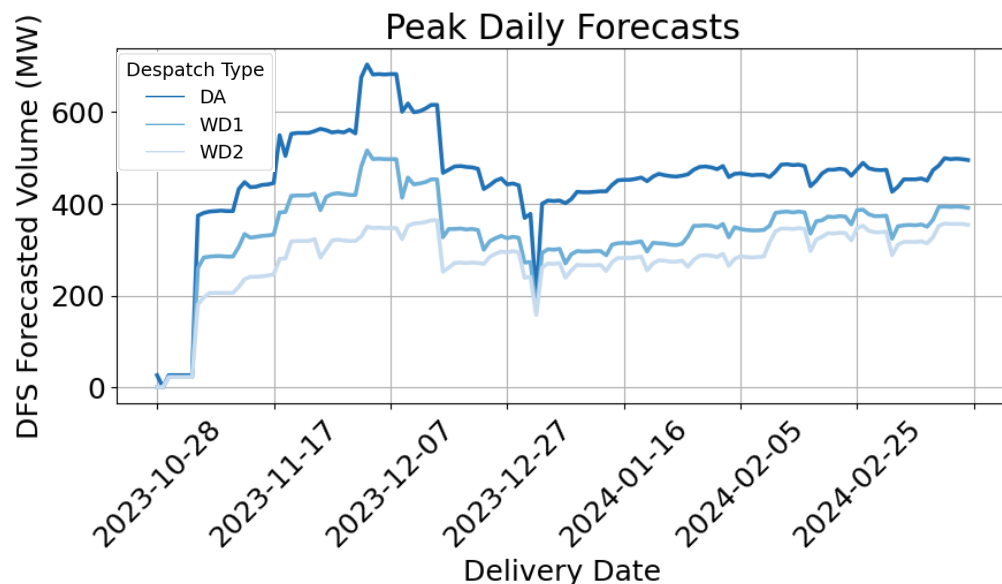
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Historic out-turn data can be found on the [ESO Data Portal](#) in the following data sets: [Historic Demand Data](#) & [Demand Data Update](#)

		FORECAST (Wed 20 Mar)	
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)
20 Mar 2024	Evening Peak	37.2	0.5
21 Mar 2024	Overnight Min	21.5	1.3
21 Mar 2024	Evening Peak	34.7	3.2
22 Mar 2024	Overnight Min	19.5	3.0
22 Mar 2024	Evening Peak	33.5	3.3
23 Mar 2024	Overnight Min	18.6	3.5
23 Mar 2024	Evening Peak	31.6	3.4
24 Mar 2024	Overnight Min	18.4	3.1
24 Mar 2024	Evening Peak	34.8	1.0
25 Mar 2024	Overnight Min	21.9	0.8
25 Mar 2024	Evening Peak	38.7	1.1
26 Mar 2024	Overnight Min	22.6	1.1
26 Mar 2024	Evening Peak	37.2	2.5

Demand Flexibility Service



Despatch Type	Number of events		
	Live	Test (GAP £3,000/MWh)	Test (GAP £0/MWh)
Day-ahead	2	2	0
Within day 1	0	3	2
Within day 2	0	2	4
Total	2	7	6

DA	Day-ahead procurement.
WD1	Procurement at around 09:00 for same day delivery.
WD2	Procurement at around 12:00 for same day delivery.

Latest events:

Delivery Date: 14th March 2024 (Thursday); 18:00 to 18:30 h, WD2, GAP = 0€/MWh.

On this day, 20 participants engaged via 45 DFS Units to offer up to 279 MW. The highest accepted price was £735/MWh whilst the lowest was £150/MWh. In total, we secured 56 MW, equivalent to 112% of the procurement target of 50 MW.

Market Information Report – March 2024 summary

We are assessing the bidding behaviour and delivery data from the events completed to date and **may initiate further tests** should they offer sufficient value to the ongoing discussion around the evolution of the service.

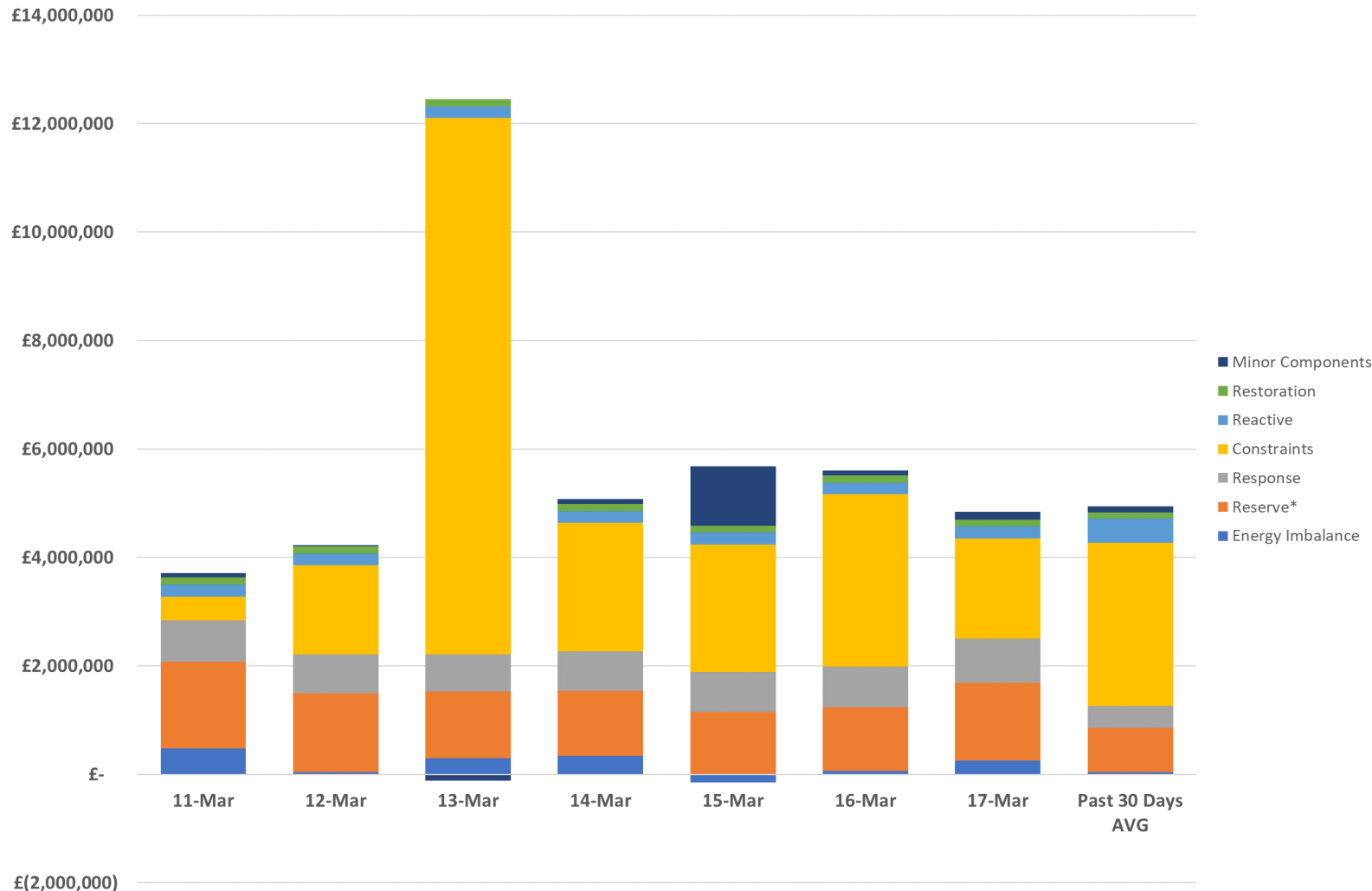
<https://www.nationalgrideso.com/document/304481/download>

DFS Webinar – Overview & What's next

Join us for this session on Friday 22nd March from 10:00 – 11:00 for an overview of DFS winter 23/24 so far and an early view on the future evolution of the service.

[Register here](#)

ESO Actions | Category costs breakdown for the last week



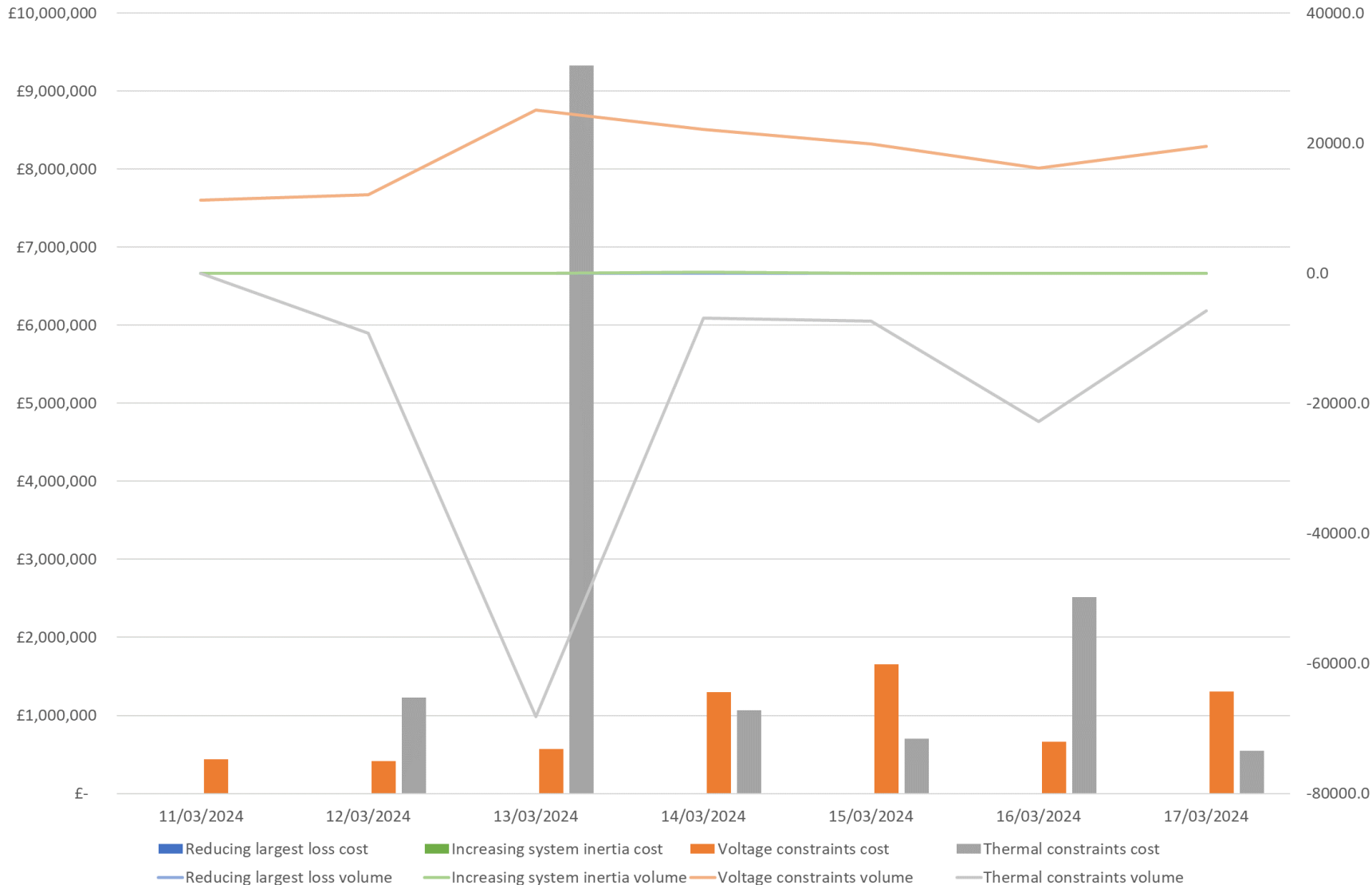
Date	Total (£m)
11/03/2024	3.7
12/03/2024	4.2
13/03/2024	12.3
14/03/2024	5.1
15/03/2024	5.5
16/03/2024	5.6
17/03/2024	4.8
Weekly Total	41.3
Previous Week	53.0

Constraints and Reserve 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



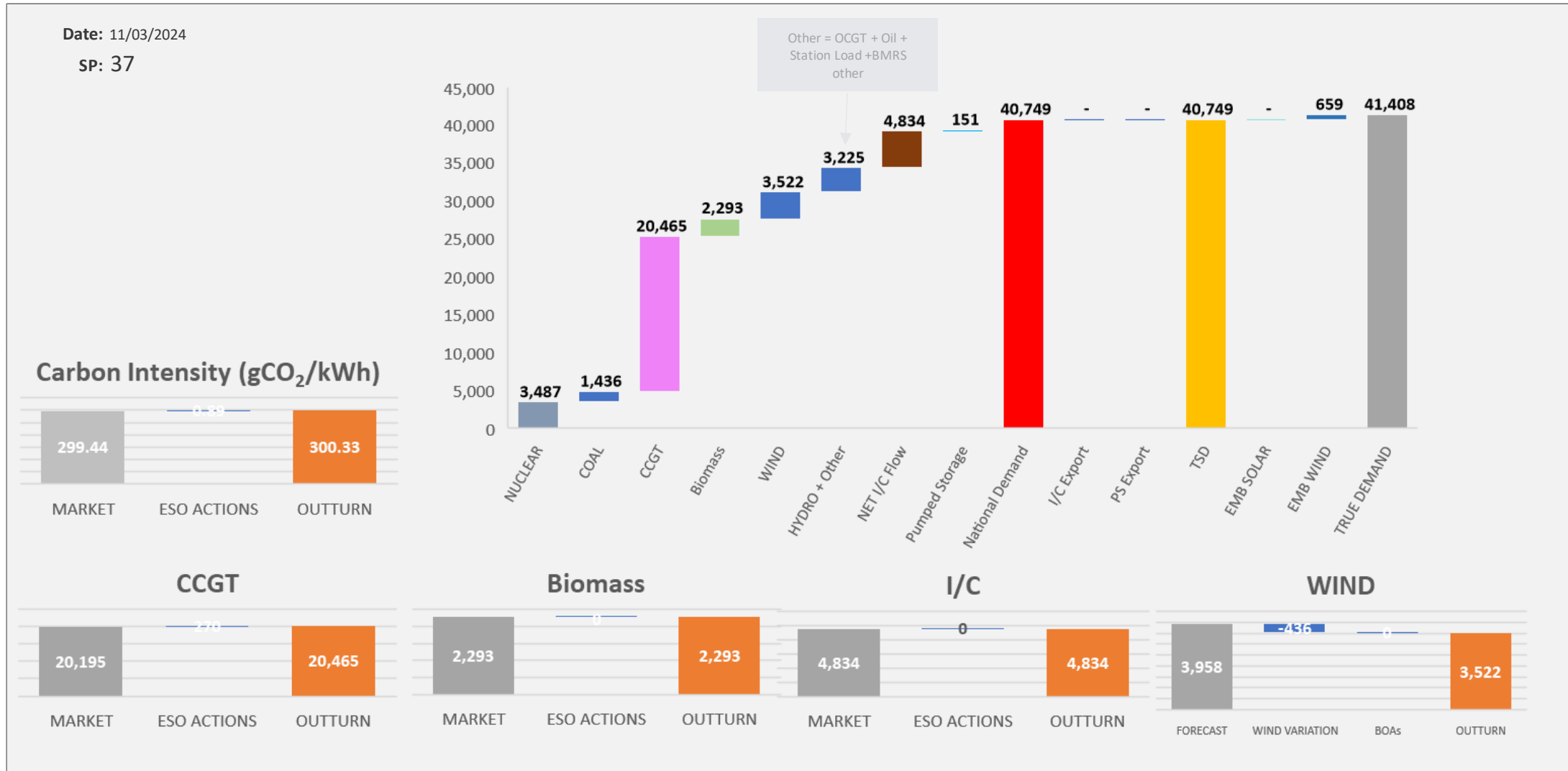
Thermal – network congestion
 Actions were required to manage thermal constraints throughout the week except on Monday, with the most significant costs on Wednesday.

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

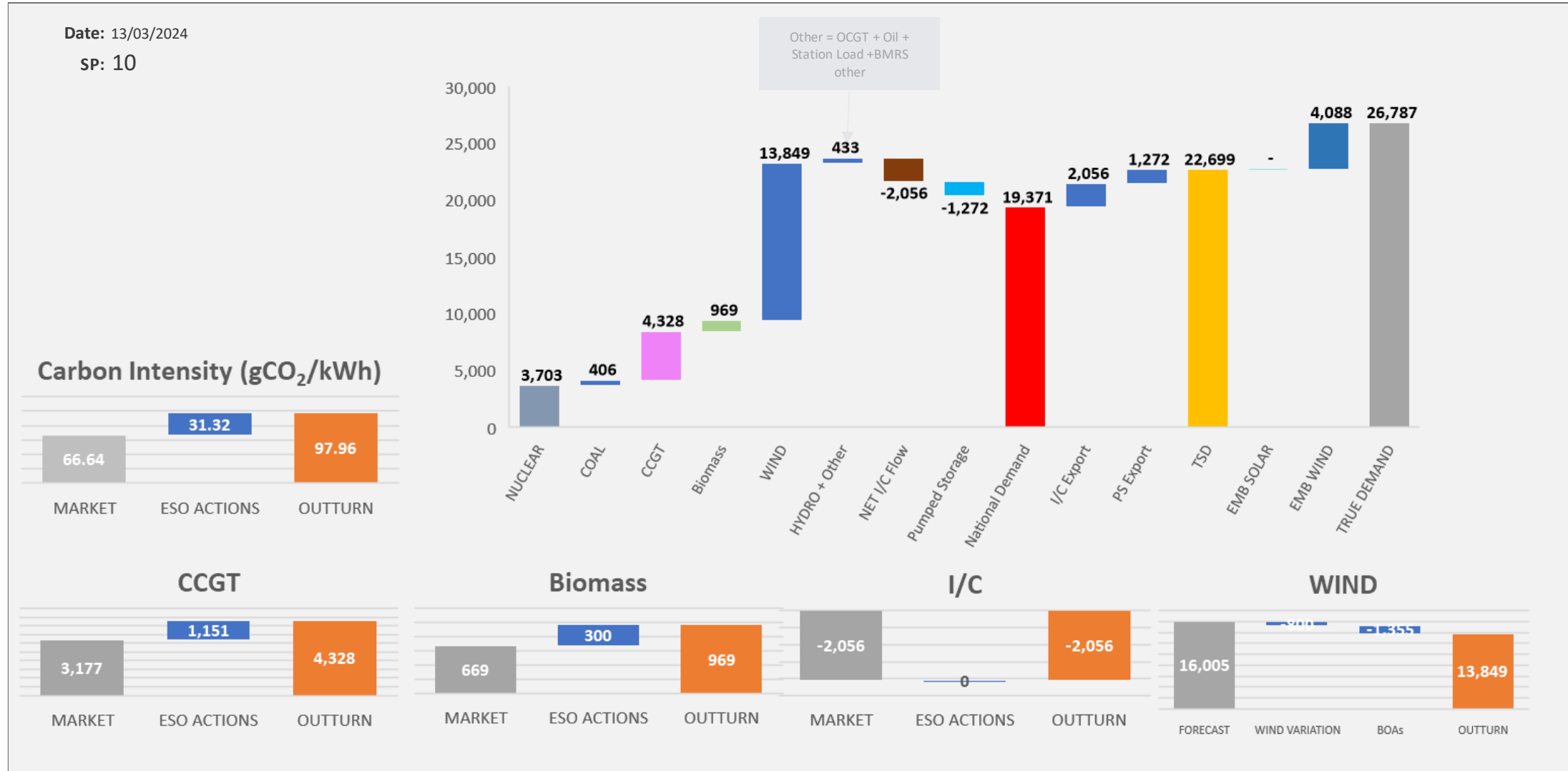
Managing largest loss for RoCoF
 No intervention was required to manage largest loss.

Increasing inertia
 No intervention was required to manage System Inertia.

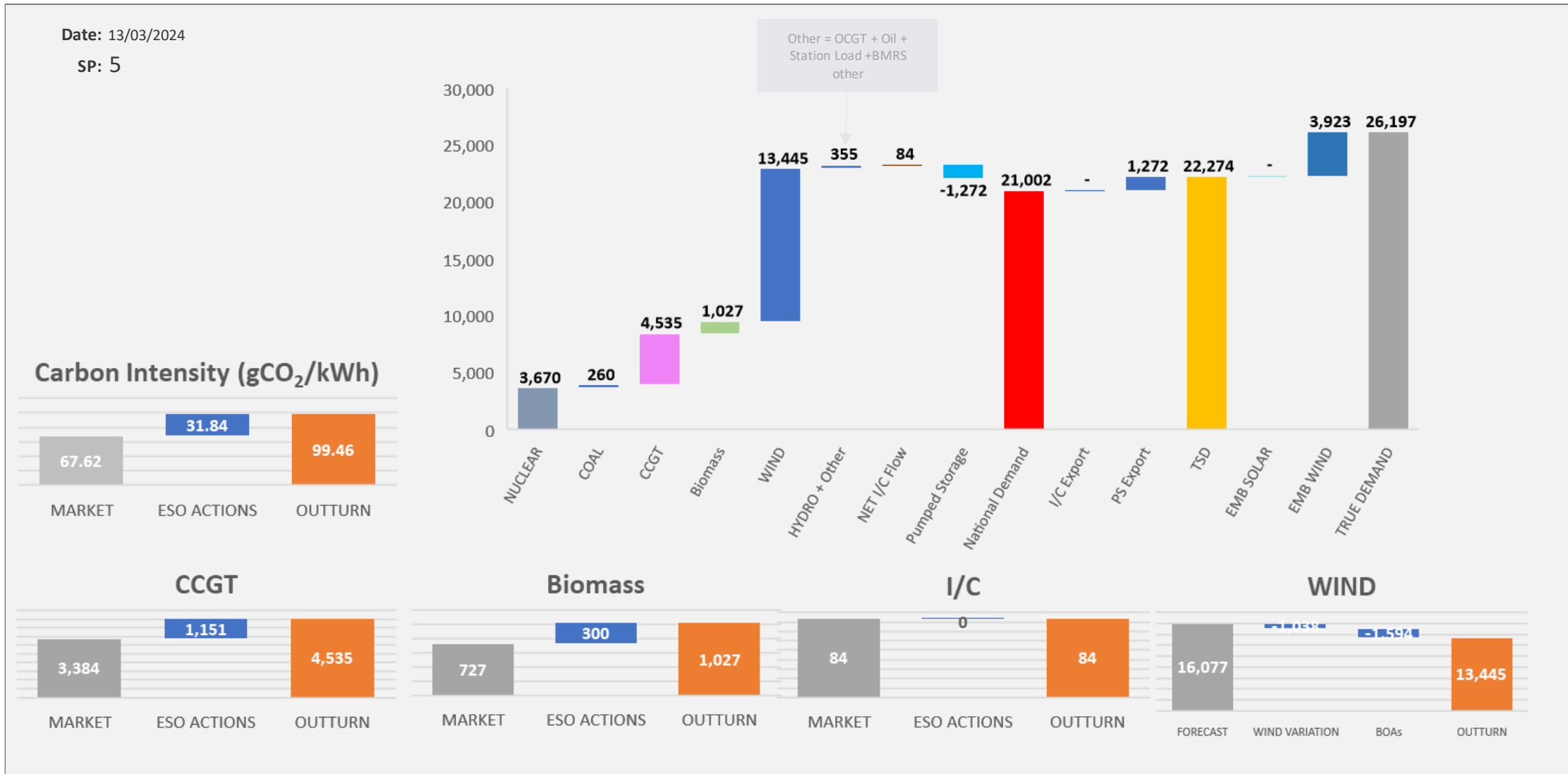
ESO Actions | Monday 11 March – Peak Demand – SP spend ~£61k



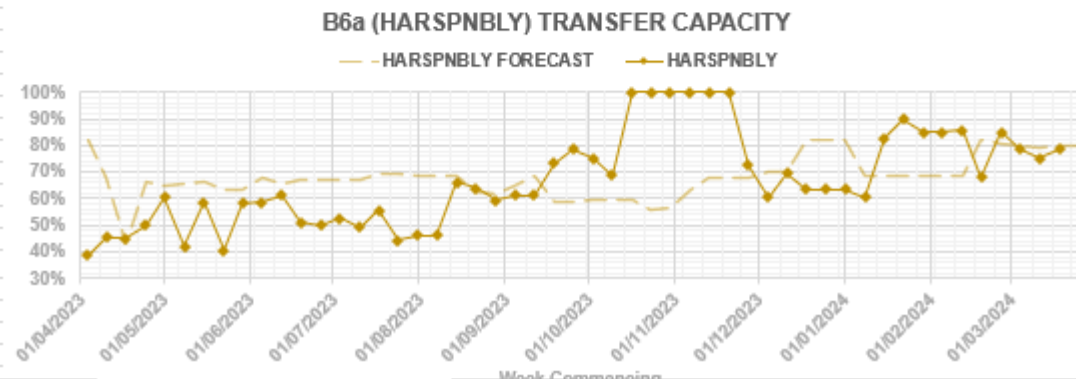
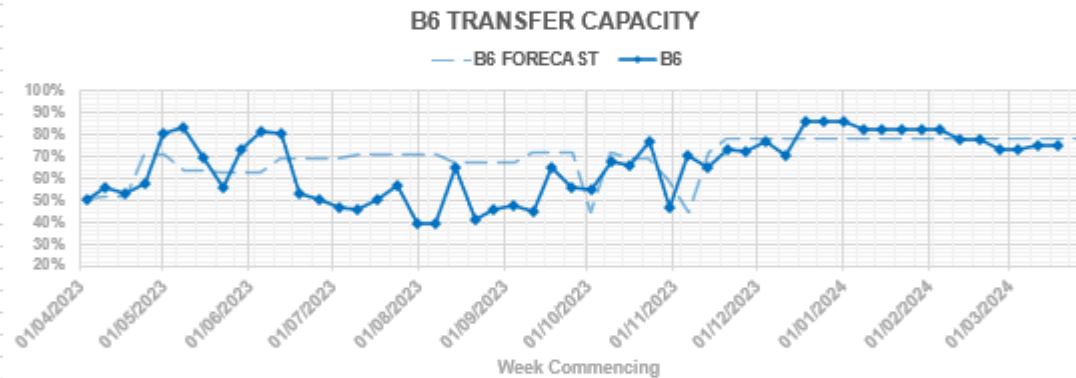
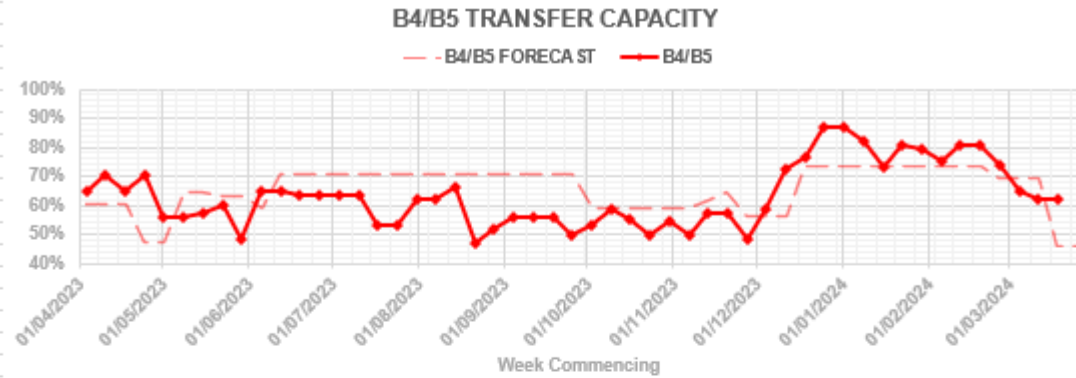
ESO Actions | Wednesday 13 March – Minimum Demand – SP Spend ~£311k



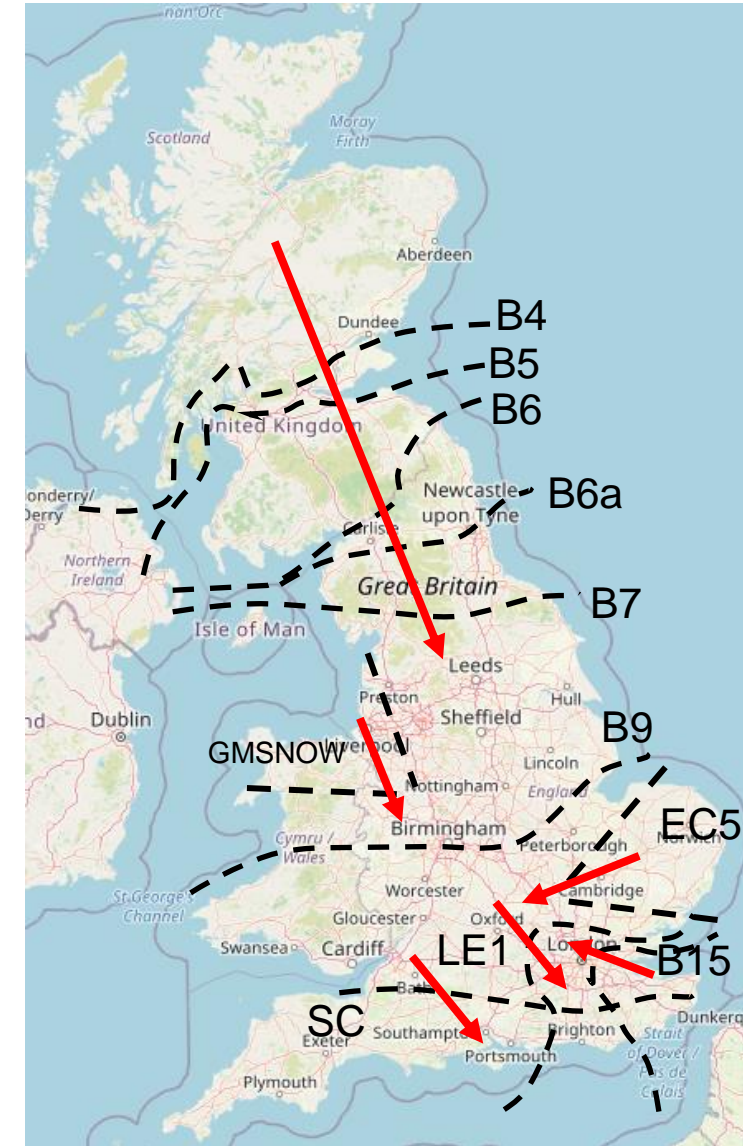
ESO Actions | Wednesday 13 March – Highest SP Spend ~£330k



Transparency | Network Congestion

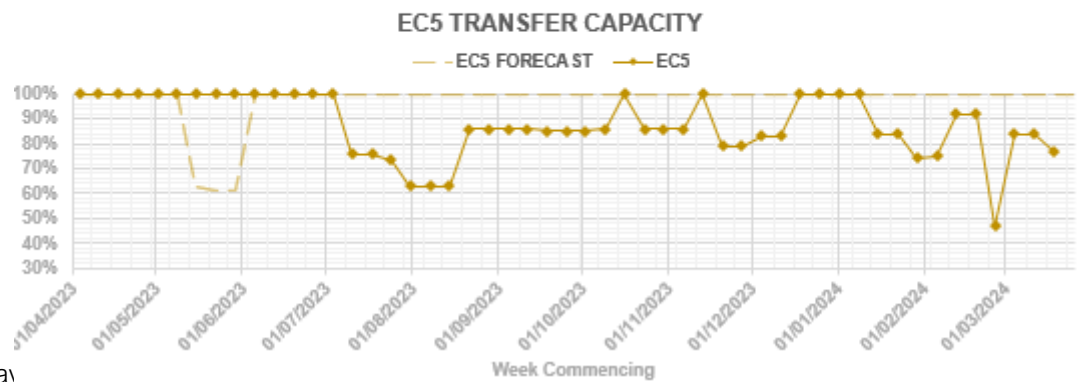
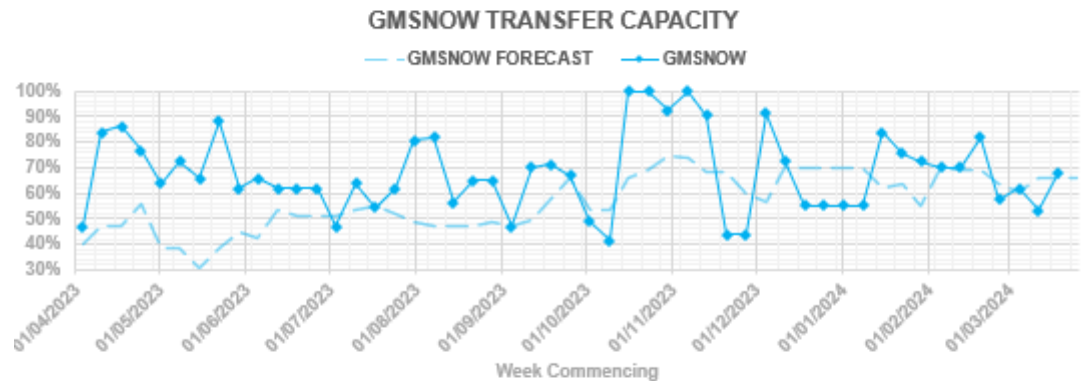
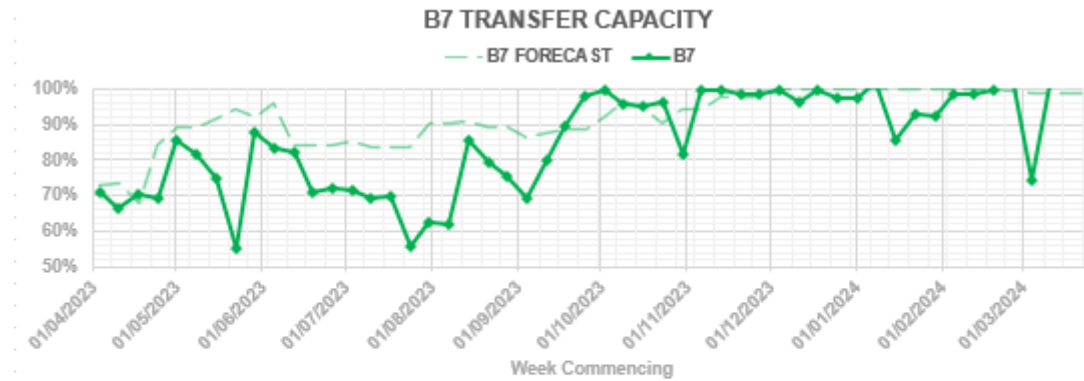


Boundary	Max. Capacity (MW)	Current Capacity (%)
B4/B5	3400	62%
B6	6800	75%
B6a	8000	79%
B7	8325	100%
GMSNOW	4700	68%
EC5	5000	77%
LE1	8500	74%
B15	7500	100%
SC	7300	100%

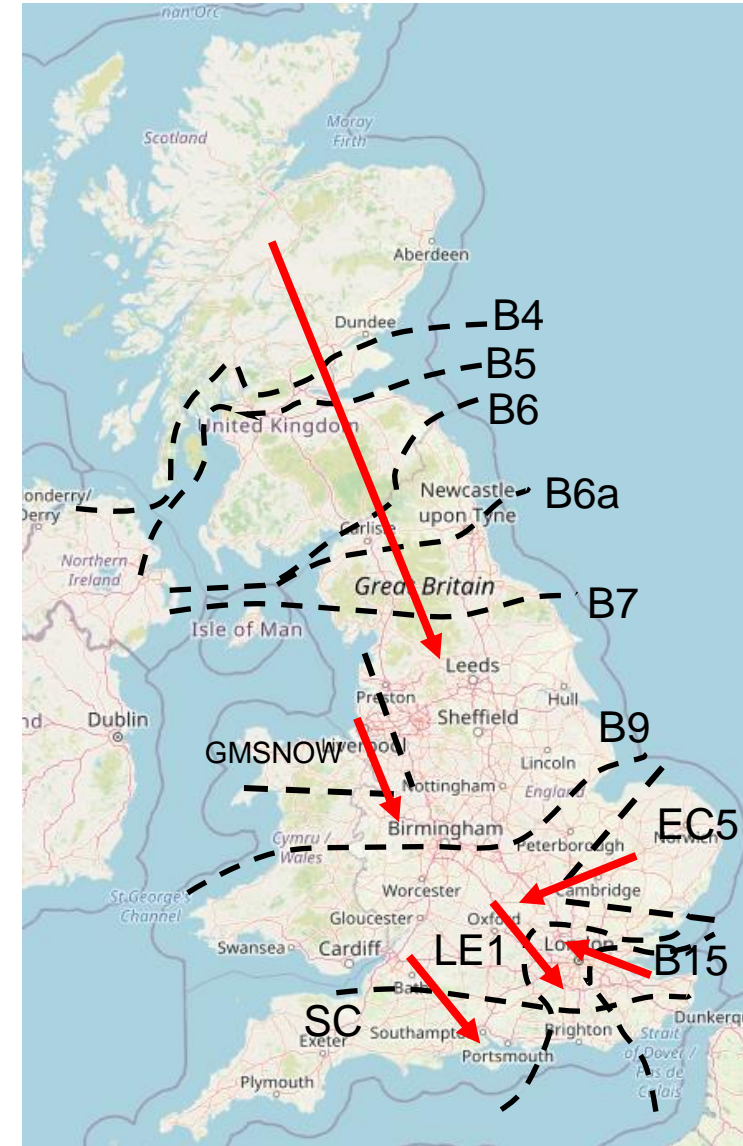


Day ahead flows and limits, and the 24-hour constraint limit forecast are published on the ESO Data Portal: [Constraints Management](#)

Transparency | Network Congestion

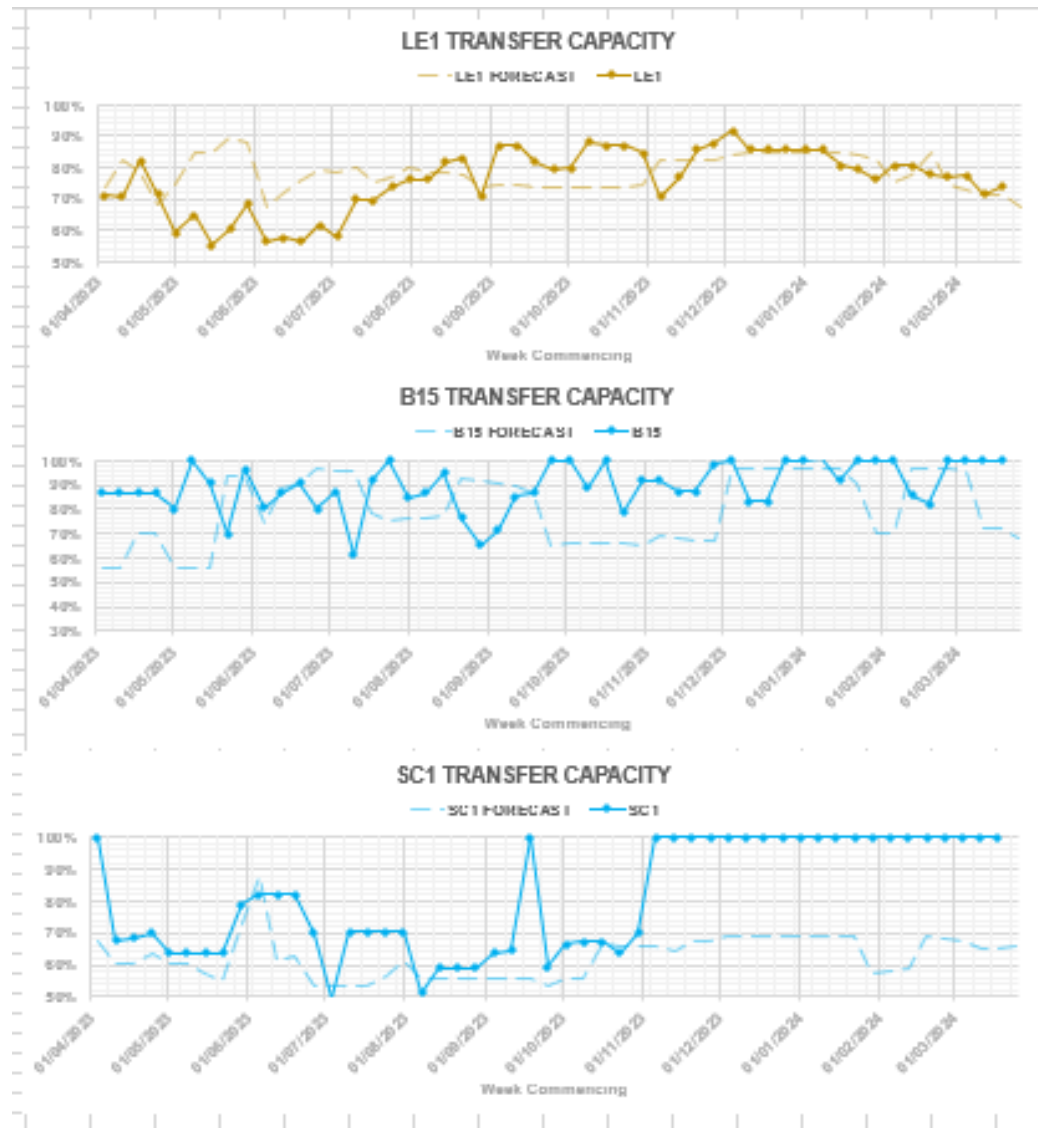


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B15	7500	100%
SC	7300	100%

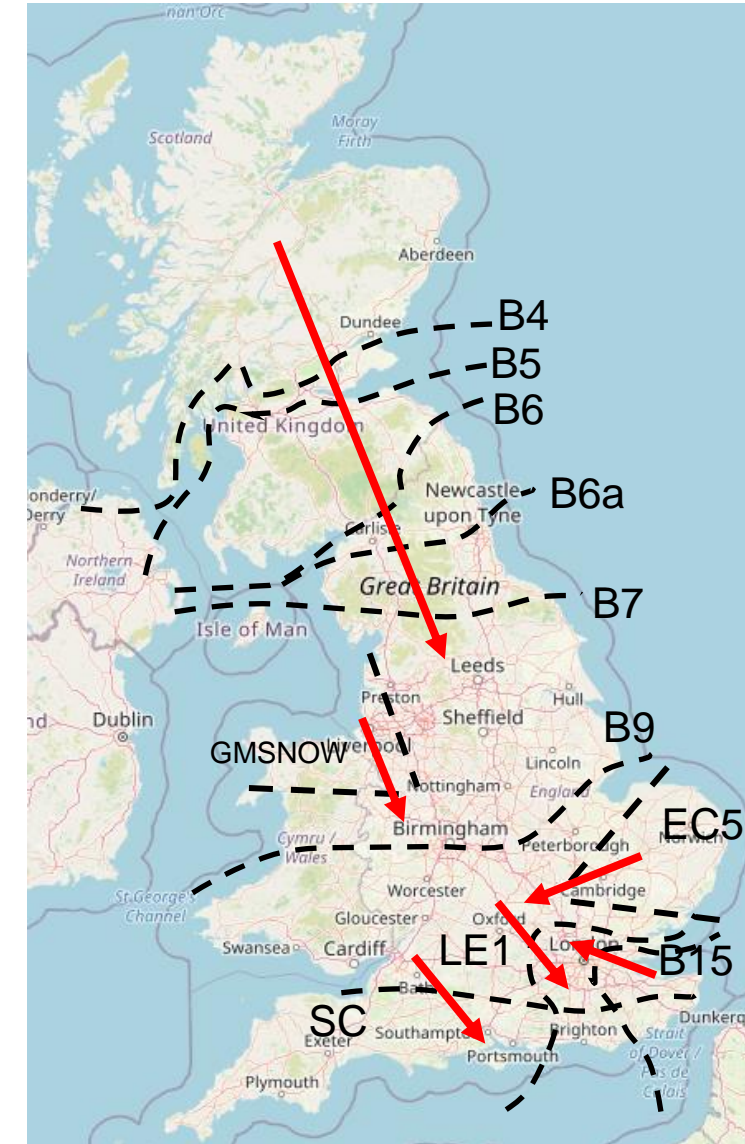


a Portal:

Transparency | Network Congestion



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GMSNOW	4700	68%
EC5	5000	77%
LE1	8500	74%
B15	7500	100%
SC	7300	100%



Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal: [Constraints Management](#)

Previously asked questions

Q: I asked various questions ref Monday 4th unusual operations. They were partly/briefed addressed last week in the OTF, will they be answered more fully for all?

A: We have reviewed questions from the previous week's OTF and the advance question form but we cannot find any questions about 4th March. Please get in touch with us at: box.NC.Customer@nationalgrideso.com

Q: In the balancing reserve results is the price in £ per MW?

A: Availability is £/MW/hour and utilisation is priced at £/MWh

Q: For the network congestion transparency slides, is it possible to show more of the forecast constraints (so future view) than what happened ~ a year ago against plan. That would be more helpful. I understand that plans change so wouldn't take it as gospel!

A: Thank you for your feedback. We are currently looking into whether this request is possible, and we will provide an update at a future OTF.

Previously asked questions

Q: A large amount of large BMUs were instructed on to cover the evening peak on 20th Feb, however a number of assets were skipped in the process by a fairly large margin. 2 units failed to start early, but weren't replaced. Was the large amount taken in order to cover for some of them failing?

A: Apologies for the time taken to provide an answer to this question, we wanted to confirm with the control engineers on duty before we responded.

It is important to remember that we make strategic decisions ahead of time to mitigate risks. This is an iterative process and plans are reviewed as we get closer to real time.

The large BMUs that were initially instructed were the lowest cost combination. While there were other units available that were cheaper per MWh, these were not the lowest cost option when the specific technical and commercial data submitted was considered. For example: synch intervals, Stable Export Limit (SEL), and increasing prices per MWh throughout the time period.

In this instance, there was a lot of uncertainty as we approached DP (Darkness Peak). This uncertainty was due to large confidence bands on Wind generation and potential losses on Interconnectors due to the price differential between GB and non-GB. Our plan therefore included large amounts of reserve. As you have spotted there were supply losses (~1970MW) but this was balanced by higher wind outturn than expected (~2000MW). This meant that ESO did not have to take action to replace the supply losses because the market provided additional Wind.

Previously asked questions

Q: Why do you think there has been such a small volume of CCGTs participating in the first 2 days of BR and do you expect the current proportion of participating technology to continue?

A: The Balancing Reserve product has been live for a week so far – we are closely monitoring the participation and take up of this new product and will be coming back to a later forum with our reflections on the service.

Q: what's up with SMS taking too much BR on both sides to be deliverable, and also setting their BM prices to £500/MWh?
Outragoues

A: We won't be commenting on specific unit or provider actions – if you are concerned please contact our Market Monitoring team at MarketMonitoring@nationalgrideso.com

Advance Questions

Q: Regarding the new 130GVA.s inertia threshold, what does inertia dropping below this levels trigger? (Both in terms of ESO actions as well as wider impacts)

A: If the market provided inertia drops below 130 GVAs, ESO will take actions to instruct additional machines to keep the inertia level at 130 GVAs as a minimum.

GVAs = Giga Volt Ampere seconds

Reminder about answering questions at the ESO OTF

- **Questions from unidentified parties will not be answered live.** If you have reasons to remain anonymous to the wider forum please use the advance question or email options. Details in the appendix to the pack.
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- **Takeaway questions** – these questions will be included in the pack for the next OTF, we may ask you to contact us by email in order to clarify or confirm details for the question.
- **Out of scope questions** will be forwarded to the appropriate ESO expert or team for a direct response. We may ask you to contact us by email to ensure we have the correct contact details for the response. These questions will not be managed through the OTF, and we are unable to forward questions without correct contact details. Information about the OTF purpose and scope can be found in the appendix of this slide pack

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



Appendix

Purpose and scope of the ESO Operational Transparency Forum

Purpose

The Operational Transparency Forum runs once a week to provide updated information on and insight into the operational challenges faced by the control room in the recent past (1-2 weeks) and short term future (1-2 weeks). The OTF will also signpost other ESO events, provide deep dives into focus topics, and allow industry to ask questions.

Scope

Aligns with purpose, see examples below:

In Scope of OTF

Material presented i.e.: regular content, deep dives, focus topics
ESO operational approach & challenges
ESO published data

Out of Scope of OTF

Data owned and/or published by other parties
e.g.: BMRS is published by Elexon
Processes including consultations operated by other parties e.g.: Elexon, Ofgem, DESNZ
Data owned by other parties
Details of ESO Control Room actions & decision making
Activities & operations of particular market participants
ESO policy & strategic decision making
Formal consultations e.g.: Code Changes, Business Planning, Market development

Managing questions at the ESO Operational Transparency Forum

- OTF participants can ask questions in the following ways:
 - Live via Sli.do code #OTF
 - In advance (before 12:00 on Monday) at <https://forms.office.com/r/k0AEfKnai3>
 - At any time to box.NC.Customer@nationalgrideso.com
- **All questions asked through Sli.do** will be recorded and published, with answers, in the Operational Transparency Forum Q&A on the webpage: [Operational Transparency Forum | ESO \(nationalgrideso.com\)](#)
- **Advance questions** will be included, with answers, in the slide pack for the next OTF and published in the OTF Q&A as above.
- **Email questions** which specifically request inclusion in the OTF will be treated as Advance questions, otherwise we will only reply direct to the sender.
- **Takeaway questions** – we may ask you to contact us by email in order to clarify or confirm details for the question.
- **Out of scope questions** will be forwarded to the appropriate ESO expert or team for a direct response. We may ask you to contact us by email to ensure we have the correct contact details for the response. These questions will not be managed through the OTF, and we are unable to forward questions without correct contact details. Information about the OTF purpose and scope can be found in the appendix of this slide pack