

Public

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'

# NESO Operational Transparency Forum

13 November 2024

# Introduction | Sli.do code #OTF

Slido code #OTF

To ask questions live & give us post event feedback go to Sli.do 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 below.
- **The OTF is not the place to challenge the actions of individual parties** (other than the NESO), and we will not comment on these challenges. This type of concern can be reported to the Market Monitoring team at: [marketreporting@nationalenergyso.com](mailto:marketreporting@nationalenergyso.com)
- **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. After that please use the advance questions or email options below.
- **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@nationalenergyso.com](mailto:box.nc.customer@nationalenergyso.com)

**Stay up to date on our webpage:** <https://www.neso.energy/what-we-do/systems-operations/operational-transparency-forum> (OTF Q&A is published with slide packs)

# Future deep dive / focus topics

Slido code #OTF

## **Today**

Operating Margin & System Warnings

Capacity Market Notifications

## **Future**

Frequency Risk and Control Report (FRCR) 2025 Scope and industrial engagement plan – 20 November

NESO Data Sharing Approach – 27 November

NESO's next RIIO-2 Business Plan (BP3): Consultation launch – 4 December

Initial National Demand Outturn – TBC

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

# Balancing Programme Event

Slido code #OTF

**Date:** 27 November 2024

**Time:** 9:30am – 4:30pm

**Location:** Clermont Hotel, Charing Cross, London

## Hear the latest on:

- Open Balancing Platform (OBP) future delivery
- Constraint management in OBP
- National Optimisation
- Delivery of our new Wind Model
- A day in the life of a Control Room Engineer


To sign up to the event, click [here](#). We are currently running a waitlist but expect to be able to release some places soon.

To stay up to date with the latest information from the Balancing Programme, subscribe to the NESO newsletter by clicking [here](#), and selecting 'Future of Balancing Services inc. Balancing Programme'

If you have any questions, please contact the team at: [box.balancingprogramme@nationalenergyso.com](mailto:box.balancingprogramme@nationalenergyso.com)

# Future Event Summary

Slido code #OTF

Event	Date & Time	Link
Markets Forum	11 November 2024 (10am)	<a href="#">Sign Up</a>
Future of Reactive Power	13 November (2pm)	<a href="#">Sign Up</a> 
Balancing Programme Event	27 November (9:30am-4:30pm)	<a href="#">Sign up</a> 
FRCR 2025 Webinar – 1: Framework and Methodology	27 November 2024 (1:30 – 2:30pm)	<a href="#">Sign up</a> Sign up links will also be shared via SQSS mailbox.
FRCR 2025 Webinar – 2: Model and Data	11 December 2024 (1:30 – 2:30pm)	<a href="#">Sign up</a> Sign up links will also be shared via SQSS mailbox.

Public

# Operating Margin and System Warnings

Dan Auty

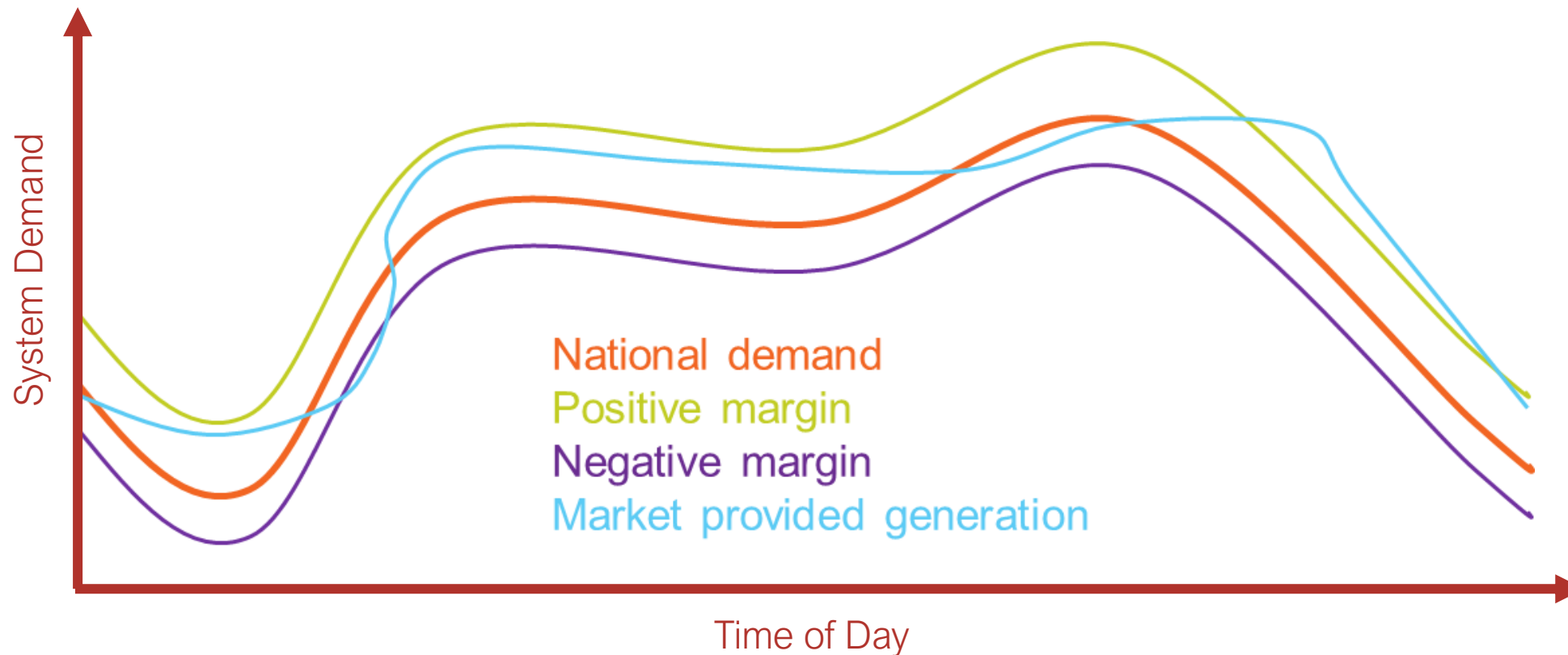
Operations Manager

Winter 2024

# Transparency

## Why do we hold Operating Margin?

NESO must ensure that sufficient Operating Margin is held to meet system security requirements due to a variety of factors, such as loss of generation, normal fluctuations in national demand and variance from forecast.



# Transparency What is Operating Margin?

Slido code #OTF

## NESO System Operating Plans

- Demand uncertainty
- Volume of renewable generation
- Special events
- Weather
- Largest demand and generation loss risk
- Periods of enhanced system risk

**What is it for?**  
To cover plant re-declarations and changes in demand or generation forecasts

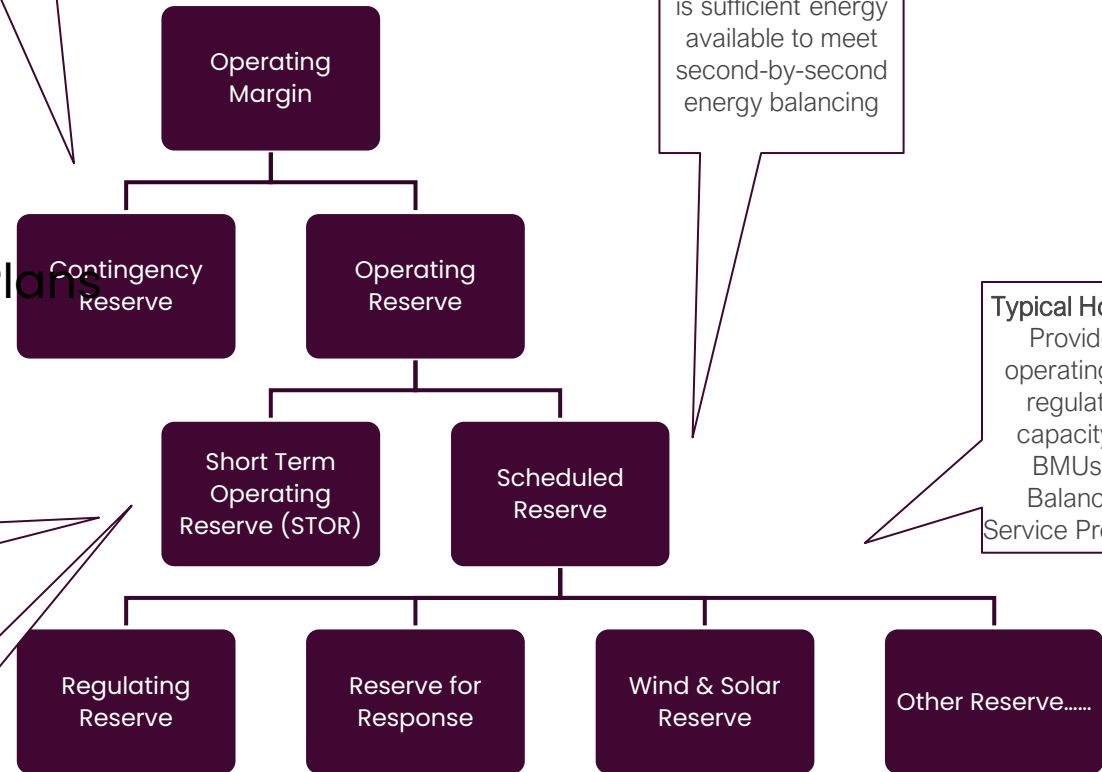
**What is it for?**  
Reserve scheduled to ensure that there is sufficient energy available to meet second-by-second energy balancing

**Decreases over time**  
to zero at 4hrs from real-time

**What is it for?**  
To replace generation if we have a large loss in real-time

**Typical Holding**  
Providers available to change output at short notice for fairly short timescales

**Typical Holding:**  
Providers operating in a regulating capacity eg BMUs or Balancing Service Providers



Link to: [NESO System Operating Plan \(SOP\)](#)

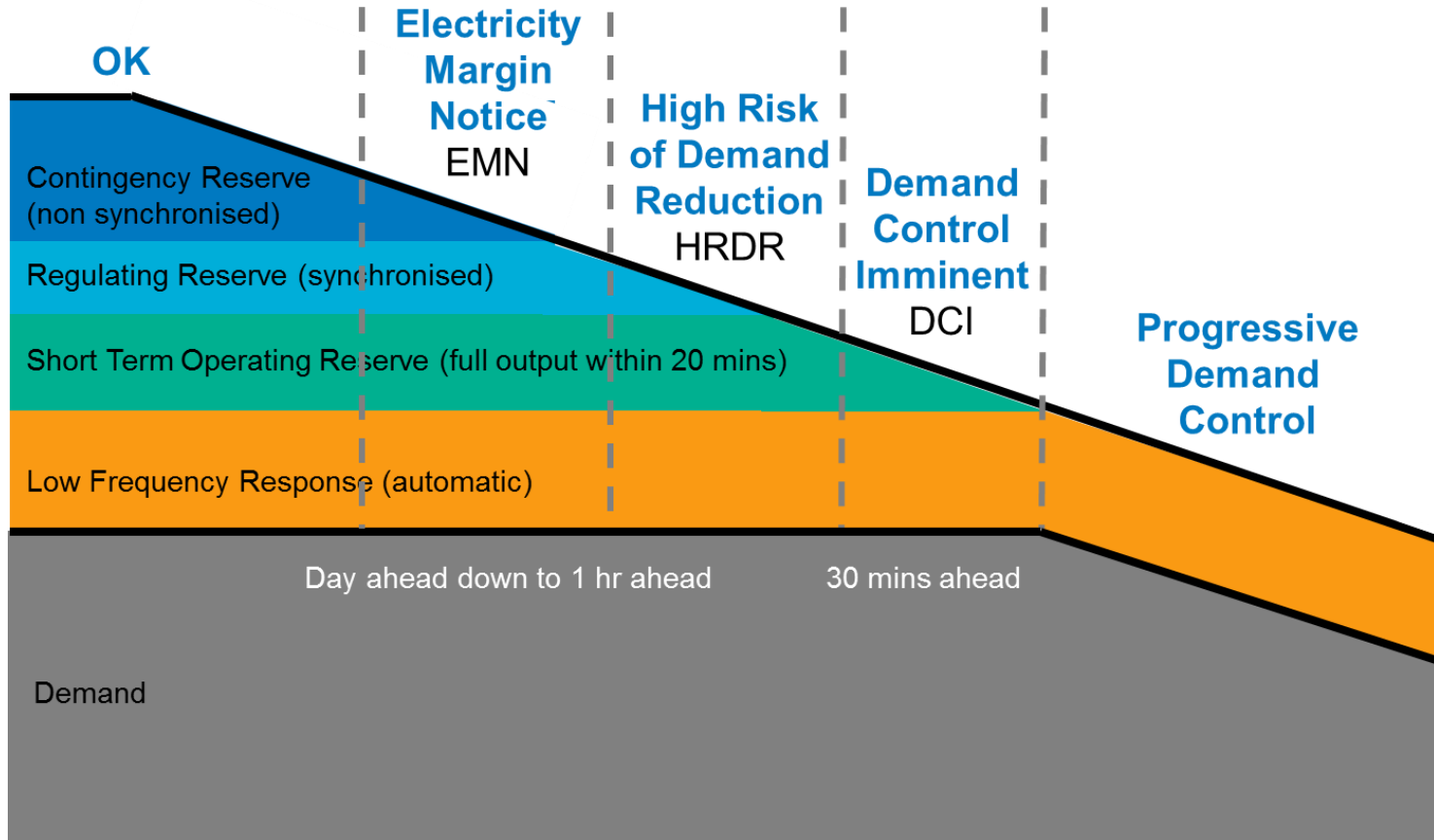


# Transparency

## What warnings do ENCC issue?

NESO has a number of system warnings that it uses to signal tight margins to the market

Slido code #OTF



# System Warnings

Slido code #OTF

<https://bmrs.elexon.co.uk/events>

## Electricity Margin Notice (EMN)

Issued when our normal margins for operating the system are not as large as we would like and we cannot address through the normal mechanisms

## High Risk of Demand Reduction (HRDR)

Issued when our normal margins for operating the system are not as high as we would like it, we cannot address through the normal mechanisms and / or when judged there is a high risk of demand reduction

## Demand Control Imminent (DCI)

Issued to provide short term notice, where possible, when a demand reduction is expected in within 30 mins.

# Order of Actions

## Everyday Actions

Everyday Actions	Order	Comments
Reconfigure Transmission Network to reduce network congestion: Change substation running arrangements, Tap Quad Boosters, and make use of enhanced ratings	Normal operating practice – no cost	Changing daily operating conditions can result in different network configurations to reduce congestion.
Review and refine reserve requirement within day dependent on system conditions	Normal operating practice – no cost	Changing system conditions can relieve requirements for reserve or increase requirements. This can change at any time as the conditions change.
All deliverable Offer action on all available BM participants	#1 based on Cost	Scheduled from Day Ahead, action taken in real time – some offers may not be available due to network congestion.
Issue warming instructions to cold BM participants	#1 based on Cost	Scheduled from Day Ahead, action taken in real time.
Buy energy from continental Europe	#1 based on Cost	Scheduled from Day Ahead, action taken from Day Ahead to 4hrs ahead of time by ESO Traders.
Reconfigure CCGTs to increase available energy (e.g.sync additional GTs)	#1 based on Cost	Scheduled from Day Ahead, managed within the control timescales within day.
SO-SO trade in cost order	#1 based on Cost	SO to SO trade with other SO in Europe/ Ireland.
Instruct Demand Flexibility product	#1 based on Cost	For predominantly peak periods (16:00 to 19:00) activated within day.

# Order of Actions

## Enhanced Actions

Enhanced Actions (if everyday actions are insufficient)	Order	Comments
Recall TO assets from outage to increase network availability and available capacity	#2	Anytime through to control room timescales, depending on ERTS (Emergency Return to Service) time.
Net Transfer Capacity (NTC) restrictions	#3	Required to ensure interconnectors flows remain within operation security limits. Used as a last resort after all commercial actions and system optimisations have been taken. Can be use for margin extremes when an interconnector flow can result in an EMN or HRDR being issued (this is detailed further in the internal and external NTC policies).
Use of Emergency Assistance (EA) from other SO	#4	Enacted close to real-time. Only applicable if capacity is available on interconnectors. EA can be withdrawn at any time.

# Order of Actions

## Emergency Actions & Emergency Powers

Slido code #OTF

Emergency Actions (if enhanced actions are insufficient)	Order	Comments
Emergency Instruction (EI) to other SO	#5	Only applicable if this does not cause demand control in the interconnected countries.
Use of MaxGen	#5	This should be used at the same time as EI to other SO. This service will be initiated by the issuing of an Emergency Instruction.
OC6.5.3 Fast Demand Control instructions to DNOs	#6	This could be via voltage control or demand control of fast disconnection blocks up to 20%, protecting critical sites.
OC6.5.4. Demand Control Rotation Protocol	#7	In-day rota'd demand control disconnections up to 40%, protecting critical sites. ESO has emergency powers to do this, when approved by Gold CMT.
Emergency Powers (if emergency actions are insufficient)	Order	Comments
Recommend to DESNZ to implement ESEC	#8	Ongoing conversations prior to this so all parties would be aware of risk.
ESEC instructed by DESNZ	#9	ESO implement rota disconnections within ESEC framework, likely with 48h notice. Demand Control greater than 40%.

# Tools to manage generation shortfall

OC6  
voltage  
reduction

- Short notice
- Short duration
- <5% demand reduction
- No customer disconnections

OC6  
demand  
control

- Short notice
- Short duration
- 5% to 40% demand reduction
- Customer disconnections
- ESO determine disconnection required and instruct DNOs
- DNO implement disconnections in pre-prepared 5% blocks
- Distribution-connected generator sites protected where possible

ESEC  
(Electricity Supply  
Emergency Code)

- Longer notice
- Prolonged duration
- 5% to 90% demand reduction
- Customer disconnections
- ESO determine disconnection required and instruct DNOs under Government direction
- DNOs implement rota disconnection in pre-prepared 5% blocks, under Government direction
  - Variable rota disconnections as per ESEC document
  - Priority Sites List



Public

# Capacity Market Notifications

Richard Price

Short Term Operability Team

Market Requirements

OTF – 13<sup>th</sup> November 2024

# What is a Capacity Market Notification?

Slido code #OTF

- A Capacity Market Notification (CMN) is a notification issued by NESO normally at 4 hours ahead of real time
- It is a signal four hours in advance that, when taking into account additional operational reserve requirements, there may be less generation available than we expect to need to meet national electricity demand on the transmission system.
- The notices are intended to be a signal that the risk of a System Stress Event in the GB electricity network is higher than under normal circumstances. They are an early notification that CM participants should be prepared to deliver their Adjusted Load Following Capacity Obligations (ALFCO) under the CM rules Chapter 8.
- Capacity Market Notices are communicated automatically by NESO systems and the primary trigger set by the UK Government for a Capacity Market Notice to be issued to the industry is where the level of available generation is within a 500MW threshold of NESO's total requirement (demand plus reserve).
- In certain exceptional situations, CMNs can also be triggered in response to a Demand Control event. The exception to this is when the event has been determined as occurring for system management reasons, in such circumstances a CMN will not be issued.
- CMNs are published on ELEXON's Insights Platform <https://bmrs.elexon.co.uk/events> and also on the dedicated GBCMN website here: <https://gbcmn.nationalenergyso.com/> Please also see the FAQ on this website: <https://gbcmn.nationalenergyso.com/faq>



# CMN calculation methodology

- The calculation adds together the total MEL capacity available from all generation including wind, interconnectors (PN), non-BM STOR etc.
- For conventional generation, if  $PN > 0$  it uses MEL. If  $PN = 0$  and  $NDZ < \text{lead time}$ , it calculates the expected maximum level that the unit can ramp up to by the target time.
- It compares this against our total requirement, i.e. the demand forecast plus our reserve requirement.
- If the difference is less than +500MW, a CMN is automatically triggered.
- Normally CMNs are triggered at 4 hours ahead automatically if the margin calculation results in a margin less than the 500MW threshold for a specific target half hour, but they can also be triggered at any point if we issue demand control. (note that EMNs can cover a time range rather than a single half hour).
- All intervening half hours are subsequently monitored and once the margin is above the threshold for all half hours, the CMN is automatically cancelled. It can also be manually cancelled.
- The CMN calculation doesn't directly affect DRM / LoLP / RSP, but the calculation methodology is similar in both, so if margin forecasts are tight in one, they are also likely to be tight in the other.

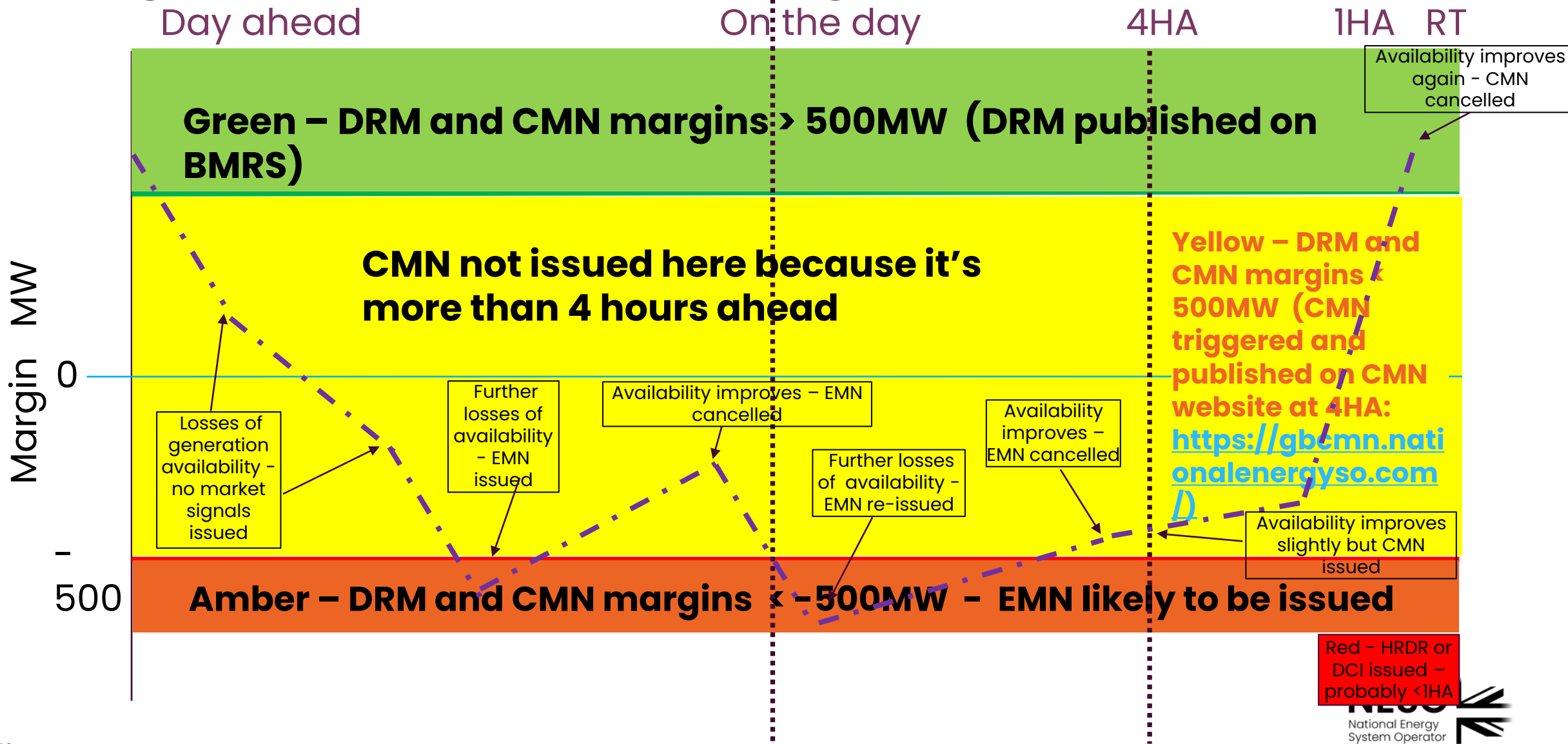
PN – Physical Notification, MEL – Maximum Export Limit, NDZ – Notice to Deviate from Zero, DRM – De-rated Margin, LoLP – Loss of Load Probability, RSP – Reserve Scarcity Price

# Comparison of Capacity Market Notification (CMN) and Electricity Margin Notice (EMN)

Slido code #OTF

CMN	Features	EMN
Automated	Trigger	Manual
500MW <b>above</b> margin requirement	Threshold	500–800MW <b>below</b> margin requirement
Not included	Constraints	Included
4 hours out (for initial alert)	Lead time	Flexible
CM Agreement holders put on notice that risk of System Stress Event is elevated	Expected response	Provision of additional energy where possible
Capacity Market Notices Website and ELEXON Insights	Publication	ELEXON Insights platform
Aimed at CM agreement holders	Focus	Operationally focused

# Margin thresholds – traffic lights



# Consistency of signals

- Generally we believe that our margin signals are consistent and based on the same underlying source data.
- However, there are different trigger levels and different lead times, and although DRM and CMN margins are calculated completely automatically, the EMN margin calculation is manually generated.
- As such, there is an opportunity for the control room to incorporate some adjustments to the raw submitted availabilities and our latest demand forecasts based on their judgement and experience.
- Last winter, there was some concern over apparent inconsistency when a CMN was issued just after an EMN had been cancelled.
- From the previous slide you can see that this is entirely possible, because for example, even if the margin improves from say 5-6HA when an EMN is issued in the RED zone, it can still be in the AMBER zone and tight enough for a CMN to still be triggered at 4HA.

# Detailed breakdown of De-rated Margin (DRM) calculation

- For a given lead time: Forecast Margin = Available Generation less Demand Forecast less Reserve Requirement.
- Lead times published are Midday Day ahead; 8, 4, 2 & 1 Hour ahead on the day
- Available Generation is sum of MEL for plant with  $PN > 0$ , or NDZ  $<$  lead time or  $PN > 0 < 8$ hrs ago
- Wind generation is forecasted separately
- Demand forecast is the National Demand Forecast
- Interconnector PN positions and non-BM STOR availability are also included
- Reserve requirement to cover the largest loss.
- Probability distributions of generation and total requirement convolved into a single distribution of the margin. LoLP calculated as  $\text{Prob}(\text{Margin} < 0)$ . A LoLP of 0.5 at one hour ahead indicates that there is a 50% chance that the margin will be negative.
- The detailed methodology is published here: [https://www.elexon.co.uk/wp-content/uploads/2015/10/37\\_244\\_11A\\_LOLP\\_Calculation\\_Statement\\_PUBLIC1.pdf](https://www.elexon.co.uk/wp-content/uploads/2015/10/37_244_11A_LOLP_Calculation_Statement_PUBLIC1.pdf)

# Key difference between DRM and CMN margin calculations

- Both calculations are based on submitted availabilities from market participants and our demand forecasts and reserve requirements
- DRM are published at several lead times from day ahead onwards up to 1HA
- CMN margin is only published at 4HA if a CMN is triggered by margin  $< 500\text{MW}$
- CMN calculation includes a higher reserve requirement than DRM. DRM only covers the reserve for response at 1HA to cover the largest generation loss. CMN also includes regulating reserve.
- CMN includes a more sophisticated calculation of availability using ramp rates to predict actual levels achievable, e.g. for plant desynced or below MEL.

# Contact Details

Together with the Delivery Partners we have consolidated information into a central guidance document, [G18 - Capacity Market Stress Event Guide](#) to support Capacity Providers being prepared if a System Stress Event were to occur.

## EMR Delivery Body

[emr@nationalenergyso.com](mailto:emr@nationalenergyso.com)

01926 655300

Opening hours

9:00 – 17:00 Monday – Thursday

9:00 – 16:00 Friday

<https://emrdeliverybody.nationalenergyso.com>

## EMR Settlement Ltd

[contact@emrsettlement.co.uk](mailto:contact@emrsettlement.co.uk)

020 7380 4333

Opening hours

8:30 – 17:30 Monday – Friday

<https://www.emrsettlement.co.uk/>

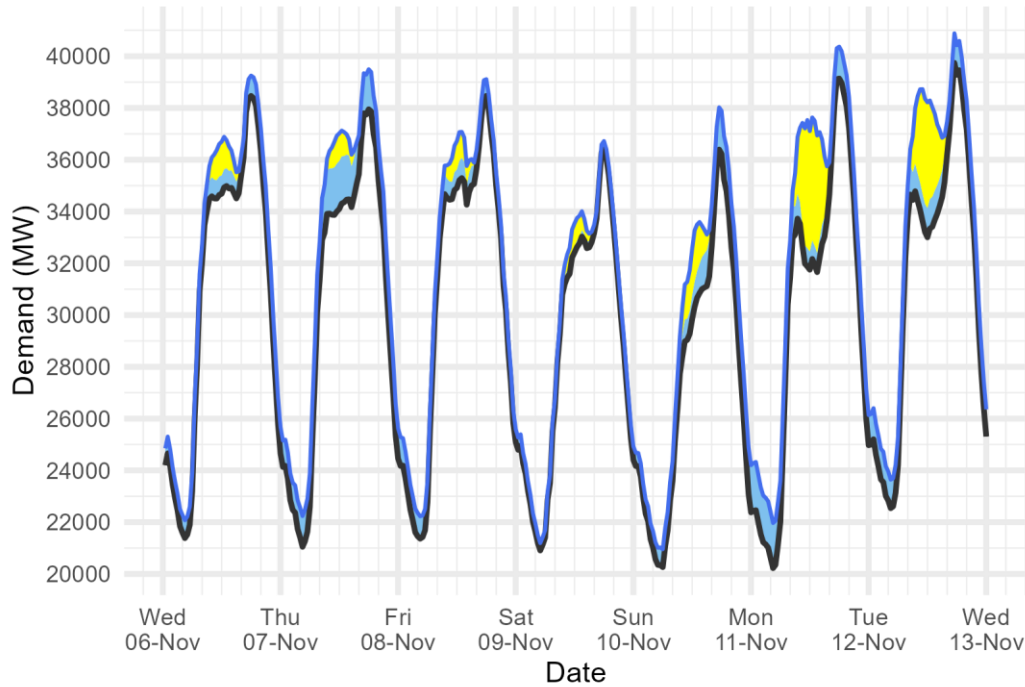
## Electricity Settlement Company

[info@electricitysettlementscompany.uk](mailto:info@electricitysettlementscompany.uk)

# Demand | Last week demand out-turn

Slido code #OTF

NESO National Demand outturn 06-12 November 2024



Renewable type

- Distributed\_PV
- Distributed\_Wind

Demand type

- National Demand (ND) transmission connected generation requirement within GB
- ND + est. of PV & wind at Distribution network

Distributed generation

Peak values by day

Date	OUTTURN	
	Daily Max Dist. PV (GW)	Daily Max Dist. Wind (GW)
06 Nov 2024	1.3	1.0
07 Nov 2024	1.1	1.9
08 Nov 2024	1.1	1.1
09 Nov 2024	0.9	0.5
10 Nov 2024	2.0	1.8
11 Nov 2024	4.9	1.9
12 Nov 2024	4.1	1.2

National Demand Peaks and troughs

Date	Forecasting Point	FORECAST (Wed 06 Nov)		OUTTURN			
		National Demand (GW)	Dist. wind (GW)	National Demand (GW)	Triad Avoidance est. (GW)	N. Demand adjusted for TA (GW)	Dist. wind (GW)
06 Nov 2024	Evening Peak	38.6	0.8	38.5	0.0	38.5	0.8
07 Nov 2024	Overnight Min	20.7	1.2	21.0	n/a	n/a	1.2
07 Nov 2024	Evening Peak	37.5	1.5	37.9	0.0	37.9	1.5
08 Nov 2024	Overnight Min	20.9	1.2	21.4	n/a	n/a	0.9
08 Nov 2024	Evening Peak	37.4	1.1	38.5	0.0	38.5	0.6
09 Nov 2024	Overnight Min	20.9	0.6	20.9	n/a	n/a	0.3
09 Nov 2024	Evening Peak	34.8	0.7	36.4	0.0	36.4	0.3
10 Nov 2024	Overnight Min	18.8	1.6	20.3	n/a	n/a	0.7
10 Nov 2024	Evening Peak	34.7	1.5	36.4	0.0	36.4	1.6
11 Nov 2024	Overnight Min	20.1	1.1	20.2	n/a	n/a	1.7
11 Nov 2024	Evening Peak	38.9	0.7	39.1	0.0	39.1	1.2
12 Nov 2024	Overnight Min	21.8	0.7	22.5	n/a	n/a	1.1
12 Nov 2024	Evening Peak	39.3	0.7	39.7	0.0	39.7	1.1

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 NESO has no real time data.

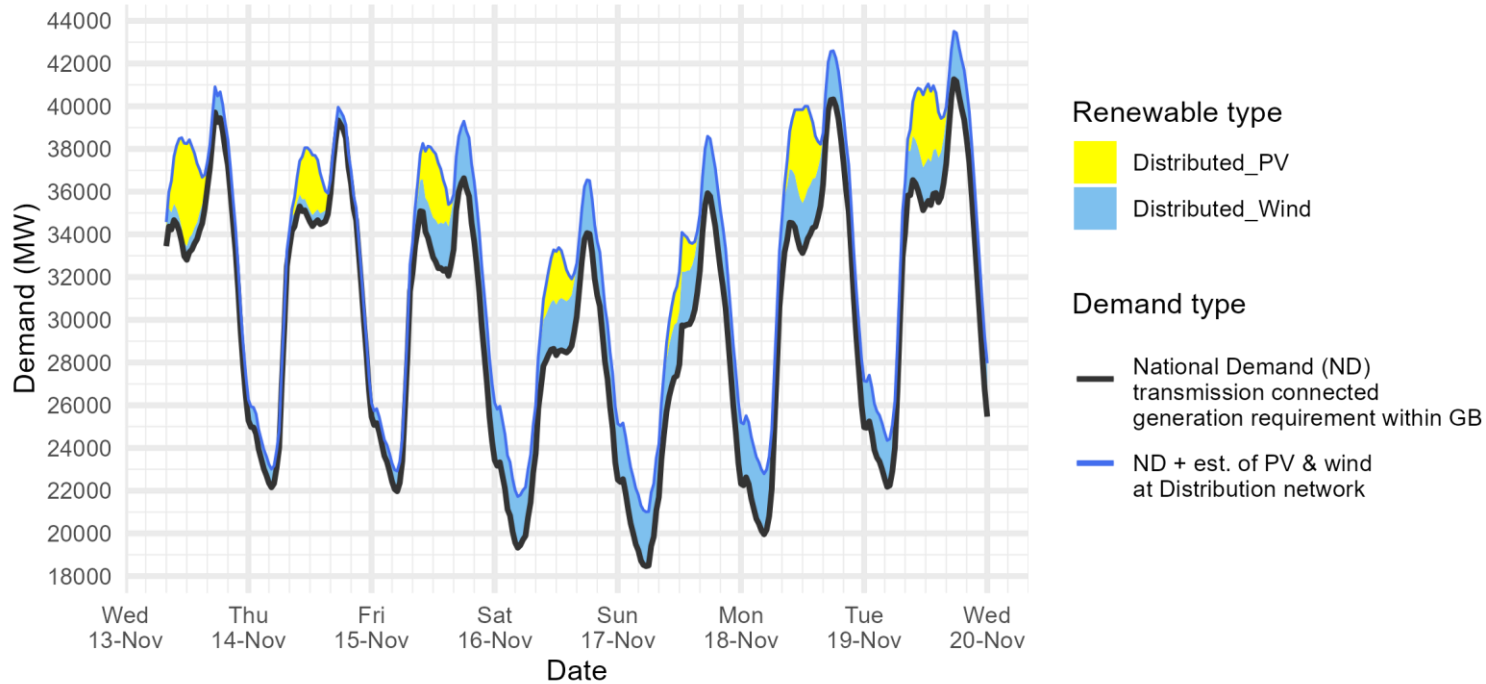
Historic out-turn data can be found on the [NESO Data Portal](#) in the following data sets: [Historic Demand Data](#) & [Demand Data Update](#)



# Demand | Week Ahead

Slido code #OTF

NESO Demand forecast for 13-19 November 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 NESO has no real time data.

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

## National Demand Peaks and troughs

Date	Forecasting Point	FORECAST (Wed 13 Nov)	
		National Demand (GW)	Dist. wind (GW)
13 Nov 2024	Evening Peak	39.7	1.2
14 Nov 2024	Overnight Min	22.2	0.9
14 Nov 2024	Evening Peak	39.3	0.6
15 Nov 2024	Overnight Min	22.0	0.9
15 Nov 2024	Evening Peak	36.6	2.7
16 Nov 2024	Overnight Min	19.3	2.4
16 Nov 2024	Evening Peak	34.1	2.5
17 Nov 2024	Overnight Min	18.5	2.5
17 Nov 2024	Evening Peak	35.9	2.7
18 Nov 2024	Overnight Min	20.0	2.8
18 Nov 2024	Evening Peak	40.3	2.3
19 Nov 2024	Overnight Min	22.2	2.2
19 Nov 2024	Evening Peak	41.3	2.2

# NESO Actions | Category Cost Breakdown

Slido code #OTF

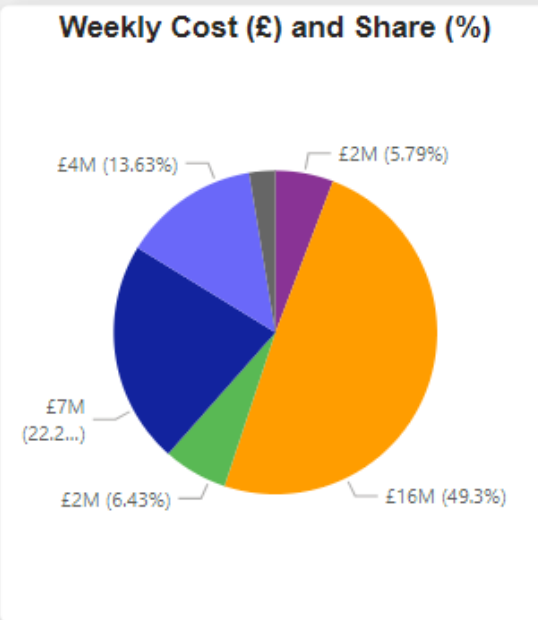
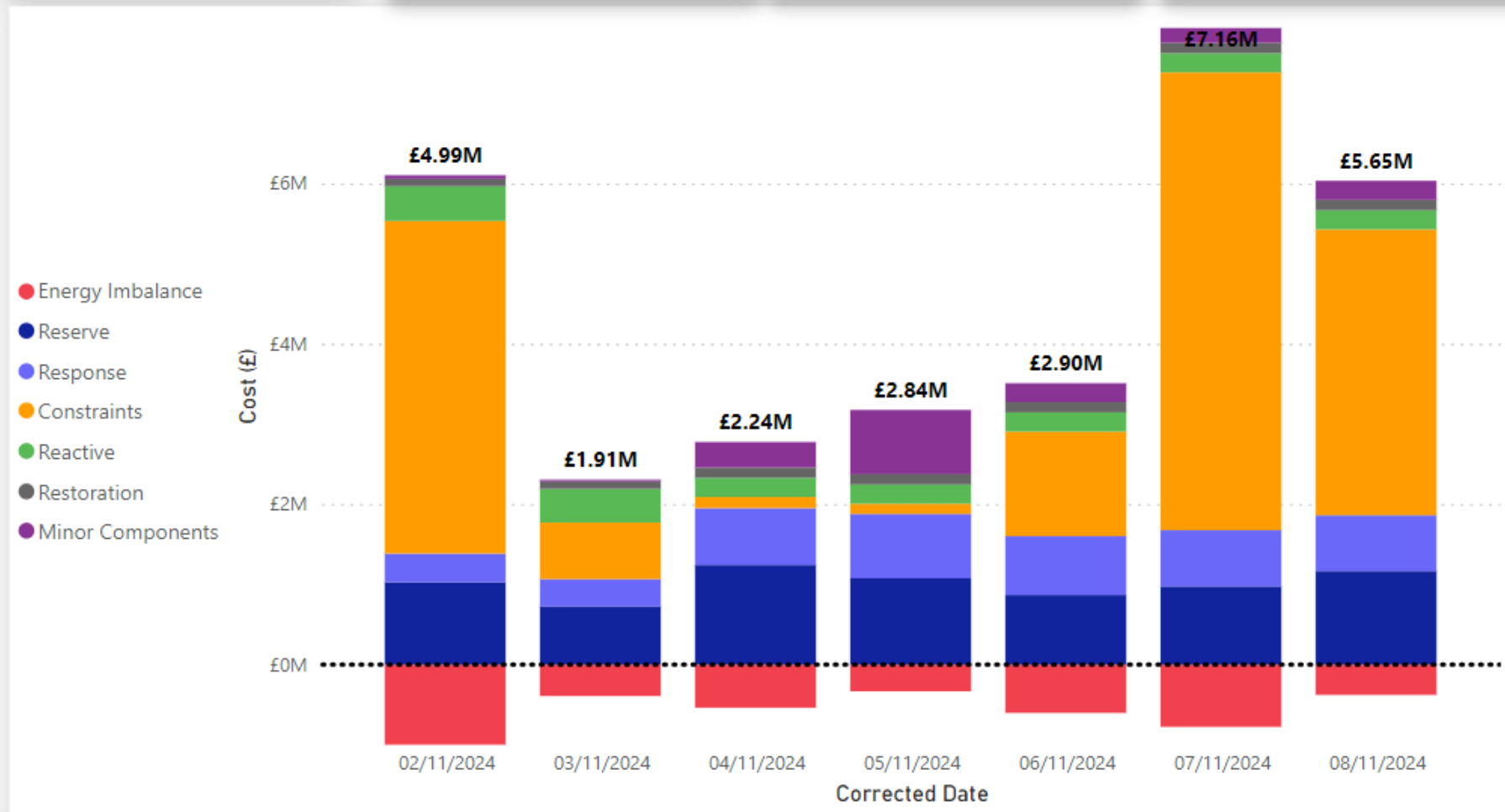
**Date**  
 02/11/2024 08/11/2024

**Weekly Total Costs (£)**  
**£27.7M**

**Last Week Total Costs (£)**  
**£56.4M**

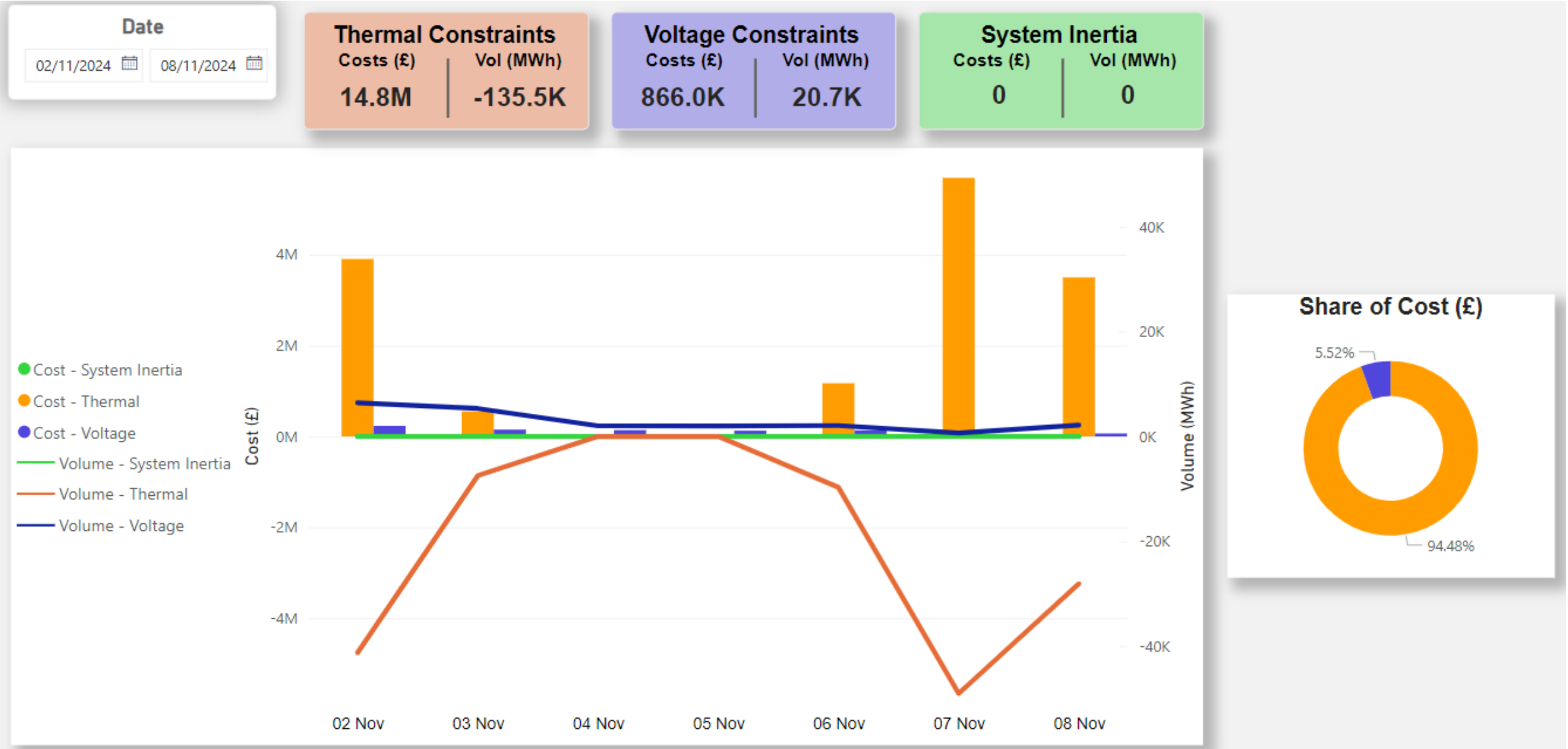
**Past 30-Day Average Costs (£)**  
**£8.4M**

Date	Total Outturn Cost
02/11/2024	£4,986,507
03/11/2024	£1,912,665
04/11/2024	£2,236,671
05/11/2024	£2,841,780
06/11/2024	£2,904,963
07/11/2024	£7,161,219
08/11/2024	£5,654,059
<b>Total</b>	<b>£27,697,863</b>



# NESO Actions | Constraint Cost Breakdown

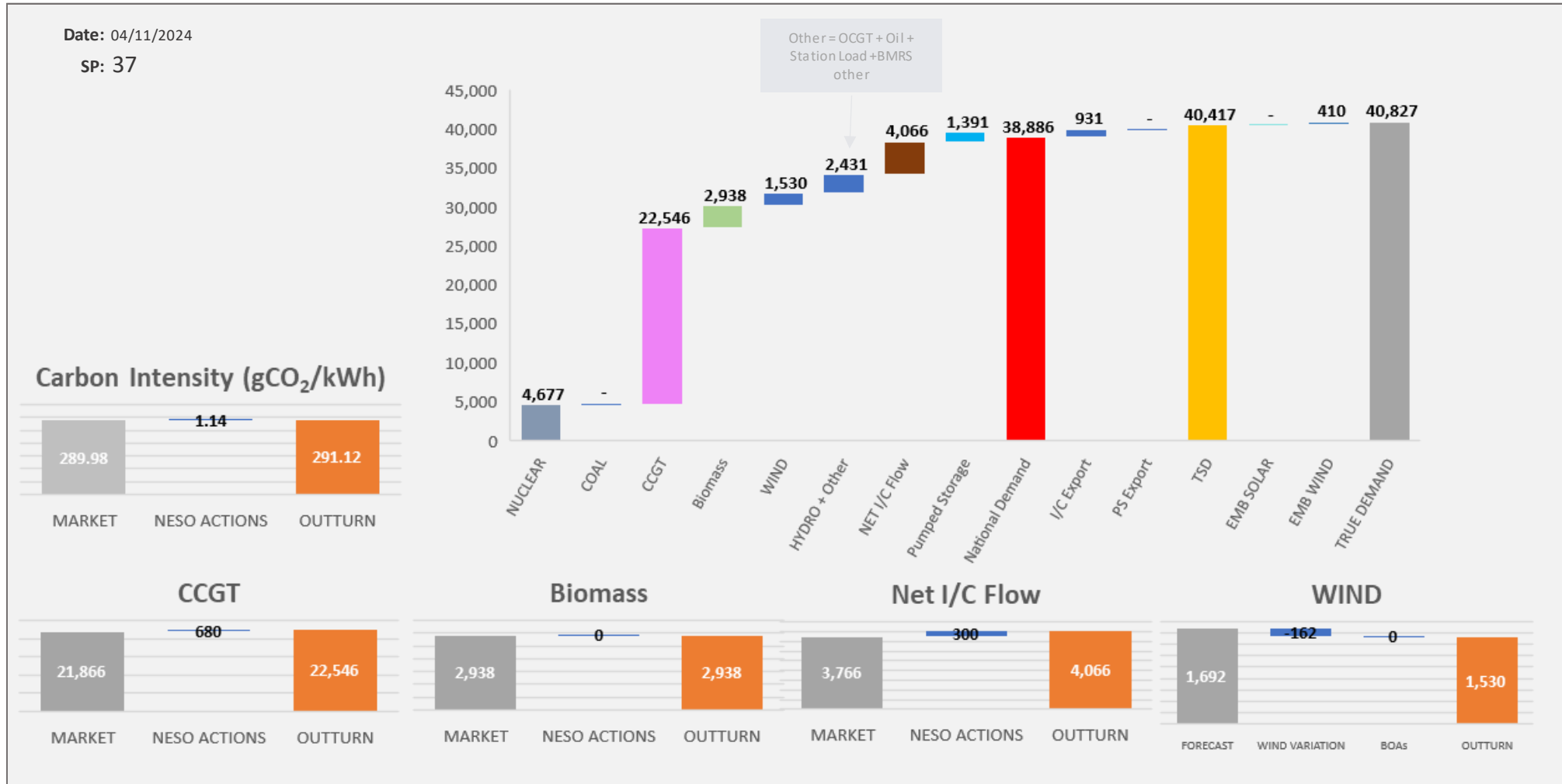
Slido code #OTF



# NESO Actions | Peak Demand – SP spend ~ £3k

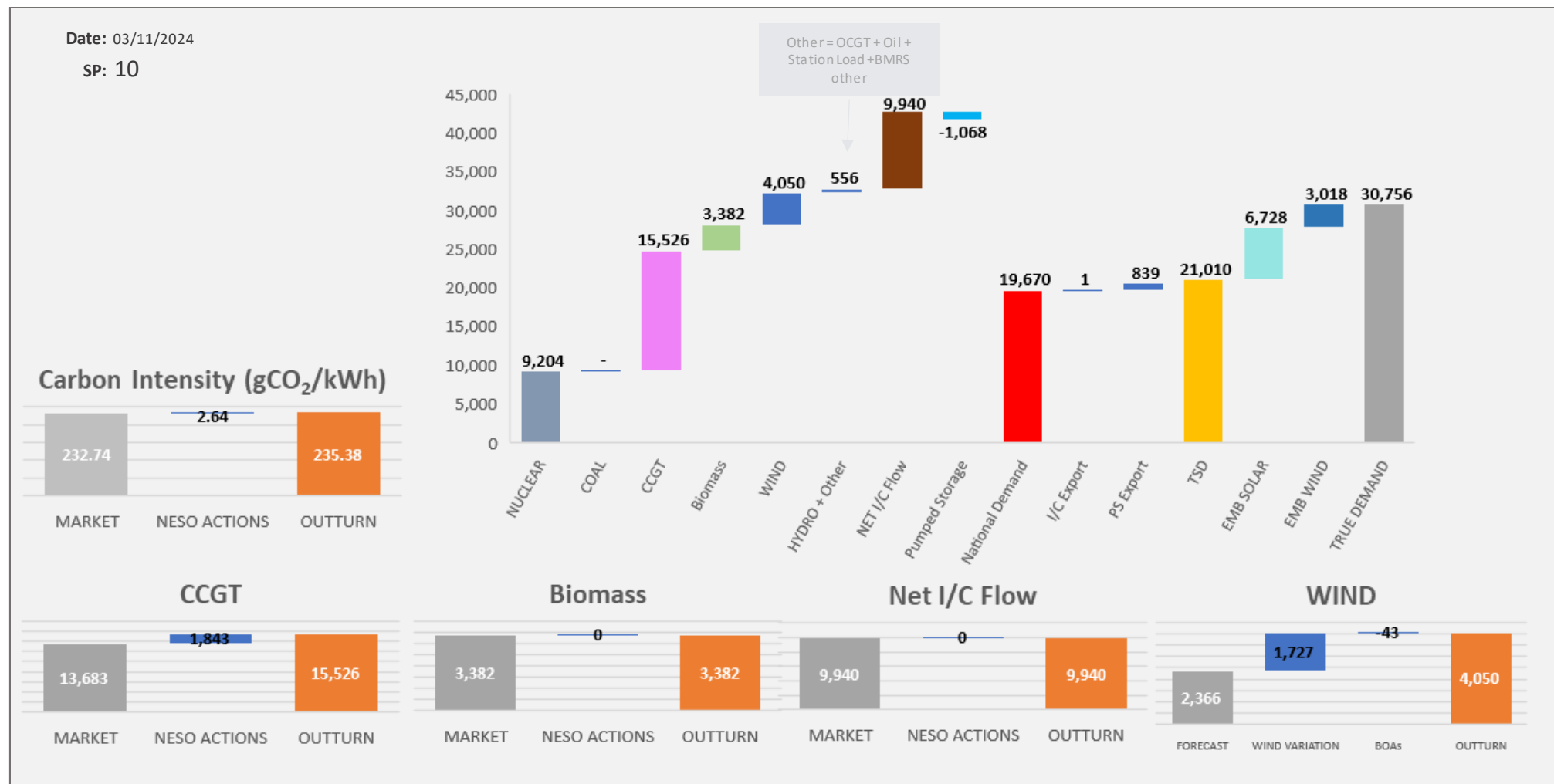
## Monday 4<sup>th</sup> November

Slido code #OTF



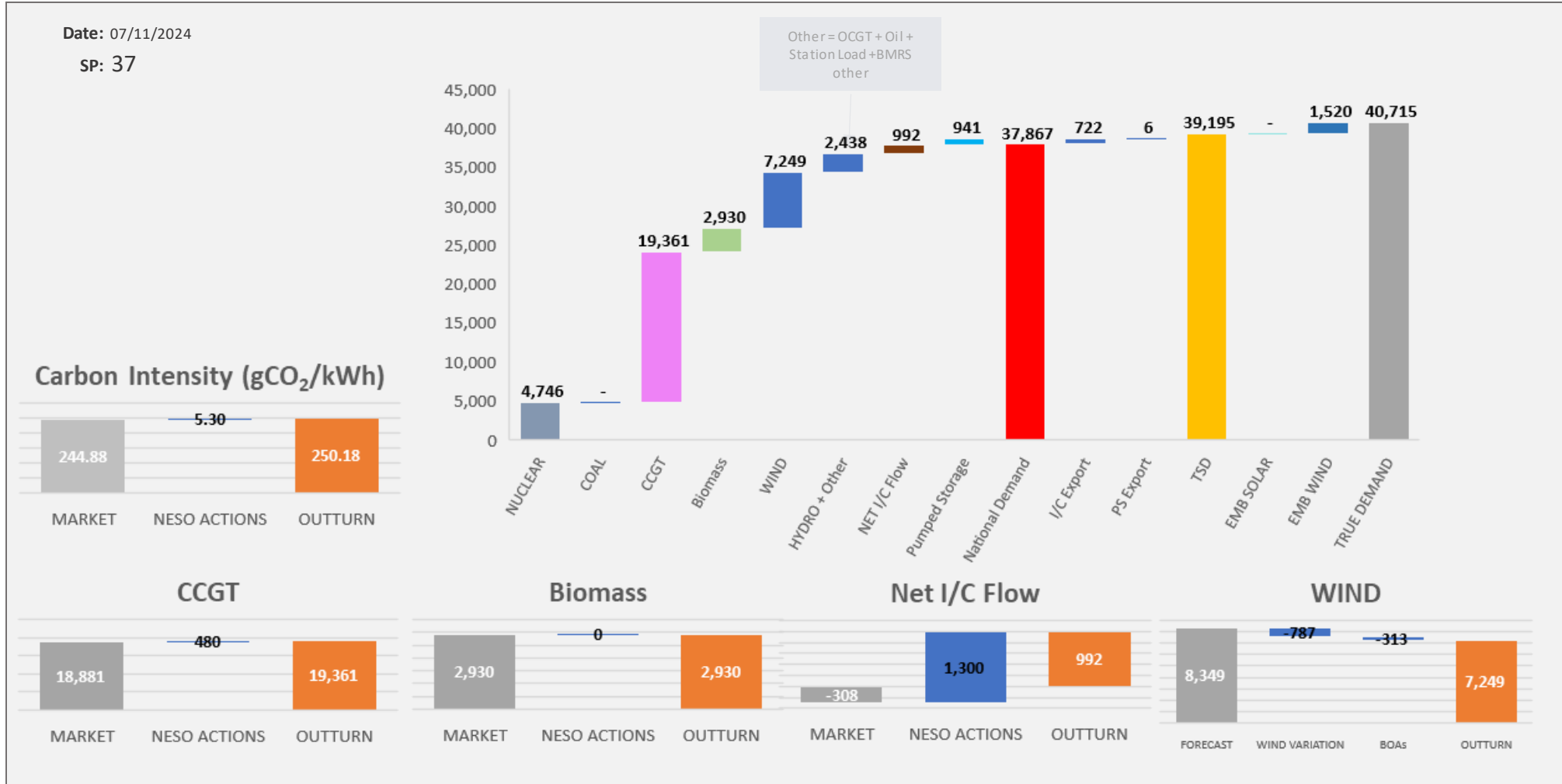
# NESO Actions | Minimum Demand – SP spend ~ £9k Sunday 3<sup>rd</sup> November

Slido code #OTF



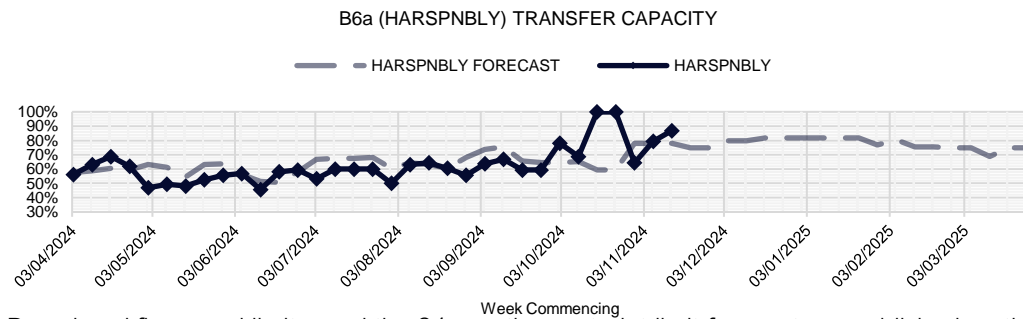
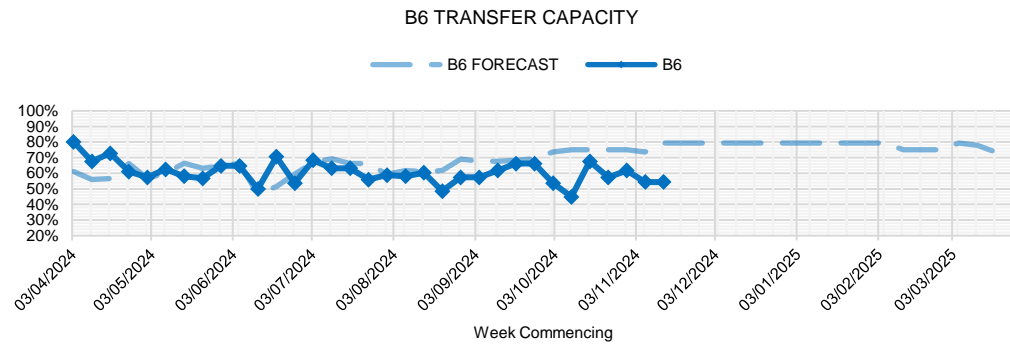
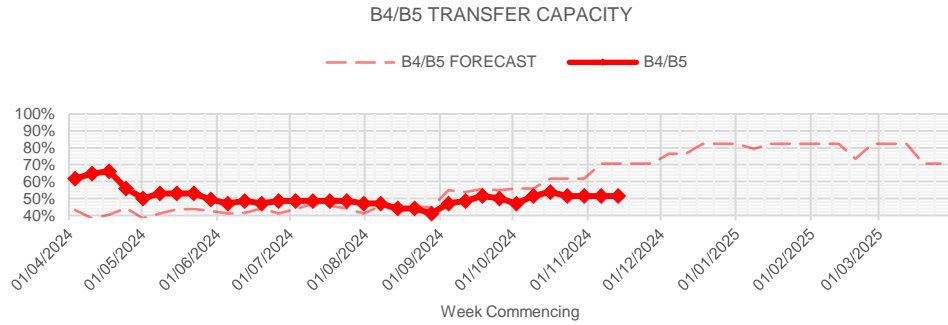
# NESO Actions | – Highest SP spend ~ £319k Thursday 7<sup>th</sup> November

Slido code #OTF

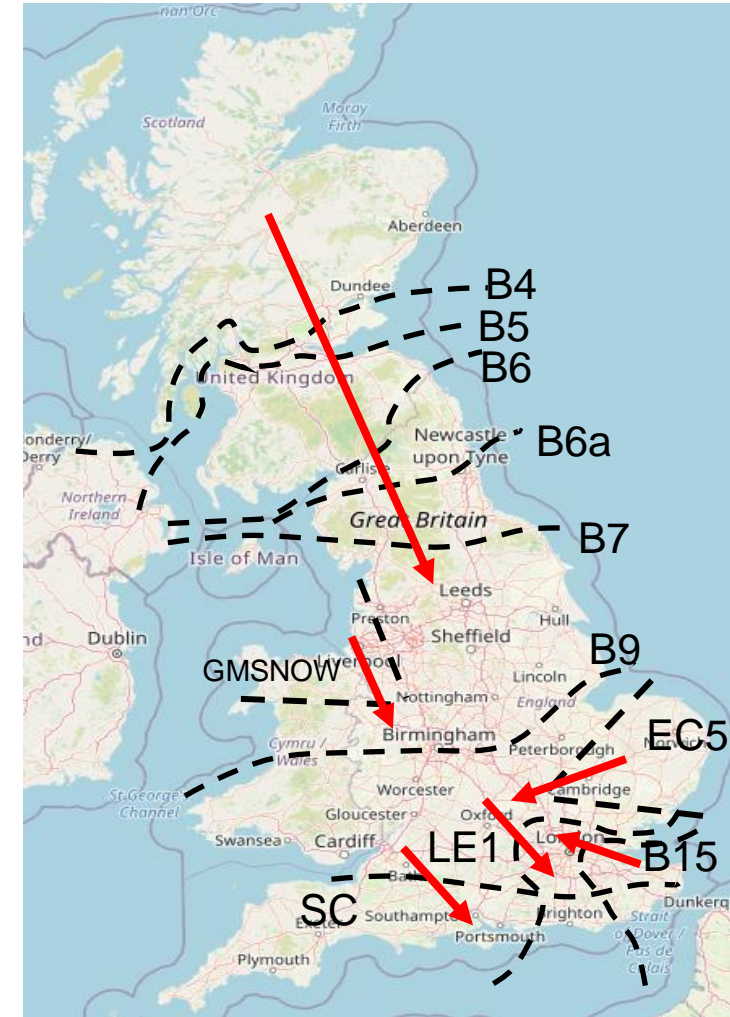


# Transparency | Network Congestion

Slido code #OTF



Boundary	Max. Capacity (MW)	Current Capacity (%)
B4/B5	3400	51%
B6 (SCOTEX)	6800	54%
HARSPNBLY	8000	87%
B7 (SSHARN)	8325	88%
GMSNOW	4700	50%
EC5	5000	100%
LE1 (SEIMP)	8500	69%
B15 (ESTEX)	7500	67%
SC1	7300	100%



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

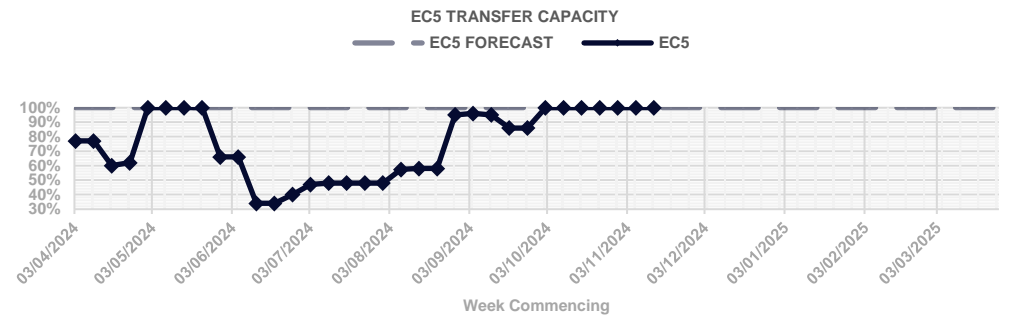
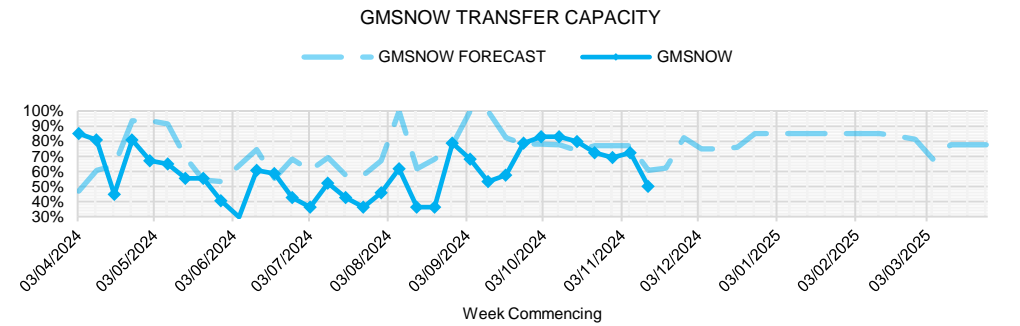
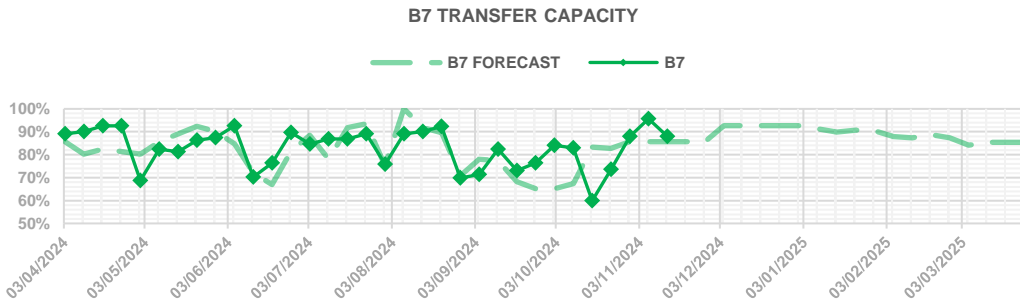
(The forecast and day ahead limits may vary due to changes in the outage plan. The plan is reviewed periodically throughout the year to ensure we are optimising system conditions, whilst managing any necessary outage plan changes)



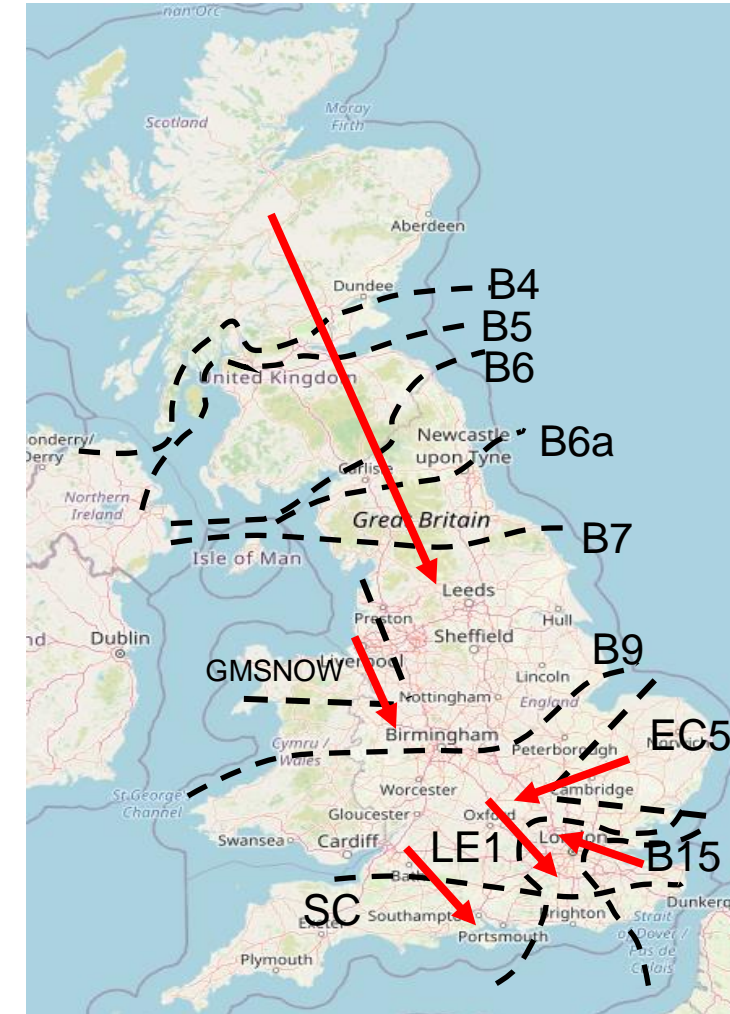


# Transparency | Network Congestion

Slido code #OTF



Boundary	Max. Capacity (MW)	Current Capacity (%)
B4/B5	3400	51%
B6 (SCOTEX)	6800	54%
HARSPNBLY	8000	87%
B7 (SSHARN)	8325	88%
GMSNOW	4700	50%
EC5	5000	100%
LE1 (SEIMP)	8500	69%
B15 (ESTEX)	7500	67%
SC1	7300	100%



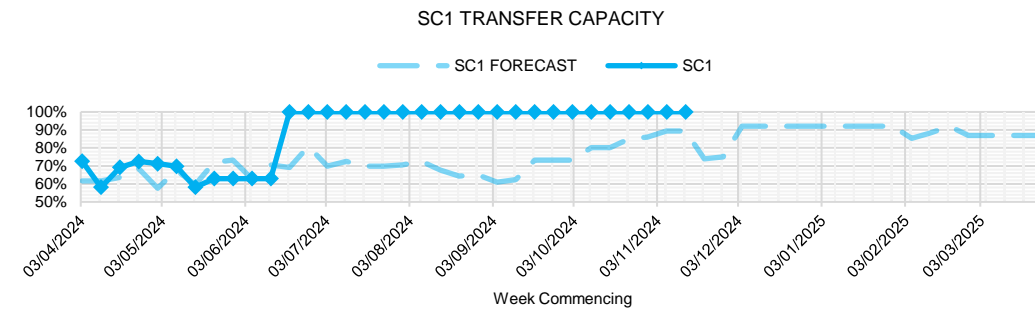
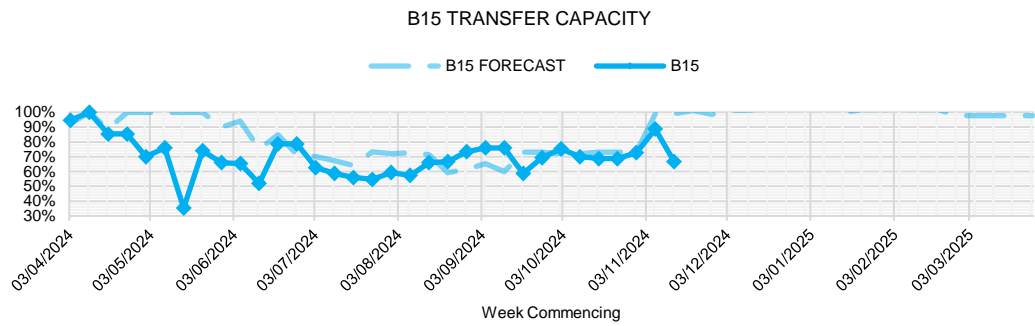
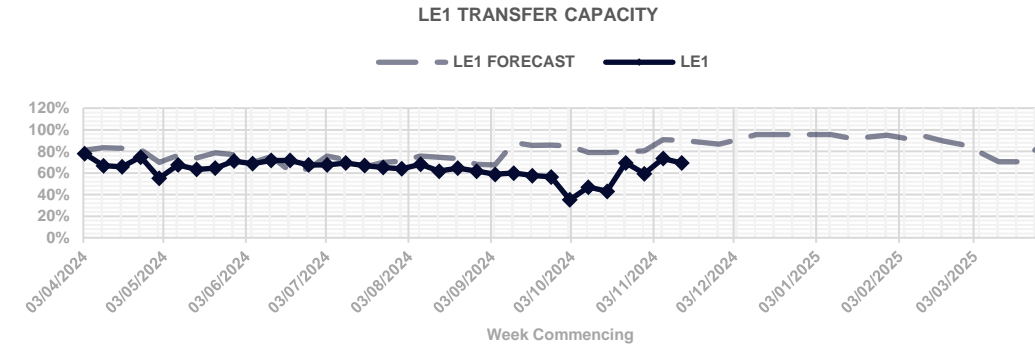
Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal: [Constraints Management](#)

(The forecast and day ahead limits may vary due to changes in the outage plan. The plan is reviewed periodically throughout the year to ensure we are optimising system conditions, whilst managing any necessary outage plan changes)

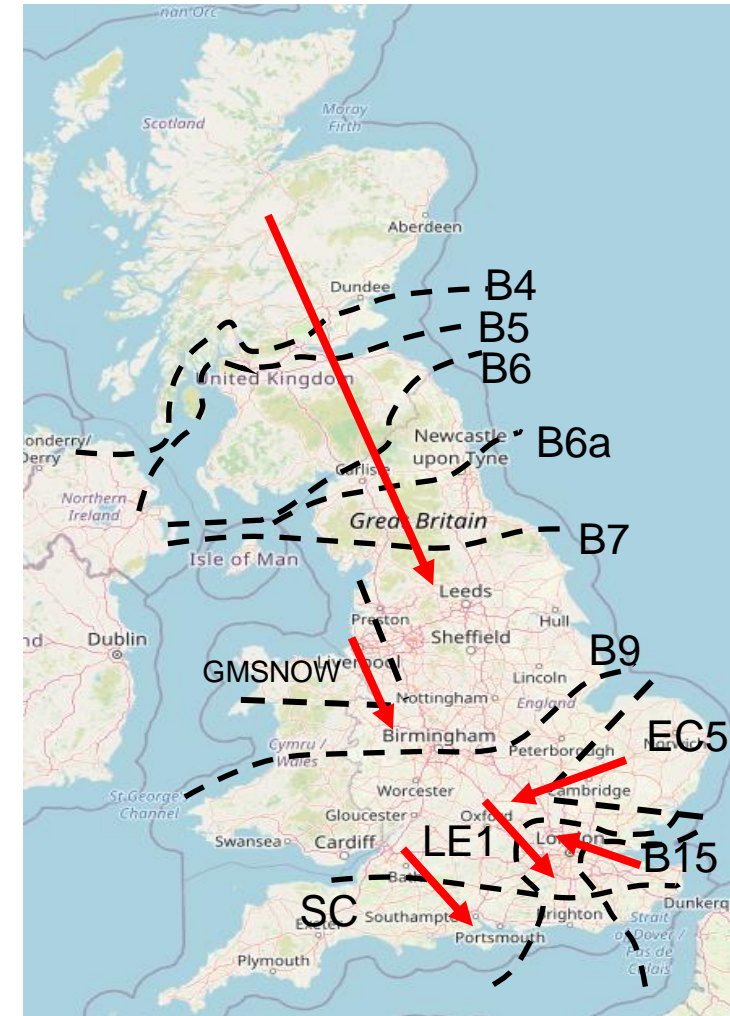


# Transparency | Network Congestion

Slido code #OTF



Boundary	Max. Capacity (MW)	Current Capacity (%)
B4/B5	3400	51%
B6 (SCOTEX)	6800	54%
HARSPNBLY	8000	87%
B7 (SSHARN)	8325	88%
GMSNOW	4700	50%
EC5	5000	100%
LE1 (SEIMP)	8500	69%
B15 (ESTEX)	7500	67%
SC1	7300	100%



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

(The forecast and day ahead limits may vary due to changes in the outage plan. The plan is reviewed periodically throughout the year to ensure we are optimising system conditions, whilst managing any necessary outage plan changes)



# Previously Asked Questions

Slido code #OTF

Q: I notice the B6 boundary limit is shown as 6.8GW. In ETYS 2023 it shows it as 6.3GW. When did it change, what is the constraint driver and what is the circuit? Thanks

A: It is also important to understand that the ETYS Methodology uses the most severe limitation to determine the network boundary capability (as mentioned in Page 14), so it would differ from current year expectations.

# Previously Asked Questions

Q: Noting its early doors, many projects for 2030 are being designed and spec-ed now; we need to get our skates on delivering code changes – some underway, many aren't- when will a programme prioritising code changes needed become available & are there inputs we can help you with to support that?

A: Thank you for the feedback. We identify in the report the need to work with Ofgem to continue to push forward energy code reform and help to identify the direction of future code changes for clean power provided through the Strategic Direction Statement (SDS) and assess how code change can be more effective and responsive to changing system or market needs.

Q: Has there been any change in the procurement of frequency response volume in terms of the buy orders' price level or volume, or are the high prices in the evening a result of the sell orders?

A: There has been a small increase in Dynamic Containment Low requirements but the main driver of the higher clearing prices in some periods over recent days is an increase in the submitted sell order prices.

All data can be found on our Enduring Auction Capability page on the data porta [EAC auction results | National Energy System Operator](#)

# Previously Asked Questions

Q: You are classing Gas CCS as low carbon. Given the leakages of CO<sub>2</sub> (not all is captured) and the CH<sub>4</sub> supply chain leakages, with about 80 times the impact of CO<sub>2</sub>, what is the emissions footprint of CCS gas?

A: Gas CCS has a higher emissions footprint – both in use and lifecycle – this is covered in the CP30 report. It will need high capture rates to limit those. Given the small share of generation, it has a relatively limited impact on grid carbon intensity.

Q: What is the total capacity of transmission across the B6 (Scotland/England) boundary that is required to meet CP2030, and what is the total projected capacity including the Orange projects on slide 20?

A: For 2030, we calculated the required transfers for various boundaries in CP30 and we require between 15–19GW of capability (scenario dependent) on B6. Once all the projects are delivered the capacity would be around 17GW.

Q: CP2030 digitisation theme– worth looking at prioritising monitoring infrastructure across industry–virtual not physical data capture, analytics, monitoring spec– what it can & can't do etc to inform pace & nature of trajectory FRCR etc. Feels like an easy win; links to a GCDF item raised today.

A: Thank you for the feedback.

# Previously Asked Questions

Slido code #OTF

Q: Assuming one unit of Hinkley Point C and at least 1 AGR unit are operating in 2030 is heroic. How much extra renewables / low carbon dispatchable capacity is required if only Sizewell B is operating.

A: We have undertaken a variety of sensitivities as outlined and identified potential alternatives in the report, which assess what might be needed if some things are not delivered. We have not specifically modelled this 'low nuclear' sensitivity.

Q: This week, the EAC buy orders API was updated to include a new 'joinedFamily' column, how do you communicate changes to your API as we were not notified.

A: We apologise for not communicating this change better. We are currently working on a notification system within the EAC which will prompt any updates or releases with direction to the API documentation or another space which will detail the change made. We will provide more information on this in the coming weeks.

# Advance Questions

Q: How much is the Wider Access API used? In number of BMUs and total MWs

If a technology supplier already has an EDL line, what would the advantages be to have the WA API as well?

A: There are currently less than 30 BMUs which access the BM using the Wider Access API. Their total capacity is less than 400MW. This includes some Aggregated BMU which each represent a portfolio of smaller assets.

I'm not sure how you are defining "technology supplier", but each will need to consider which option best suits the combination of assets managed at each Control Point and Trading Agent they operate. A very high-level view of how this works is given below, for further details see the webpage.

The intention of the Wider Access API as published in November 2020, is to enable reduced costs to end-consumers by establishing a new, cheaper communication option for smaller assets.

Communication between individual BMU and the BM is managed by the control point (using EDL) and Trading Agent (using EDT). This gives the BMU access to the BM using both EDL and EDT with communication managed through either the Wider Access API or a fixed line service.

There are limits for use of the API. Fixed line services are required for:

- a single asset with capacity of 100MW or higher
- a portfolio of smaller assets (i.e. each less than 100MW) with combined capacity of 3600MW or higher.

More information, including several published documents, definitions and technical specifications are available at: [Balancing Mechanism Wider Access | National Energy System Operator](#)

API – Application Programming Interface

BMU – Balancing Mechanism Unit (single asset or a portfolio of smaller assets)

BM – Balancing Mechanism

EDL/EDT – Electronic Dispatch and Logging/Electronic Data Transfer

MW – Mega Watts

# Advance Questions

Slido code #OTF

Q: It looks like the stacking/splitting slide of the EAC Market Explainer (see <https://www.neso.energy/industry-information/balancing-services/enduring-auction-capability-eac>) is outdated (e.g. we can't do QR and Response at the same time)

A: Thanks for the question.

The link you have provided is referring to the splitting plan during Quick Reserve Phase 1, due to go live early December.

We will only be allowing splitting of QR and Response (amongst other services) during Phase 2. For more information on Phase 2, please see the published documentation for early consultation, which is available on our website, here: [download](#)

# Advance Questions

Slido code #OTF

Q: Could you please help me understand the reason for the 68p difference between the outturn of £10.88/MWh for September, based on the Current II BSUoS data, and the monthly outturn (based on the BSUoS outturn – September 24 report) , which came to £10.20/MWh?

A: Thanks for raising this issue with us. After investigating this we identified an issue with the published II daily cost data that meant that some ancillary services forecast costs were not being updated correctly from settlement date 04/06/2024 and this was corrected with the revised published II data on the notification date 04/11/2024 – (latest settlement date 27/10/2024). Further action is being taken to prevent this issue occurring again. The data in the monthly outturn report was unaffected by this issue so is correct. Also important to note that when the monthly outturn report is compiled, it uses a mixture of II and SF data so will never completely match the II data for that month on its own.



# Outstanding Questions

Q: What progress has been made on publishing metering of non-BM assets / regional parts of the network, which has been discussed a lot and was been actively worked on?

A: In order to answer this appropriately, we would appreciate some further clarity on the question. Please reach out to [box.DERVisibility@nationalenergyso.com](mailto:box.DERVisibility@nationalenergyso.com) to continue this conversation.

Apologies, last week we gave you the wrong email address but have provided the correct one now.

Q: On Oct 20 was some of the Wind 'Variation' due to Cutout. Or Market action? Overall a rather large curtailment.

We are still working on the answer for this question.

# Reminder about answering questions at the NESO OTF

Slido code #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.
- **The OTF is not the place to challenge the actions of individual parties** (other than the NESO), and we will not comment on these challenges. This type of concern can be reported to the Market Monitoring team at: [marketreporting@nationalenergyso.com](mailto:marketreporting@nationalenergyso.com)
- **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.
- **Slido 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** All questions asked through Sli.do will be recorded and published, with answers, in the Operational Transparency Forum Q&A on the webpage: <https://www.neso.energy/what-we-do/systems-operations/operational-transparency-forum>
- **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 NESO 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**

① Start presenting to display the audience questions on this slide.

# Feedback

Slido code #OTF

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@nationalenergyso.com](mailto:box.nc.customer@nationalenergyso.com)

# Appendix

# Participation in the Operational Transparency Forum

Slido code #OTF

Thank you to everyone who participates in the OTF, whether you join weekly, monthly, on specific occasions or follow up with the webinar recordings and published slides. We hear from participant feedback and our NESO colleagues that all of us value the opportunity to share information, ask questions and share the answers.

One of the reasons this format works so well is the professional courtesy we see demonstrated every week.

However, in recent weeks there have been some Slido questions and comments in the Q&A session directed at specific market participants suggesting their actions are not appropriate. This is concerning because:

- The statements are being made in a public forum without the opportunity to reply
- The negative comments may impact these businesses directly, or indirectly e.g.: through social media, etc.
- The individuals asking questions could not be traced using the details provided in Slido
- **The OTF is not the place to challenge the actions of individual parties** (other than the NESO), and we will not comment on these challenges. This type of concern can be reported to the Market Monitoring team at: [marketreporting@nationalenergyso.com](mailto:marketreporting@nationalenergyso.com)

**Remember**, if you have reasons to remain anonymous to the wider forum or have concerns your question may not be one to ask in public, you can use the advance questions or email options.

# Purpose and scope of the NESO Operational Transparency Forum

Slido code #OTF

## 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 NESO 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  
NESO operational approach & challenges  
NESO 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 NESO Control Room actions & decision making  
Activities & operations of particular market participants  
NESO policy & strategic decision making  
Formal consultations e.g.: Code Changes, Business Planning, Market development

# Managing questions at the NESO Operational Transparency Forum

Slido code #OTF

- OTF participants can ask questions in the following ways:
  - Live via Slido code #OTF
  - In advance (before 12:00 on Monday) at <https://forms.office.com/r/k0AEfKnai3>
  - At any time to [box.nc.customer@nationalenergyso.com](mailto:box.nc.customer@nationalenergyso.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 | NESO](#)
- **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 NESO 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.



# NESO Information Request Statement

## **The Energy Act 2023 and the power to request information.**

Section 172 of The Energy Act 2023 provides NESO, as the Independent System Operator and Planner, with the power to require information, from anyone carrying out a relevant activity, to allow it to carry out any of its functions. This power will come into effect once NESO is operational.

In advance of this we are consulting on what the Information Request Statement will contain and what an Information Request issued by NESO may look like.

## **The Information Request Statement and Notice.**

The Statement will be available on our website and will contain sections on why a request has been issued, the process of responding to a request, what happens if a recipient does not provide the information and how we will manage any data provided. A draft template of an Information Request Notice is also shared on our website.

## **The Consultation**

We are running a consultation from **May 3<sup>rd</sup> to May 31<sup>st</sup>** which can be found at <https://www.neso.energy/about/operational-information/information-request-statement-consultation> and would welcome feedback from across industry to make sure we develop a statement which is clear and accessible.

Following the consultation period Ofgem will determine if the draft Statement is approved or if any changes are necessary.