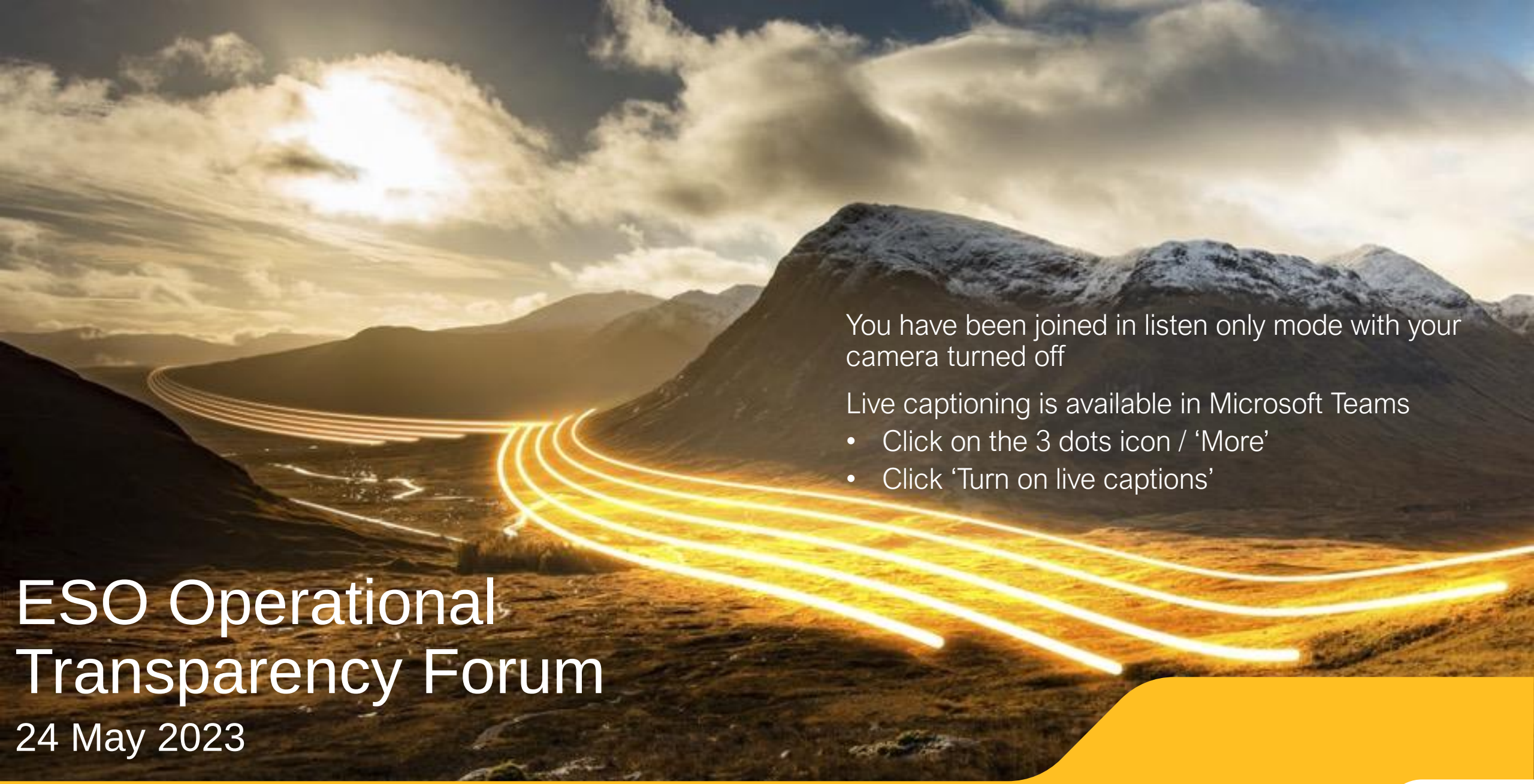


ESO Operational Transparency Forum

24 May 2023

You have been joined in listen only mode with your camera turned off

Live captioning is available in Microsoft Teams

- Click on the 3 dots icon / ‘More’
- Click ‘Turn on live captions’

Introduction | Sli.do code #OTF

Please visit 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. 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

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

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 Reserve – Call for input

We still see substantial end consumer benefit in introducing BR and have continued to develop the service to address Ofgem's concerns, specifically to address the eligibility rules which required a minimum bid size of 50MW and the £250,000 liability cap on reimbursement.

We are grateful to Ofgem and our industry partners for their time and effort in taking a proactive role in engaging with us throughout the development of the Balancing Reserve service. This engagement has been invaluable in enabling us to shape the service design as a direct result of your feedback.

Link to Slides

We would like to continue this collaboration and would welcome your feedback. The Balancing Reserve call for input slides provide a summary of our current thinking.

We would welcome your feedback or reflections on the proposals or any further areas of the BR service design you feel should be reviewed and ask you to send these using the **'call for input pro forma'** by email to box.futureofbalancingservices@nationalgrideso.com by **Friday 26 May 2023.**

Link to Pro Forma

More information is available on Balancing Reserve ESO Website.

Dispatch Transparency Event

We will be hosting an online event on **the morning of Friday 2nd June** for a deep dive about how we dispatch and "Skip Rates".

Content will be similar to the event held on 5 December 2022, including:

- How the ESO currently dispatches – illustrating the cumulative challenges faced by our control engineers and explaining our approach to managing this
- The future of dispatch – overview of the Open Balancing Platform roadmap highlighting how progress will improve transparency and support the control room to manage the dispatch challenges
- Current ESO Dispatch Transparency methodology – explaining the reasons for accepting bids or offers which appear to be out of merit; or not accepting those which appear to be in merit. Including risk management actions

There will also be opportunity for a Q & A session and all materials, including the event recording will be shared.

Please register here: https://forms.office.com/r/LHpReRqWCp

Registration will close at 17:00 on Wednesday 31 May and the webinar links will be sent out after this

Balancing Programme Engagement event

- On the 15th June the Balancing Programme will be hosting their next engagement event in London.
- As part of our ongoing commitment to keep you, our stakeholders, informed of our progress to transform our balancing capabilities and continue to ensure our roadmap for the future has your input and meets your needs.
- The details of the event are below:

Date: 15th June

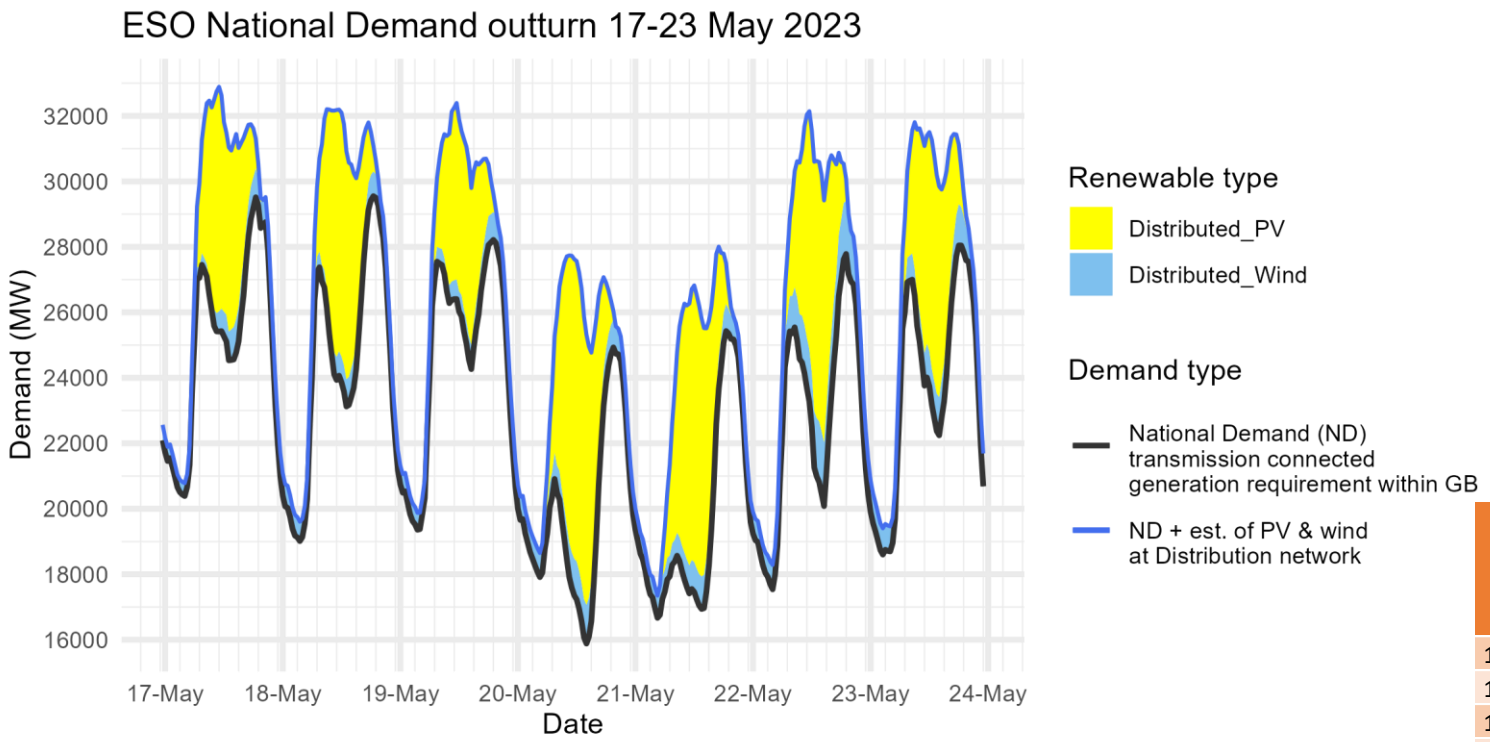
Time: 09:00 – 16:30

Venue: Hilton London Paddington, 146 Praed St, London, W2 1EE

- You can register your attendance at the event at this link

If you have any questions please get in touch by emailing .box.balancingprogramme@nationalgrideso.com

Demand | Last week demand out-turn



		FORECAST (Wed 17 May)			OUTTURN		
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
17 May	Afternoon Min	24.9	1.2	5.2	24.5	0.9	5.6
18 May	Overnight Min	19.3	0.7	0.0	19.0	0.6	0.0
18 May	Afternoon Min	25.1	1.1	5.0	23.1	0.8	7.0
19 May	Overnight Min	19.2	0.5	0.0	19.4	0.5	0.0
19 May	Afternoon Min	24.3	0.6	5.0	24.3	0.7	4.8
20 May	Overnight Min	18.1	0.5	0.1	17.9	0.7	0.0
20 May	Afternoon Min	18.5	0.8	7.8	15.9	1.2	8.3
21 May	Overnight Min	17.0	0.4	0.3	16.7	0.7	0.0
21 May	Afternoon Min	18.7	0.6	7.7	16.9	1.0	7.9
22 May	Overnight Min	18.0	0.5	0.0	17.5	0.7	0.0
22 May	Afternoon Min	22.6	0.9	7.7	20.1	2.0	7.4
23 May	Overnight Min	18.3	0.9	0.0	18.6	0.8	0.0
23 May	Afternoon Min	23.9	1.1	5.7	22.2	1.2	6.4

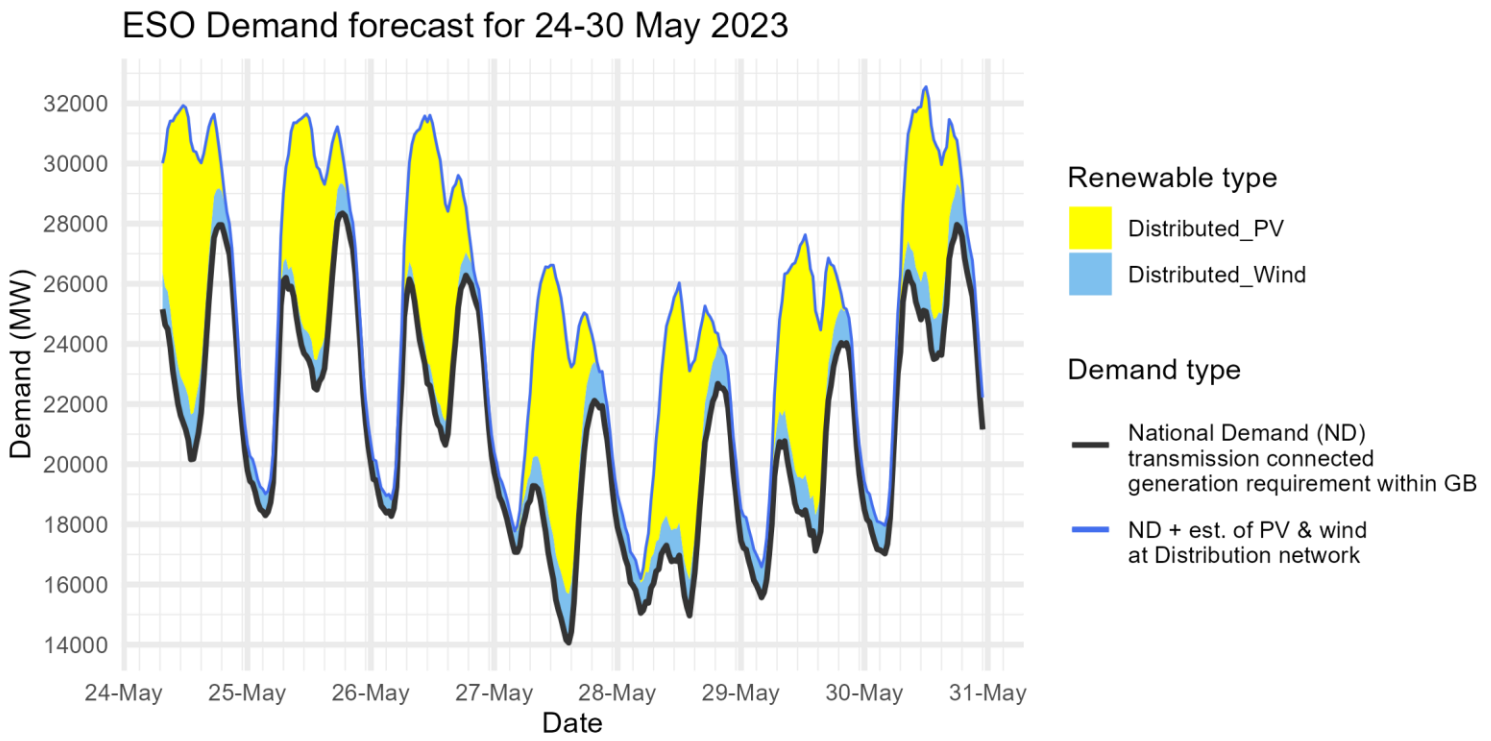
The black line (National Demand ND) is the measure of portion of total GB customer demand that is supplied by the transmission network.

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

Demand | Week Ahead



		FORECAST (Wed 24 May)		
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)	Dist. PV (GW)
24 May 2023	Afternoon Min	20.2	1.5	9.1
25 May 2023	Overnight Min	18.3	0.7	0.0
25 May 2023	Afternoon Min	22.5	1.0	6.4
26 May 2023	Overnight Min	18.3	0.6	0.0
26 May 2023	Afternoon Min	20.6	0.8	7.2
27 May 2023	Overnight Min	17.1	0.7	0.2
27 May 2023	Afternoon Min	14.1	1.6	7.9
28 May 2023	Overnight Min	15.1	1.0	0.1
28 May 2023	Afternoon Min	15.0	1.2	6.9
29 May 2023	Overnight Min	15.6	1.0	0.0
29 May 2023	Afternoon Min	17.1	1.2	6.8
30 May 2023	Overnight Min	17.0	0.9	0.0
30 May 2023	Afternoon Min	23.5	1.3	6.0

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.

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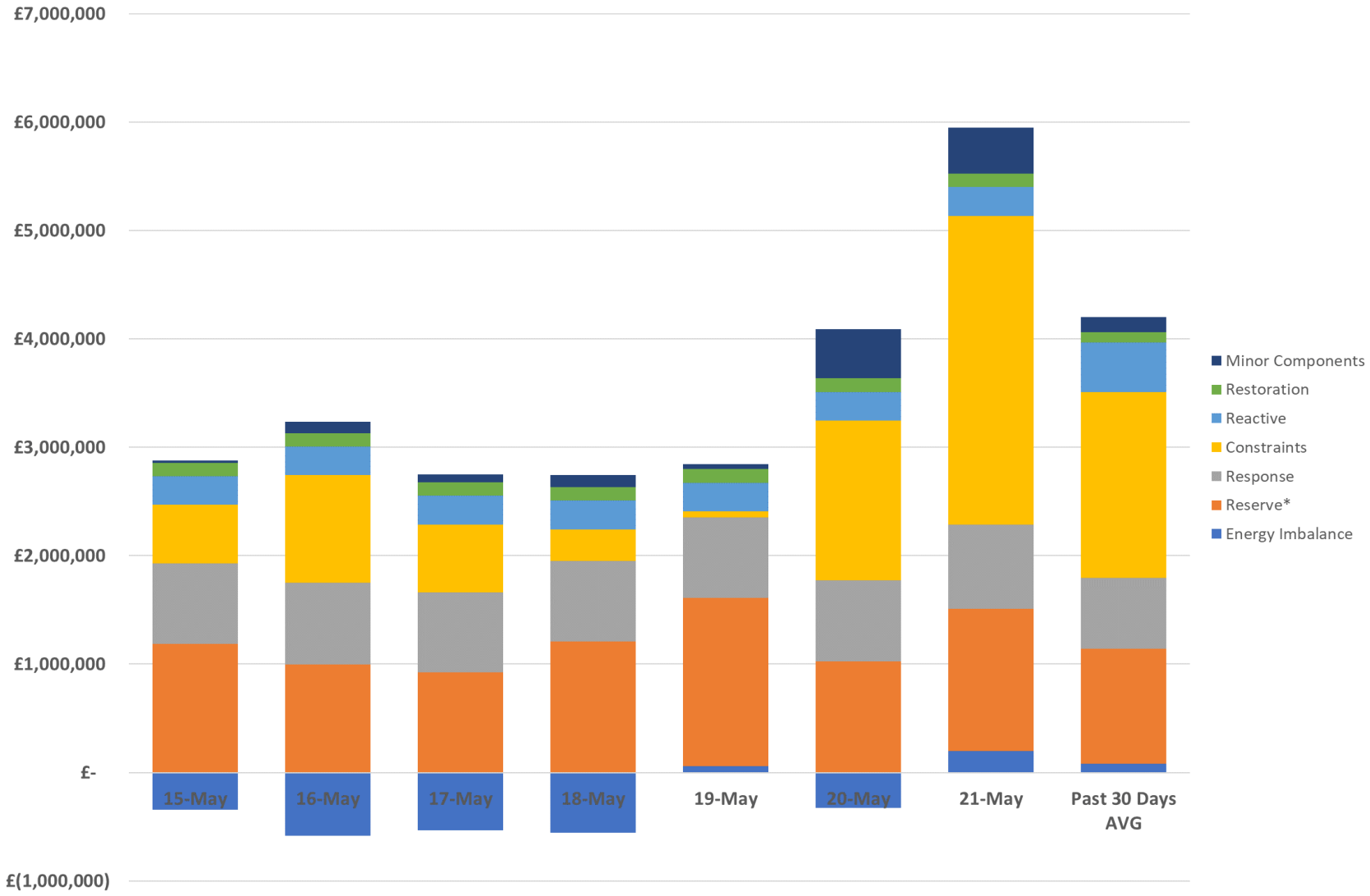
ESO Actions | Category costs breakdown for the last week



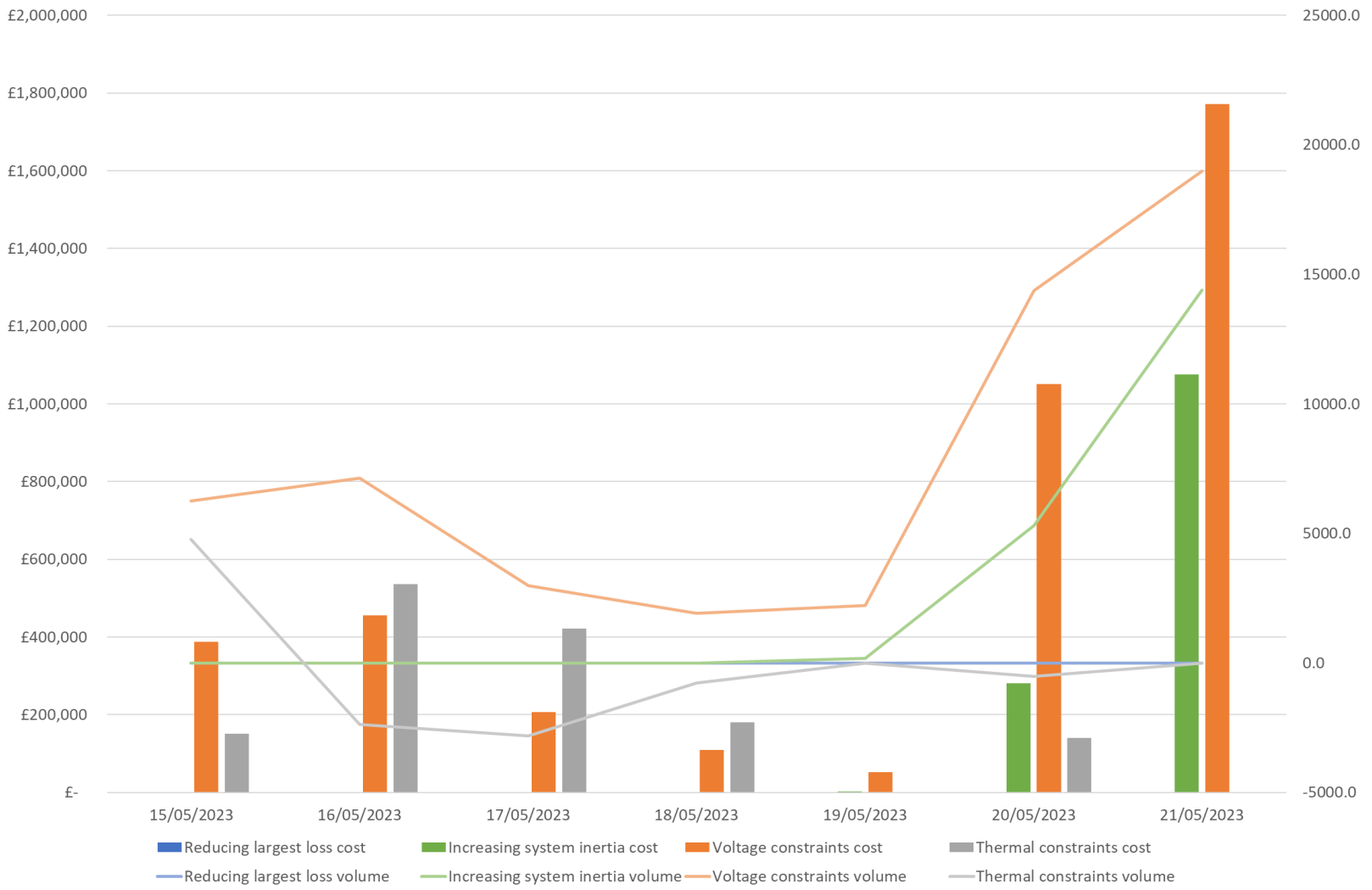
Date	Total (£m)
15/05/2023	2.5
16/05/2023	2.7
17/05/2023	2.2
18/05/2023	2.2
19/05/2023	2.8
20/05/2023	3.8
21/05/2023	5.9
Weekly Total	22.2
Previous Week	22.8

Constraints costs were the key cost component throughout 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



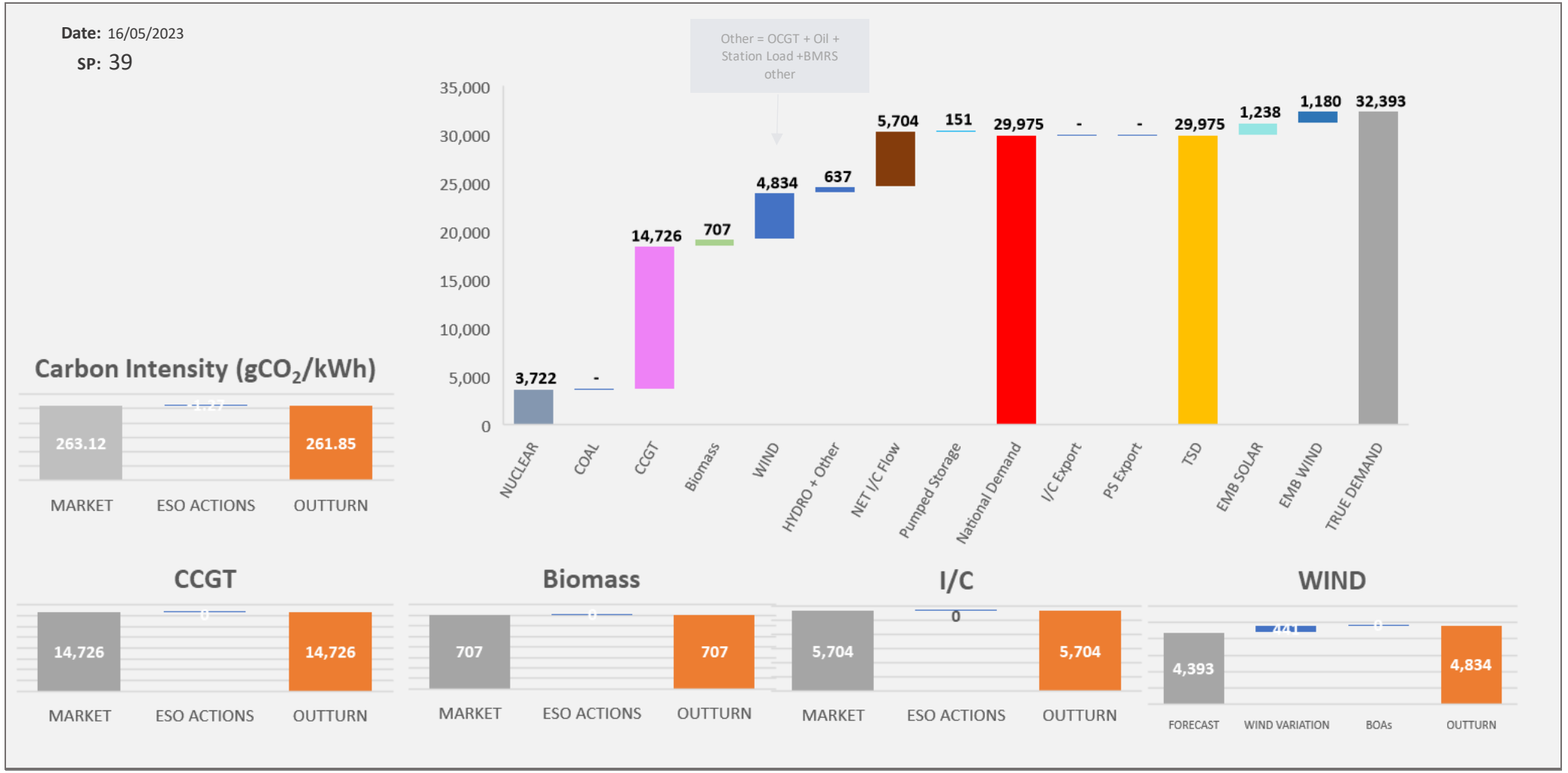
Thermal – network congestion
Actions required to manage Thermal Constraints for most of the week with the highest costs on Tuesday.

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

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

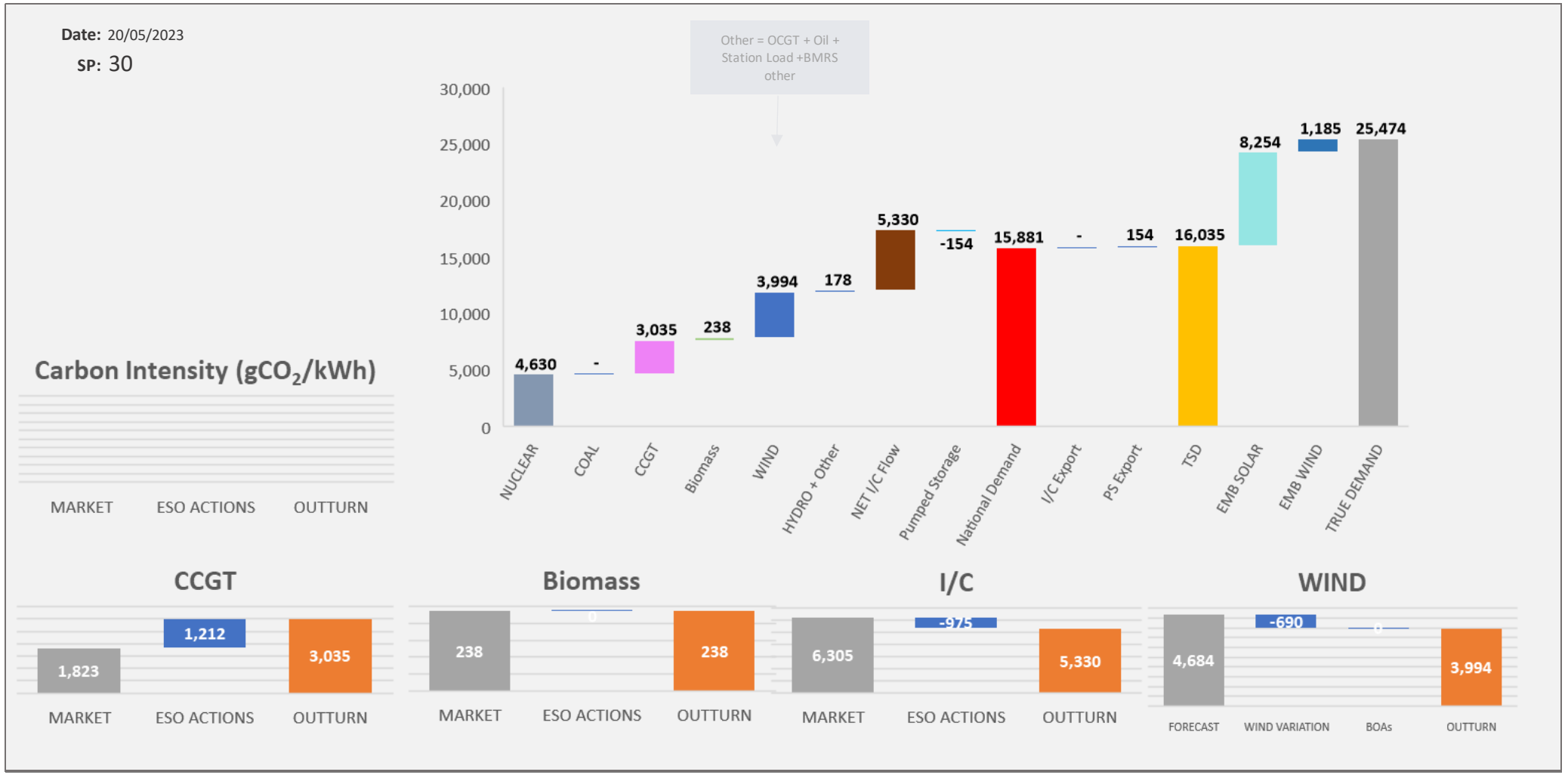
Increasing inertia
Intervention was required to manage system inertia on Sat & Sun.

ESO Actions | Tuesday 16 May – Peak Demand – SP spend ~£9k



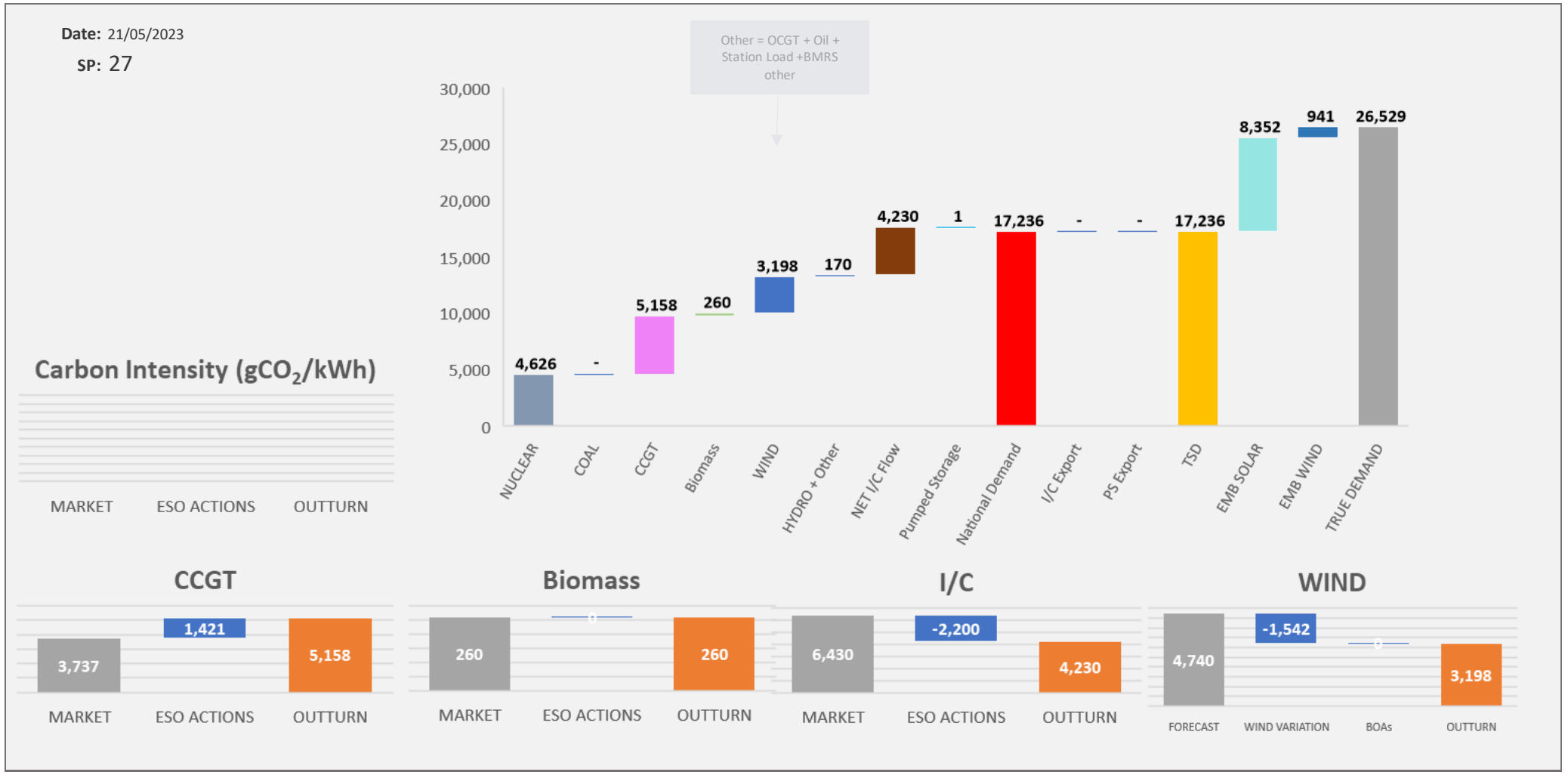
Carbon Intensity data on data portal: https://data.nationalgrideso.com/carbon-intensity1/carbon-intensity-of-balancing-actions

ESO Actions | Saturday 20 May – Minimum Demand – SP Spend ~£135k



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

ESO Actions | Sunday 21 May – Highest SP Spend ~£161k



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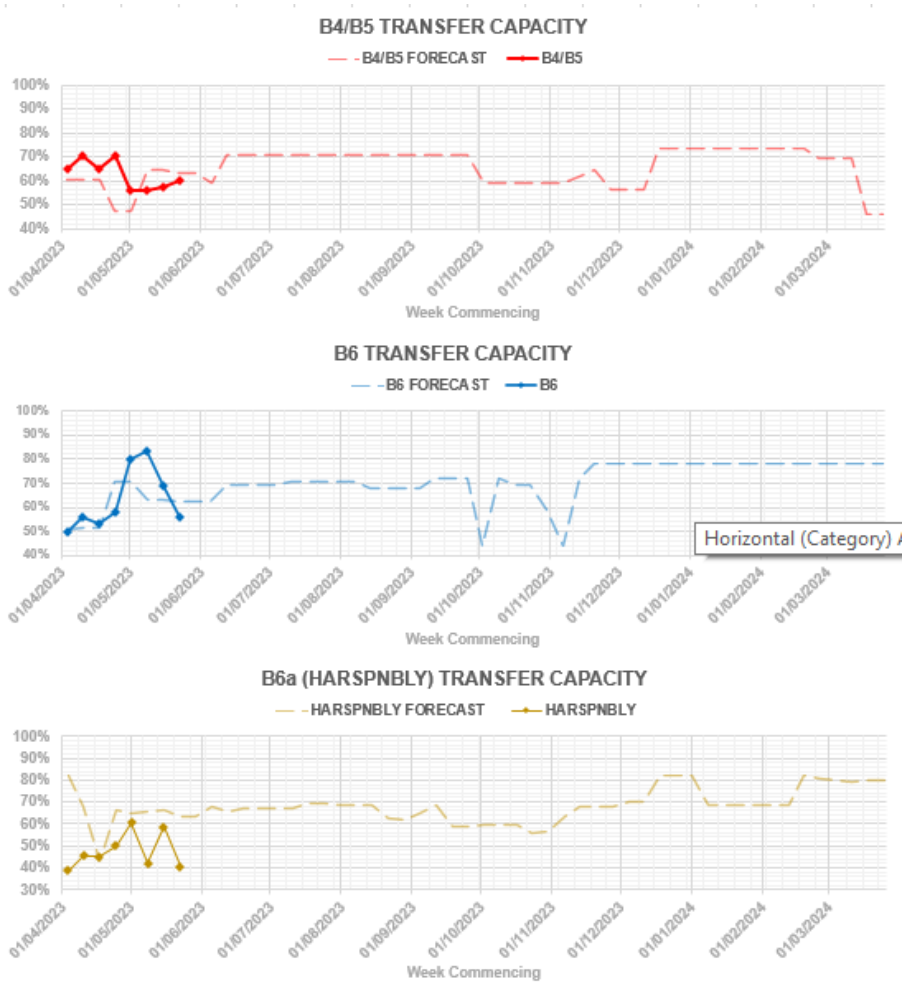
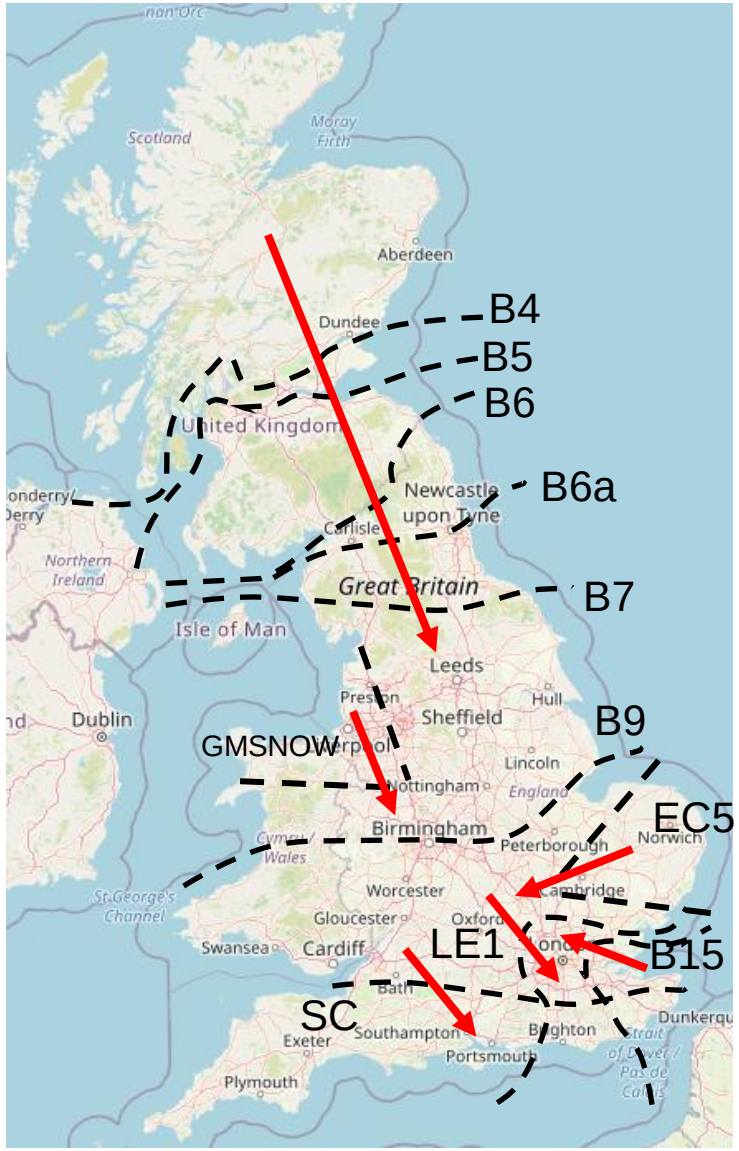
Transparency | Network Congestion

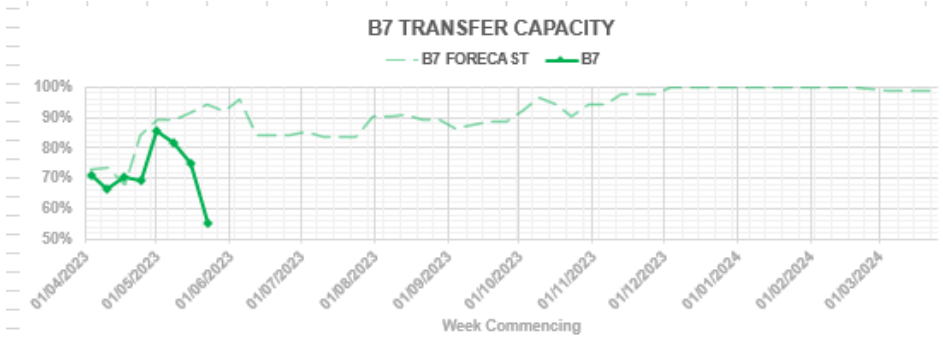


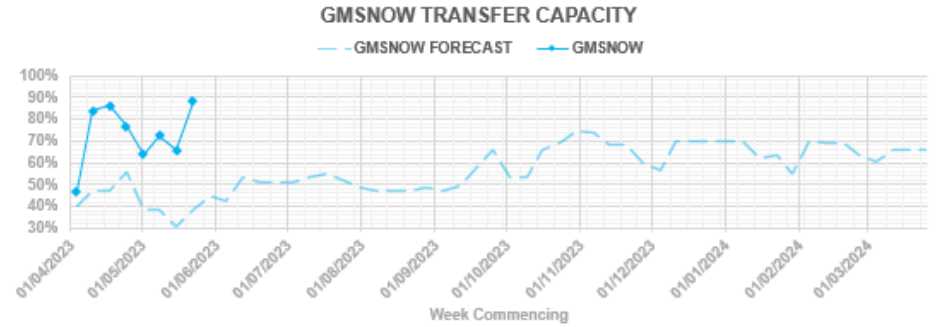
Boundary	Max. Capacity (MW)
B4/B5	3400
B6	6800
B6a	8000
B7	8325
GMSNOW	4700
B9	10600
EC5	5000
LE1	8500
B15	7500
SC	7300

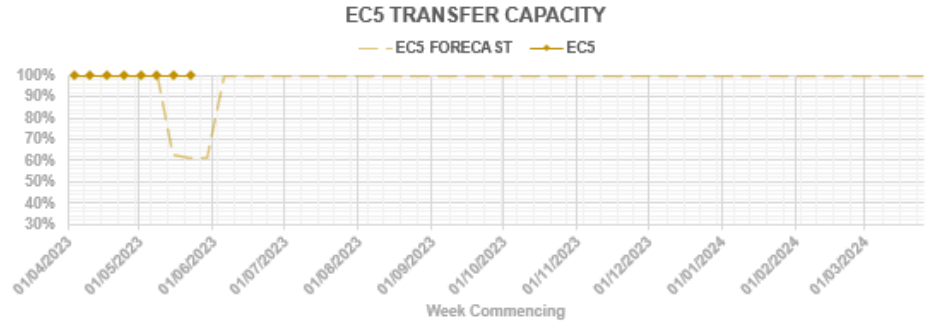


Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal:
https://data.nationalgrideso.com/data-groups/constraint-management

Transparency | Network Congestion







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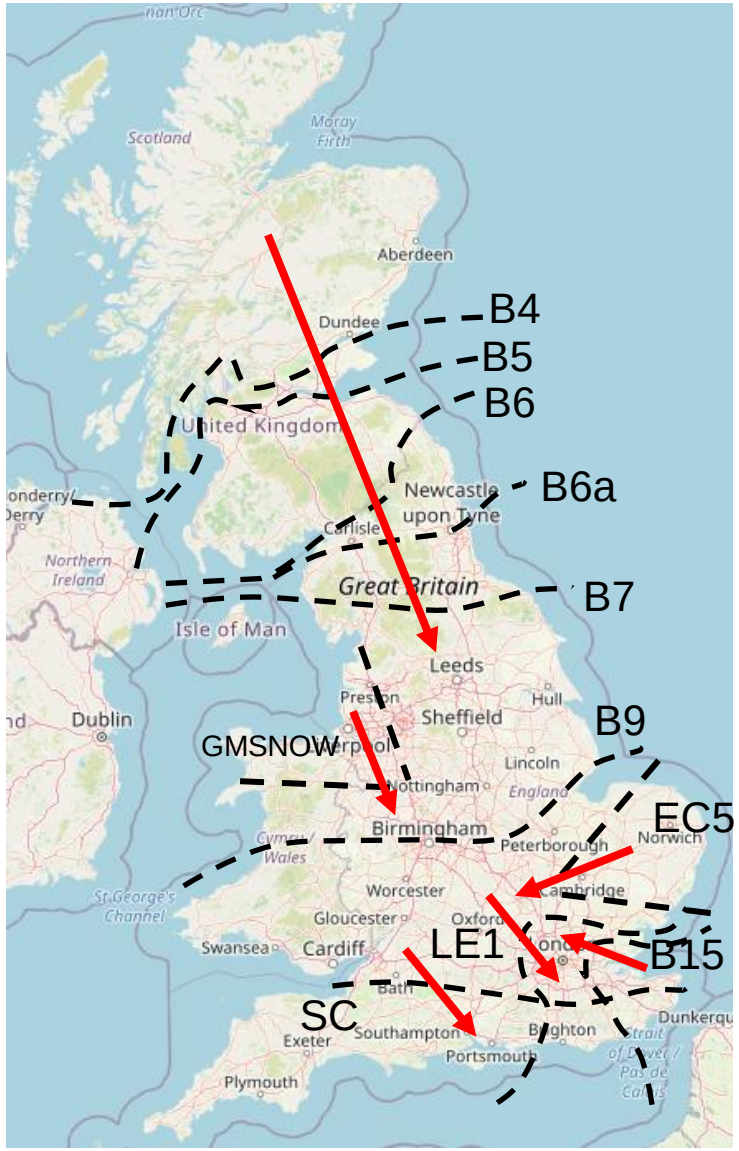

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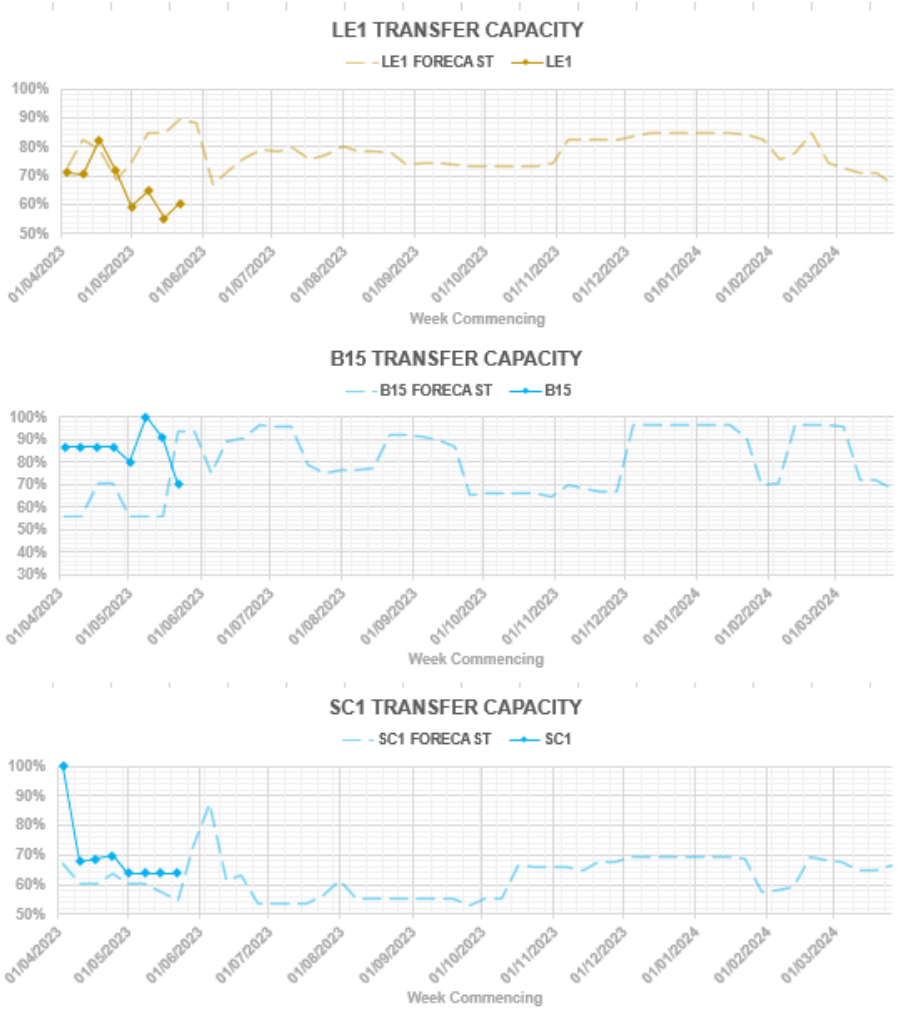
Transparency | Network Congestion



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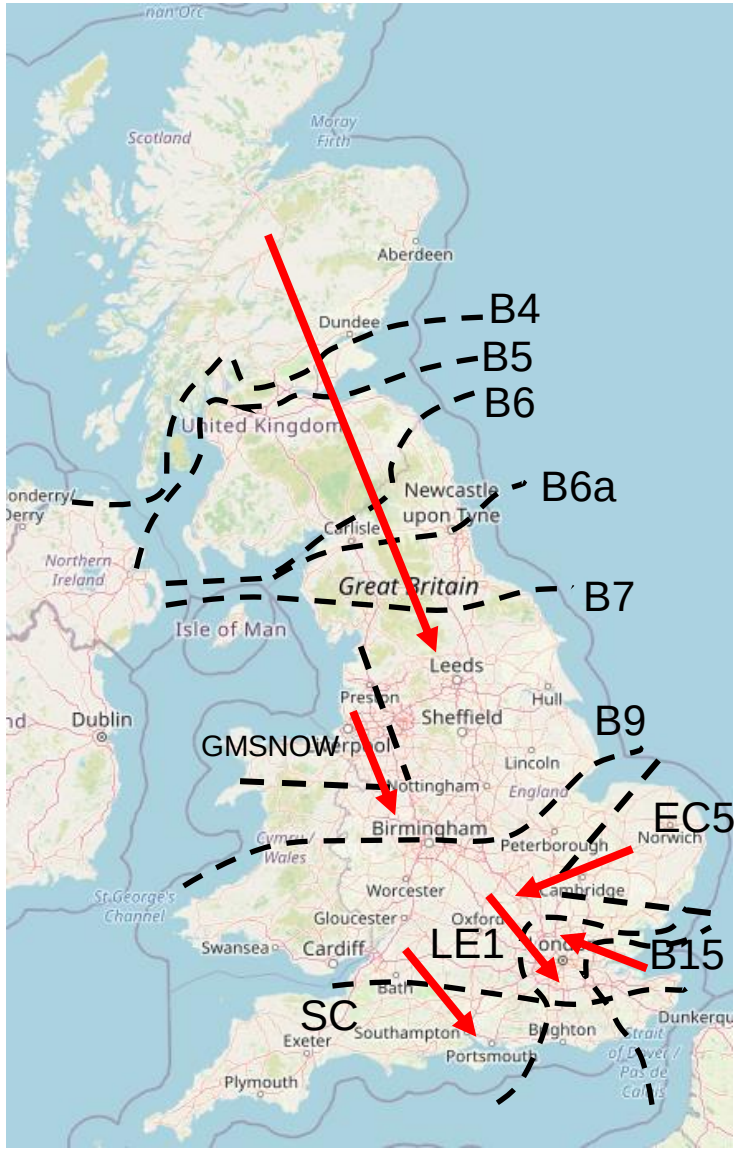

Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal:
https://data.nationalgrideso.com/data-groups/constraint-management

Advance Questions

Q: When is TSO going to start publishing Viking link REMIT messages and what is the asset ID?

A: We do not comment on any specific units as this is for the owner of those units to consider. Information about the availability of units including interconnectors should be published to the BMRS transparency platform in a timely manner if the information is considered as meeting the definitions for inside information under REMIT (see section 3 & 4 of ACER guidance): https://acer.europa.eu/en/remit/Documents/ACER_Guidance_on_REMIT_application_6th_Edition_Final.pdf

To reach out directly to Viking Link, please access the following link: https://www.viking-link.com/contact/

Questions from last week

Q: There seemed to be significant planning in preparing for uncertainty during the king's coronation, with numerous actions to help manage frequency. However, dynamic containment low and high requirement barely changed, was this overlooked or not seen as a beneficial action?

A: The Dynamic Containment requirement is always determined based on current FRCR policy to secure BMU + RoCoF losses and is largely driven by the forecasted level of largest loss. In the king's coronation day planning, we knitted all the system uncertainties into the analysis and communicated DC auction volumes as system needs.

Questions we are still working on

Q: Hi, apologies if this is covered elsewhere, on 21 December 2022 the ESO answered a question at the OTF on demand reduction over the winter period at that point (estimating there had been approximately 6.5% decrease in demand over Autumn), as we move into summer could the ESO provide a similar review of the whole winter period, did the decrease in demand remain constant throughout winter, how much demand reduction was there in total and has the trend changed at all as we have moved into warmer weather? Thanks

Q: In the answers to Advanced Questions last week you stated that the ESO Registrations team have confirmed that Solar BMUs will be continue to be included in the OTHER category for the time being and that there are less than 10 Solar BMUs at present. Please can you confirm the BMU IDs of the Solar BMUs that are included in the OTHER category at present because neither of the lists of OTHER category BMUs provided on BM Reports and Elexon's Kinnect Insight solution appear to contain any Solar BMUs.

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