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- Click 'Turn on live captions'

# NESO Operational Transparency Forum

15 January 2025



## 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: <a href="marketreporting@nationalenergyso.com">marketreporting@nationalenergyso.com</a>
- 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: <a href="https://forms.office.com/r/k0AEfKnai3">https://forms.office.com/r/k0AEfKnai3</a>
- **Ask questions anytime** whether for inclusion in the forum or individual response at: <a href="mailto:box.nc.customer@nationalenergyso.com">box.nc.customer@nationalenergyso.com</a>

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



## Future deep dive / focus topics

Slido code #OTF

#### **Today's focus topics**

Overview of 8 January Operational activity – 15 January OTF survey launch – tell us what you think – 15 January

#### **Future**

Initial National Demand Outturn – 22 January 120 GVA.s Minimum Inertia System Review – 29 January Balancing costs summer feedback – 5 February

If you have suggestions for future deep dives or focus topics, please send them to us at: <a href="mailto:box.nc.customer@nationalenergyso.com">box.nc.customer@nationalenergyso.com</a> and we will consider including them in a future forum



### **BSUoS Fixed Tariff 6 Published**





- On 20 December we published BSUoS Fixed Tariff 6.
   Download Tariff Document
- We are holding a webinar on 15 January at 1pm to talk through the tariffs and answer any questions from industry.
   Sign up for the webinar
- Each week we publish a report that shows BSUoS Revenue recovery v Costs and forecasts future positions.
   <u>Download the latest report</u>
- We issue comms to industry each time we publish tariffs.
   Sign up to our mailing list here
- For any BSUoS related questions please email us. BSUoS.queries@nationalenergyso.com

BSUoS – Balancing services use of system charge



#### **Balancing Programme Beyond 2025 Webinar**

Slido code #OTF

Date: 30 January 2025

**Time:** 2:30 – 3:30pm

**Location:** Microsoft Teams

We will share stakeholder feedback on the potential balancing & forecasting capabilities we have identified for beyond 2025. This is your opportunity to further contribute ideas and views as we continue to shape our future delivery.

You can read more about the capabilities and future engagement **here**.

To sign up to the event, click here.

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: <a href="mailto:box.balancingprogramme@nationalenergyso.com">box.balancingprogramme@nationalenergyso.com</a>



## Slido code #OTF

## **Future Event Summary**

| Event  | Date & Time                   | Link                              |
|--|-------------------------------|-----------------------------------|
| Slow Reserve Industry Feedback                     | By 15 January 2025            | Complete the feedback survey here |
| BSUoS Fixed Tariff 6 (Oct 2025 - Mar 2026) Webinar | 15 January 2025 (13:00-14:30) | <u>Register here</u>              |
| Response Reform Webinar                            | 22 January 2025 (15:00–16:30) | Register here                     |
| Future of Registration webinar                     | 23 January 2025 (11:00-12:00) | Register here                     |
| Balancing Programme Beyond 2025 Webinar            | 30 January 2025 (14:30-15:30) | Register here                     |





### **Contents**

- Reminder (slides from presentation on 13 November: <u>Operating Margin and System Warnings</u>)
- 2. Context and background
- 3. The week before
- 4. The day before
- 5. On the day

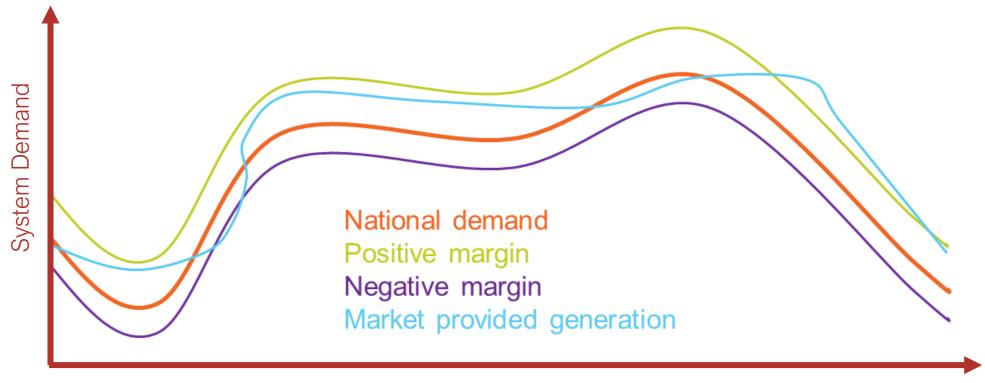


## Transparency

Slido code #OTF

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?

What is it for?

To cover plant redeclarations and changes in demand or generation forecasts Slido code #OTF

What is it for?
Reserve scheduled

to ensure that there is sufficient energy available to meet second-by-second energy balancing

NESO System Operating Plans

Operating

Margin

Short Term

Operating

Reserve (STOR)

Link to: NESO System Operating Plan (SOP)

Operating

Reserve

Reserve for

Response

Scheduled

Reserve

Contingency

Reserve

Regulating

Reserve

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

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

Wind & Solar
Reserve
Other Reserve

NESO
National Energy
System Operator

• Volume of renewable generation

Demand uncertainty

• Special events

Weather

Largest demand and generation loss risk

Periods of enhanced system risk

## Context and background

Slido code #OTF

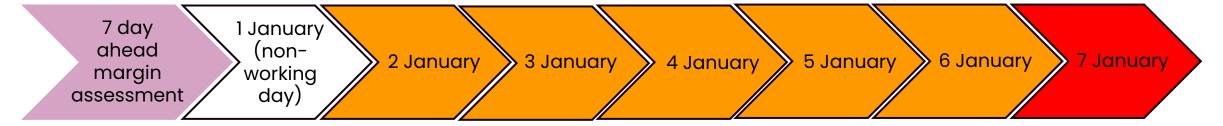
- We published our <u>Winter Outlook Report</u> in October 2024 where we set out "We expect to have a sufficient operational surplus throughout the winter when considering the natural variations in demand, wind and generator outages. There may be some tight days, most likely between late November and the end of January, excluding the Christmas period."
- We set this out in government, regulatory and media briefings
- The period is typically where margins can be tight and an Electricity Margin Notice (EMN) may be used
- An EMN is a standard operational tool used by our control room to provide a signal to the market. This
  doesn't mean we don't have enough electricity to meet demand; it just means we'd like a larger cushion of
  spare capacity, and we want the market to provide it. For more explanation you can view the OTF webinar
  from 13 November 2024: Operating Margin & System Warnings Capacity Market Notifications
- We monitor margins on a rolling 7 day ahead basis. As you get closer to the day, the numbers become more accurate as there is more certainty on key factors like demand, wind, market position etc
- We publish internally and to DESNZ and Ofgem the 7 day ahead margin assessments on a daily basis

https://www.neso.energy/document/330221/download



### The week before

Slido code #OTF



Wednesday 8
January was first
reported as
AMBER in the 7
day ahead
margin
assessment
produced on 2
January, the first
working day of
the year

Wednesday 8 January reported as AMBER from 2 to 6 January

Status changed to RED at 09:30 on 7 January.



## The day before: 7 January 2025

Slido code #OTF

7 day ahead margin assessment

7 January

09:30 Status changed to RED

20:30 Electricity Margin Notice issued Electricity Margin Notice (EMN)

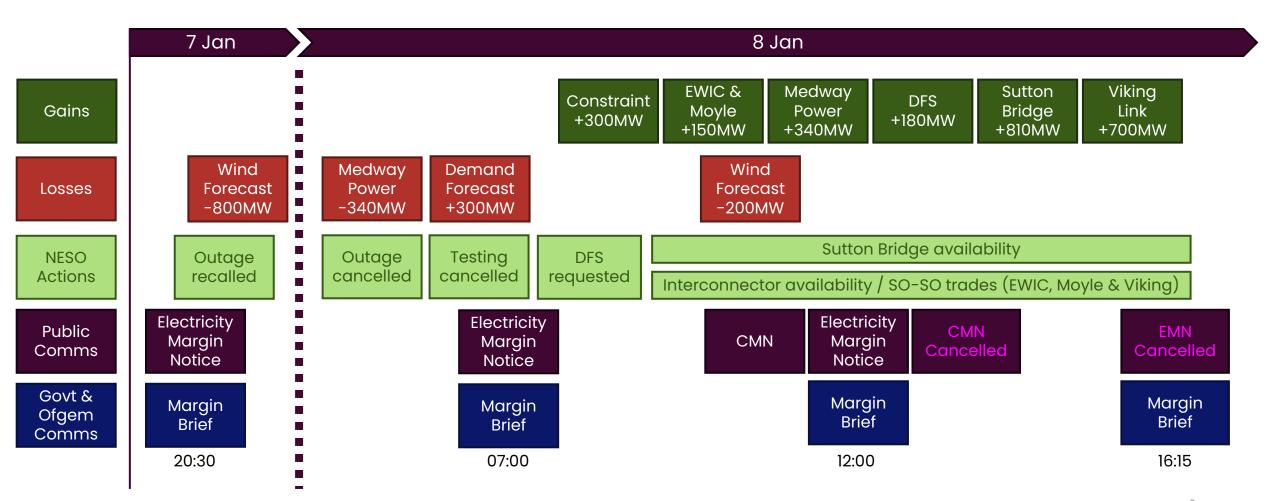
Issued when our normal margins for operating the system are not as large as we would like and we cannot address through the normal mechanisms

Throughout Tuesday, actions are taken to improve margin and reduce risk on Wednesday:

- A planned outage is cancelled to avoid a 500MW reduction in a constraint boundary.
- An ongoing outage is recalled to improve a different constraint boundary by 350MW.
- Planned commissioning work is cancelled to reduce system risk.
- Conservative assumptions are made regarding generation planning to return from outages.
- Additional capacity options with generators are checked.
- European power prices are monitored.
- Options for additional capacity are identified to be pursued the following morning:
  - Demand Flexibility Service
  - SO-SO trades on interconnectors with potentially available capacity (EWIC, Moyle and Viking Link)

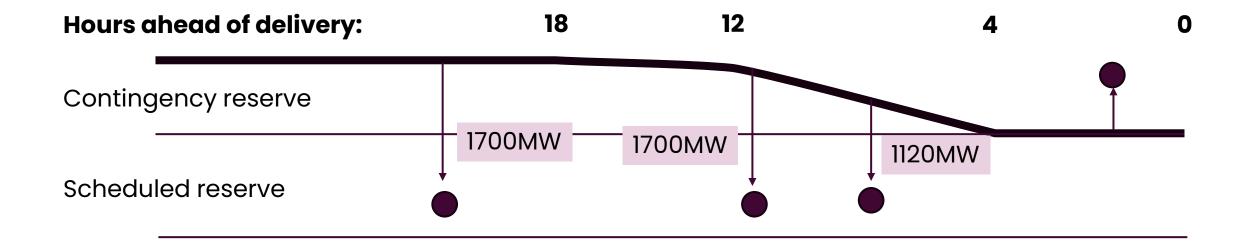


## **Timeline**





## Margins over time



Reserve for largest infeed loss



## Order of Actions Everyday Actions

| Everyday Actions  | Order                               | Comments  |
|---|-------------------------------------|---|
| Reconfigure Transmission Network to reduce<br>network congestion: Change substation running<br>arrangements, Tap Quad Boosters, and make<br>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<br>(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<br>Assistance (EA) from other<br>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

| 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<br>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%.                                 |





## Slido code #OTF

### Introduction

The Operational Transparency Forum (OTF) 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 also signposts other NESO events, provides deep dives into focus topics, and allows industry to ask questions.

We are focused on understanding the needs of our customers. In December 2023, we conducted a detailed survey of the OTF, with the aim of understanding how the OTF is meeting customer expectations and opportunities to increase customer value.

A detailed report of all the survey responses, and our plans to address the feedback was published on the <a href="OTF webpage">OTF webpage</a> with a summary presented at the <a href="OTF webinar on 26 June">OTF webinar on 26 June</a>.

An updated report will be published shortly on the <u>OTF webpage</u> detailing the changes we have made to incorporate the feedback/suggestions, or an explanation as to why we have not made the changes requested. Responses to individual comments are listed within the report.

Today, we are launching a new survey to reflect on the OTF throughout 2024. Recognising the growing reach of the OTF, we value your insights to ensure this forum continues to meet out customer needs and expectations.

## **OTF Survey 2023 Results 1**

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#### **Key themes**

#### **OTF**

- Requiring names for Slido

  We continue to require full names or organisations in the live Q&A via Slido. Other options are available if you prefer to be anonymous to the Forum. We will not publish the names in the Q&A log or on the previously asked questions slides
- Naming individual units
   We have changed our approach and will name individual
   BMUs if the information is already in the public domain

#### **Cross-NESO**

- Scheduling events
  We're working to improve our internal planning to reduce conflict with major industry events and other NESO events
- Event accessibility
   We have considered how we host our events to make them
   as accessible as possible. For example, the <u>Markets Forum</u>
   has trialled different combinations of in person, online,
   recorded and live events.

#### **General OTF topics**

#### High level changes:

- Introducing National Energy System Operator (NESO) branding, communications and website
- Implementing NESO subscriber process to reach over 2,400 signups
- Extending our internal engagement. OTF is now supported by colleagues from across NESO directorates
- Improved our approach for preparing and presenting the weekly forum, using customer feedback to develop and share best practice
- Expanding subject matter for our weekly focus topics and deep dives. We delivered 31 deep dives into focus topics in 2024 compared to 28 in 2023



## OTF Survey 2023 Results 2 Regular content

Slido code #OTF

#### Signposts

NEW summary slide

#### **Margins**

REINSTATED weekly slide

#### Network Congestion

UNDER CONSIDERATION

#### **Demand Outturn**

NEW distributed generation table added to slide

#### **Balancing costs**

NEW monthly summary presentation

#### Suggested deep dive and focus topics

- 59 comments, questions or suggestions
- 25 addressed at the OTF weekly forum
- 16 addressed through other NESO events
- 8 will be included at future OTFs
- 8 outside the scope of the OTF
- 2 will require more information for us to understand the contributor's expectations



## **OTF Survey January 2025**

Slido code #OTF

To ensure the OTF continues to develop and meet the needs of our customers who join this operational forum, we are publishing a further survey reflecting on the OTF throughout 2024.

- This survey is shorter than previous years
- Will take around 5 minutes to complete
- Constructed to provide us with better understanding of participants needs
- Survey opens: today, 15 January 2025
- Access from link below, <u>OTF webpage</u> or from email invitation (registered participants)
- Closing date: 31 January 2025
- Commitment to share outputs
- Consider feedback and share what we will or won't do
- Update at OTF on progress

Please help us to improve the OTF – <u>complete the survey NOW!</u>

OTF Survey of 2024

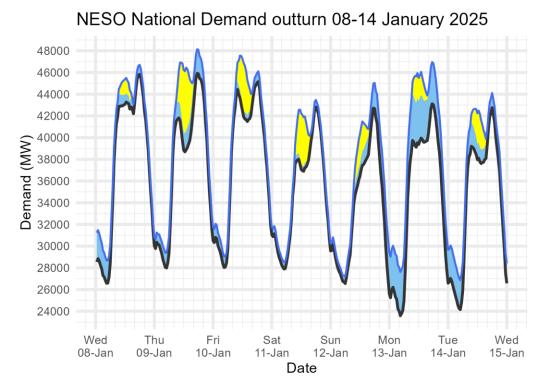


### Demand | Last week demand out-turn

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#### **Distributed generation**

Peak values by day



#### Demand type

 National Demand (ND) transmission connected generation requirement within GB

 ND + est. of PV & wind at Distribution network

#### Renewable type

Distributed\_PV

Distributed\_Wind

#### **National Demand**

Peaks and troughs

|             | OUTTURN                       |                                 |  |
|-------------|-------------------------------|---------------------------------|--|
| Date        | Daily Max<br>Dist. PV<br>(GW) | Daily Max<br>Dist. Wind<br>(GW) |  |
| 08 Jan 2025 | 1.4                           | 2.7                             |  |
| 09 Jan 2025 | 5.8                           | 2.2                             |  |
| 10 Jan 2025 | 4.4                           | 1.3                             |  |
| 11 Jan 2025 | 4.7                           | 0.7                             |  |
| 12 Jan 2025 | 2.8                           | 3.8                             |  |
| 13 Jan 2025 | 2.4                           | 4.3                             |  |
| 14 Jan 2025 | 3.1                           | 3.0                             |  |

| 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 <u>do not include</u> export on interconnectors or pumping or station load

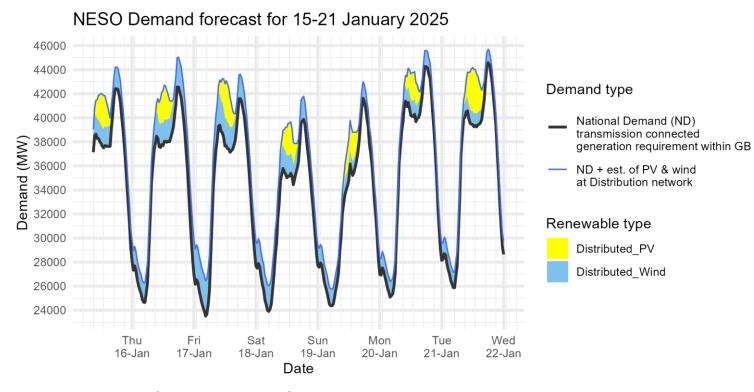
Blue line serves as a proxy for total GB customer demand. It includes demand supplied by the distributed wind and solar sources, but it <u>does not include</u> demand supplied by non-weather driven sources at the distributed network for which NESO has no real time data.

Historic out-turn data can be found on the <u>NESO Data Portal</u> in the following data sets: Historic Demand Data & Demand Data Update

|             | FORECAST (Wed 08 Jan) |                            | OUTTURN            |                            |                                 |                                      |                    |
|-------------|-----------------------|----------------------------|--------------------|----------------------------|---------------------------------|--------------------------------------|--------------------|
| Date        | Forecasting<br>Point  | National<br>Demand<br>(GW) | Dist. wind<br>(GW) | National<br>Demand<br>(GW) | Triad<br>Avoidance<br>est. (GW) | N. Demand<br>adjusted for<br>TA (GW) | Dist. wind<br>(GW) |
| 08 Jan 2025 | Evening Peak          | 45.5                       | 0.9                | 45.8                       | 0.0                             | 45.8                                 | 0.9                |
| 09 Jan 2025 | Overnight Min         | 27.5                       | 1.3                | 28.0                       | n/a                             | n/a                                  | 1.4                |
| 09 Jan 2025 | Evening Peak          | 45.0                       | 2.1                | 45.9                       | 0.6                             | 46.5                                 | 2.2                |
| 10 Jan 2025 | Overnight Min         | 28.7                       | 0.8                | 28.0                       | n/a                             | n/a                                  | 1.0                |
| 10 Jan 2025 | Evening Peak          | 45.0                       | 1.3                | 45.2                       | 0.0                             | 45.2                                 | 0.9                |
| 11 Jan 2025 | Overnight Min         | 26.8                       | 1.2                | 27.9                       | n/a                             | n/a                                  | 0.7                |
| 11 Jan 2025 | Evening Peak          | 41.4                       | 1.1                | 42.8                       | 0.0                             | 42.8                                 | 0.6                |
| 12 Jan 2025 | Overnight Min         | 24.3                       | 2.1                | 26.5                       | n/a                             | n/a                                  | 0.6                |
| 12 Jan 2025 | Evening Peak          | 39.2                       | 3.8                | 42.7                       | 0.0                             | 42.7                                 | 2.3                |
| 13 Jan 2025 | Overnight Min         | 21.8                       | 4.3                | 23.6                       | n/a                             | n/a                                  | 4.1                |
| 13 Jan 2025 | Evening Peak          | 40.3                       | 4.2                | 43.1                       | 0.0                             | 43.1                                 | 3.8                |
| 14 Jan 2025 | Overnight Min         | 22.6                       | 3.1                | 24.1                       | n/a                             | n/a                                  | 2.7                |
| 14 Jan 2025 | Evening Peak          | 41.4                       | 2.0                | 42.8                       | 0.0                             | 42.8                                 | 1.4                |

### 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.

ND values <u>do not include</u> 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 <u>does not include</u> demand supplied by non-weather driven sources at the distributed network for which NESO has no real time data.

#### **National Demand**

Peaks and troughs

|             |                      | FORECAST (                 | Wed 15 Jan)        |
|-------------|----------------------|----------------------------|--------------------|
| Date        | Forecasting<br>Point | National<br>Demand<br>(GW) | Dist. wind<br>(GW) |
| 15 Jan 2025 | Evening Peak         | 42.4                       | 1.8                |
| 16 Jan 2025 | Overnight Min        | 24.7                       | 1.6                |
| 16 Jan 2025 | Evening Peak         | 42.6                       | 2.4                |
| 17 Jan 2025 | Overnight Min        | 23.5                       | 2.9                |
| 17 Jan 2025 | Evening Peak         | 41.6                       | 2.0                |
| 18 Jan 2025 | Overnight Min        | 23.9                       | 2.1                |
| 18 Jan 2025 | Evening Peak         | 39.9                       | 1.9                |
| 19 Jan 2025 | Overnight Min        | 24.4                       | 1.4                |
| 19 Jan 2025 | Evening Peak         | 41.6                       | 1.4                |
| 20 Jan 2025 | Overnight Min        | 25.1                       | 1.3                |
| 20 Jan 2025 | Evening Peak         | 44.3                       | 1.3                |
| 21 Jan 2025 | Overnight Min        | 25.9                       | 1.3                |
| 21 Jan 2025 | Evening Peak         | 44.6                       | 1.1                |



Historic out-turn data can be found on the <u>NESO Data Portal</u> in the following data sets: Historic Demand Data & Demand Data Update

### Operational Margins | Week Ahead



How to interpret this information

This slide sets out our view of operational margins for the next week. We are providing this information to help market participants identify when tighter periods are more likely to occur such that they can plan to respond accordingly.

The table provides our current view on the operational surplus based on expected levels of generation, wind and peak demand. This is based on information available to NESO as of 15<sup>th</sup> January and is subject to change. It represents a view of what the market is currently intending to provide before we take any actions. The interconnector flows are equal to those in the Base case presented in the Winter Outlook.

The indicative surplus is a measure of how tight we expect margins to be and the likelihood of the NESO needing to use its operational tools.

For higher surplus values, margins are expected to be adequate and there is a low likelihood of the NESO needing to use its tools. In such cases, we may even experience exports to Europe on the interconnectors over the peak depending on market prices.

For lower (and potentially negative) surplus values, then this indicates operational margins could be tight and that there is a higher likelihood of the NESO needing to use its tools, such as interconnector trading and issuing margins notices. We expect there to be sufficient supply available to respond to these signals to meet demand.

Margins are adequate for the next week.

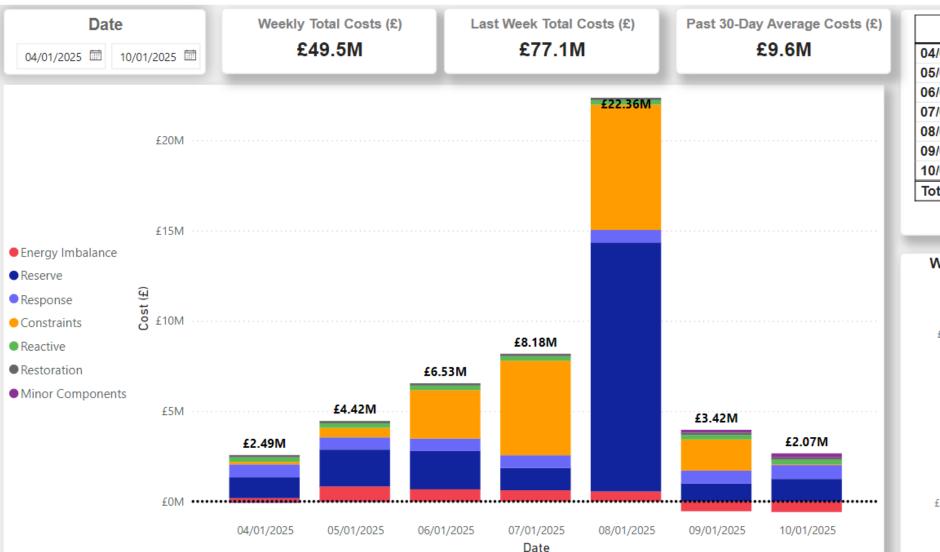
| Day | Date       | Notified<br>Generation<br>(MW) | Wind (MW) | IC Flows*<br>(MW) | Peak<br>demand<br>(MW) | Indicative<br>surplus<br>(MW) |
|-----|------------|--------------------------------|-----------|-------------------|------------------------|-------------------------------|
| Thu | 16/01/2025 | 41840                          | 10900     | 3380              | 43150                  | 5930                          |
| Fri | 17/01/2025 | 42530                          | 9200      | 3380              | 42190                  | 6440                          |
| Sat | 18/01/2025 | 42762                          | 7250      | 3380              | 40470                  | 8270                          |
| Sun | 19/01/2025 | 43092                          | 6230      | 3380              | 42220                  | 6440                          |
| Mon | 20/01/2025 | 43092                          | 6670      | 3380              | 44860                  | 4230                          |
| Tue | 21/01/2025 | 43075                          | 5410      | 3380              | 45180                  | 2390                          |
| Wed | 22/01/2025 | 43505                          | 7220      | 3760              | 44760                  | 5250                          |

<sup>\*</sup>Interconnector flow in line with the Winter Outlook Report Base Case but will ultimately flow to market price

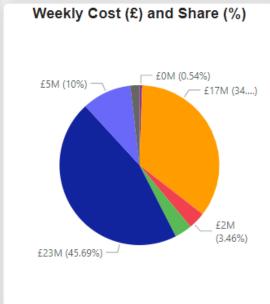
Margins do not include NESO enhanced or emergency actions



#### NESO Actions | Category Cost Breakdown

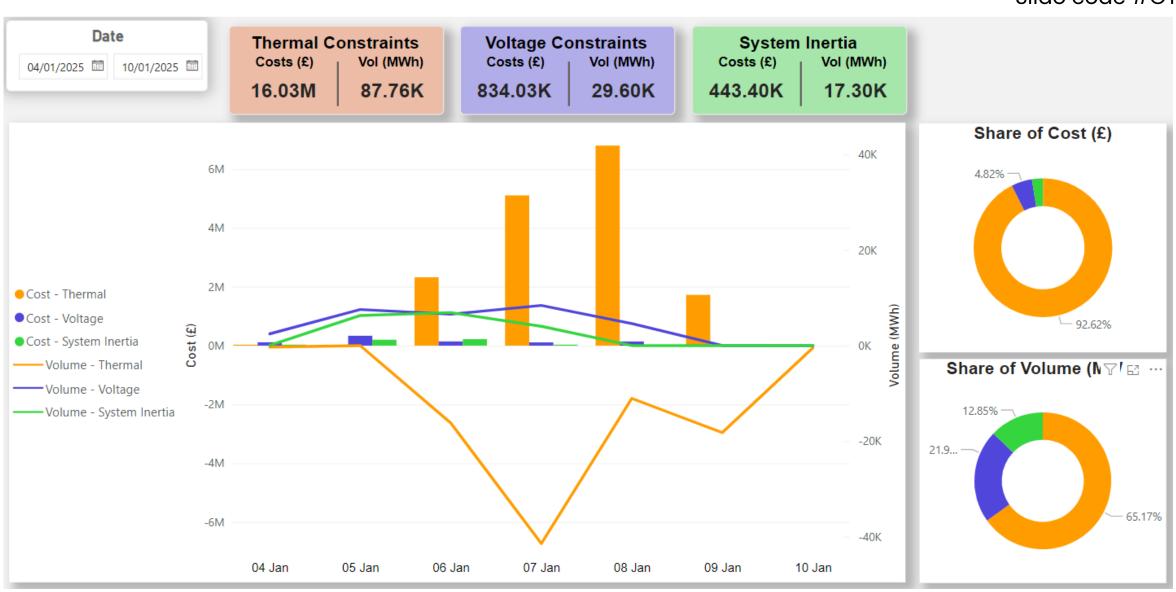


| Date       | Total Outturn Cost |
|------------|--------------------|
| 04/01/2025 | £2,494,603         |
| 05/01/2025 | £4,423,250         |
| 06/01/2025 | £6,528,629         |
| 07/01/2025 | £8,181,889         |
| 08/01/2025 | £22,355,730        |
| 09/01/2025 | £3,420,610         |
| 10/01/2025 | £2,074,306         |
| Total      | £49,479,016        |



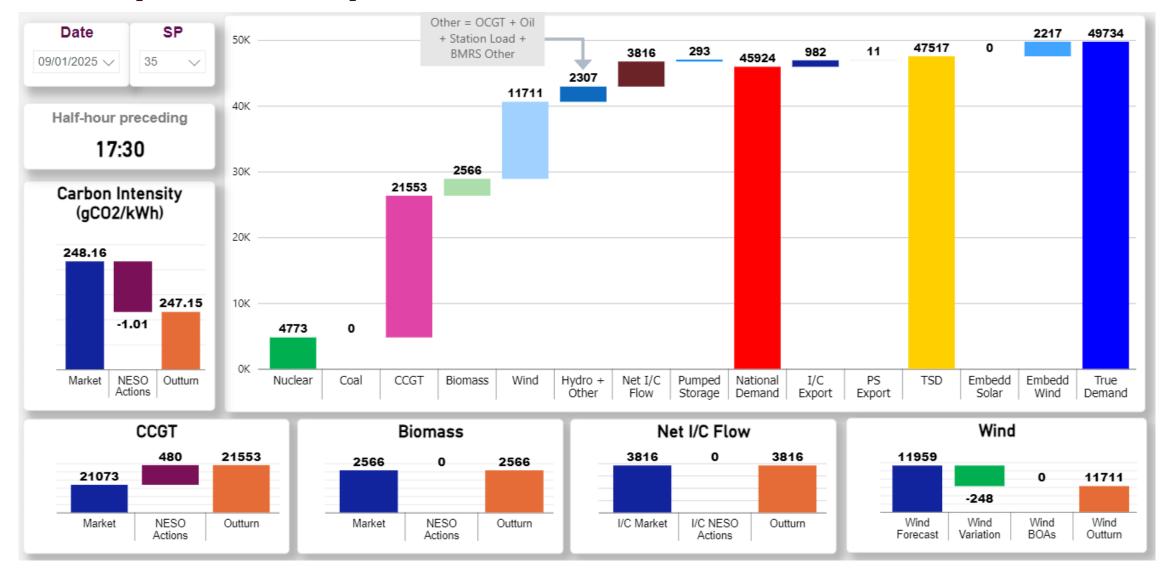
#### **NESO Actions | Constraint Cost Breakdown**



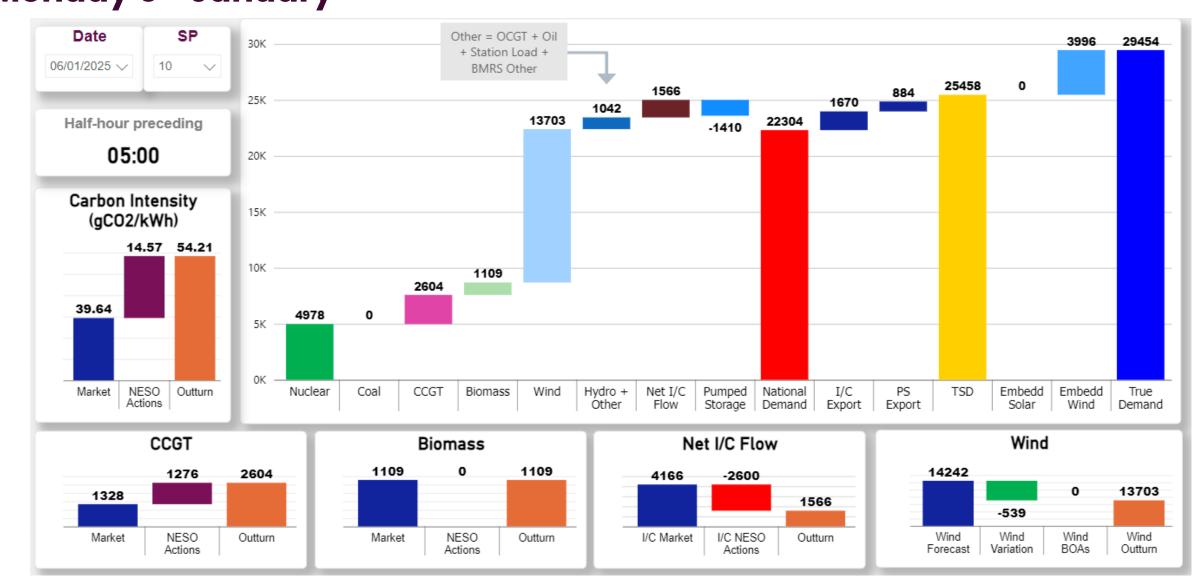


## Slido code #OTF

#### NESO Actions | Peak Demand – SP spend ~ £12k Thursday 9th January

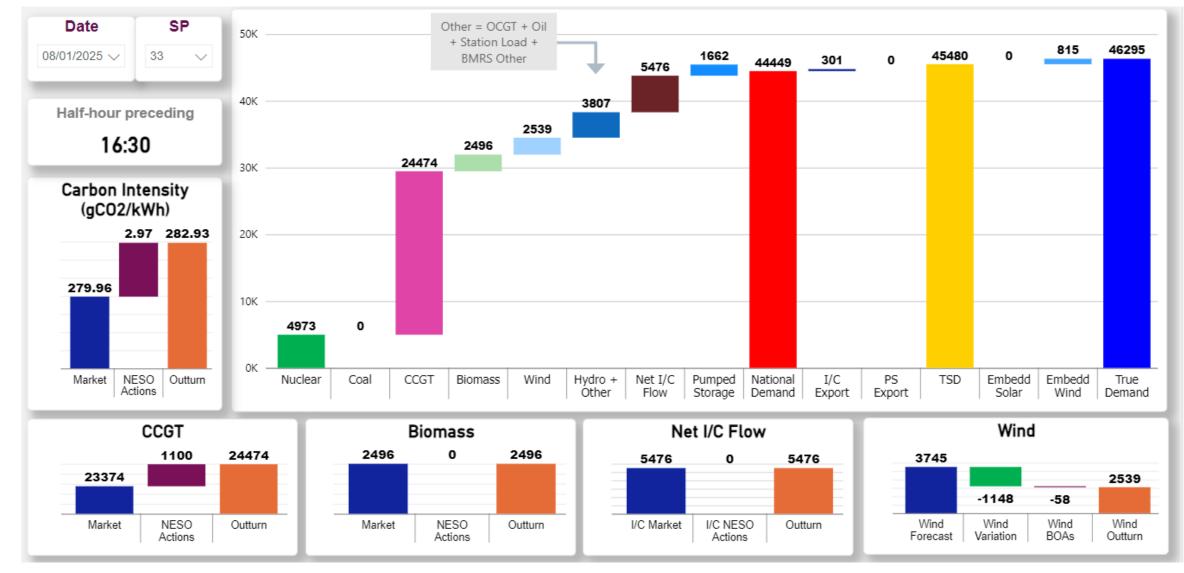


#### NESO Actions | Minimum Demand – SP spend ~ £155k Monday 6<sup>th</sup> January



#### NESO Actions | - Highest SP spend ~ £2.2m Wednesday 8<sup>th</sup> January

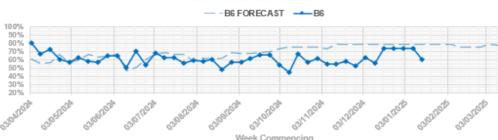




#### Transparency | Network Congestion



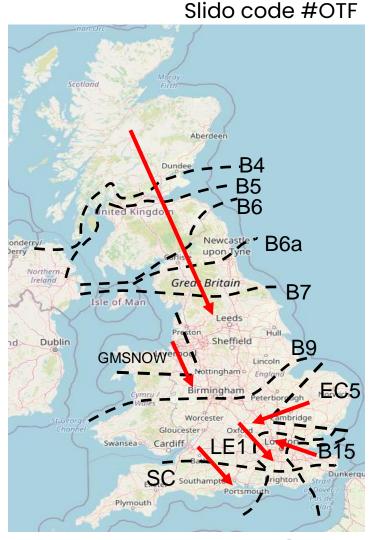






| Boundary    | Max.<br>Capacity<br>(MW) | Current<br>Capacity<br>(%) |
|-------------|--------------------------|----------------------------|
| B4/B5       | 3400                     | 80%                        |
| B6 (SCOTEX) | 6800                     | 60%                        |
| HARSPNBLY   | 8000                     | 81%                        |
| B7 (SSHARN) | 8325                     | 92%                        |
| GMSNOW      | 4700                     | 64%                        |
| EC5         | 5000                     | 100%                       |
| LE1 (SEIMP) | 8500                     | 83%                        |
| B15 (ESTEX) | 7500                     | 100%                       |
| SC1         | 7300                     | 100%                       |





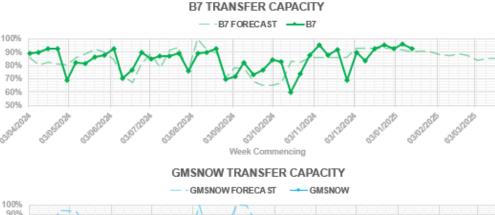
Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal: Constraints Management

(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)



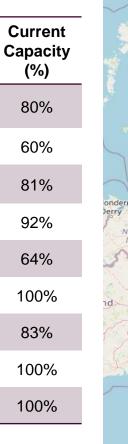
#### Transparency | Network Congestion





|  |             | (IVIVV) | (%)  |
|--|-------------|---------|------|
|  | B4/B5       | 3400    | 80%  |
|  | B6 (SCOTEX) | 6800    | 60%  |
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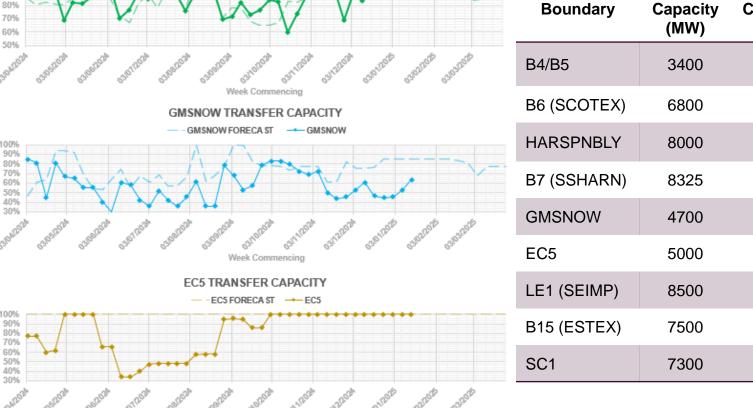
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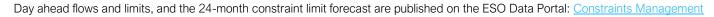


Dublin

**GMSNOW** 

Swansea







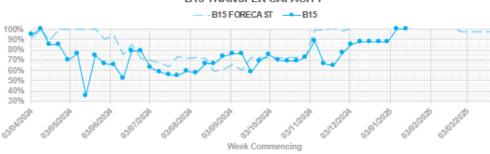
Sheffield

(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



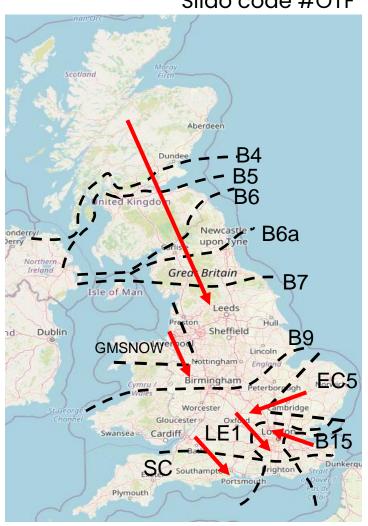




|             |  |   |            | FER CAPACI<br>ECAST —— SC |            |             |            |            |   |
|-------------|--|---|------------|---------------------------|------------|-------------|------------|------------|---|
| 100%        |  | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ••••       | •••••                     | ••••       | • • • • • • | •          |            |   |
| 90%         |  |   |            |                           | -, ,       |             |            |            | • |
| 80%         |  | / ^                                     |            |                           | /_         |             |            |            |   |
| 70%         |  | 1/ 47-1                                 | /          |                           |            |             |            |            |   |
| 60%         | V V  |   |            |                           |            |             |            |            |   |
| 50%         |  |   |            |                           |            |             |            |            |   |
| 100A        | 201h   | 201A                                    | 2000       | 2018 2018                 | , LOSA     | 2010        | 2012       | 202        |   |
| O3RARDRA O3 | STATISTICAL STATIS | 3. WILDRA G. S. W. LEVA                 | 03/09/2024 | Hotota O3H Atota          | 03/12/2024 | 03/01/2025  | 03/02/2025 | 03/03/2025 |   |
| 9- 9-       | 9" (   | 2- 0-                                   |            | Commencing                | 9-         | 9-          | 9-         | -          |   |

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## **Previously Asked Questions**



**Q:** Can you comment on the effect of decision timescale on the skip rate data? How would commitment made ~2hrs ahead to synchronise a CCGT be compared to capacity which required a commitment at just a few minutes before real time? How would we see this effect in the data?

**A:** If a unit with a PN of 0 and either MNZT, MZT, NDZ >= 31 minutes has been synchronised, its accepted volume between 0 and SEL will be excluded at stage 5. This means it cannot cause a skip.

For more information see the Skip Rate Methodology and Implementation Guide

#### Acronyms:

PN - Physical Notification (the level at which a unit is planning to supply/absorb energy)

MNZT – Minimum Non Zero Time (technical parameter: the length of time a unit needs to run before it can return to zero)

MZT – Minimum Zero Time (technical parameter: the length of time a unit needs to remain at zero before it can return to generating/absorbing energy)

NDZ – Notice to Deviate from Zero (technical parameter: when at zero, how much notice does the unit need to begin generating/absorbing energy)

## **Previously Asked Questions**

Slido code #OTF

**Q:** Is mention of Maxgen helpful on EMNs? During the energy crisis (when we had plants that could do Maxgen in the trad sense) I tried repeatedly to get ESO to take this service seriously - test it, review prices, etc. - and got nowhere. Has it ever been used since it was re-introduced c20 years ago?

A: The Maximum Generation (Max Gen) service allows access to capacity which is outside of a Generator's normal operating range in emergency circumstances. A small amount of Max Gen is available but given that its use does come with increased risks, its instruction would depend on an assessment of the prevailing conditions. For example, we would be less likely to instruct Max Gen on a unit if there was higher risk of network faults (e.g. inclement weather) or lower levels of dynamic reactive power reserves in the region.

For more information on Max Gen, click <u>here</u>.





**Q** (16/12/2024): Would it be possible to provide a lookup table that links the grid codes (SCOTEX, ESTEX, SEIMP etc etc) used in the constraint limit and other data sets to the constraint boundaries B6, B4 etc that are commonly used and to the constraint zones A-L that are commonly used.

Or if this already exists please provide a link

#### **Thanks**

**A:** Yes, we are currently working on a table that we intend to share on the data portal. We aim to publish this in the next couple of months and will inform the OTF when this is available.





**Q** (10/01/2025): How do you factor Capacity Market contracted Demand Side Response (CM DSR) into your assessment of system margins published in Electricity Margin Notices (EMN)?

For example, when you issued the EMN at 8:30pm on 7th January for 4-7pm on the 8th of January and stated that there was a system margin shortfall of 1700MW were you assuming that all of the >1GW of CM DSR contracted for the 24/25 CM Delivery Year would deliver and reduce demand or were you assuming 0MW of CM DSR delivery?

Did your view of how much CM DSR would deliver and reduce demand (for the purpose of calculating EMN system margin) change when a Capacity Market Notice was issued at noon on the 8th January?

**A:** The capacity market is not an operational process and is not linked to real time operational assessments. Control room assessments are carried out using the data submitted to NESO via normal operational processes (Grid Code and BSC) and the demand forecasts carried out by our teams.

For Electricity Margin Notices (EMN) we do not take into account Capacity Market contracted Demand Side Response (CM DSR) as usually (as was the case during the most recent EMN occurrence) the EMN is initially published day ahead and independently of any Capacity market Notice (CMN) which we can't anticipate in control timescales as it is a different process with differing timescales and thresholds. CM notices are only applicable 4 hours ahead of real time. For the differences between EMN and CM please reference our very recent DEEP DIVE at the OTF on 13 November: Operating Margin & System Warnings Capacity Market Notifications.



**Q** (08/01/2025): I would like to propose a deep dive topic for NESO: Carbon Capture, Storage & utilization and production of blue/green hydrogen:

Carbon capture has been identified as key technology for achieving clean power 2030 in NESO advice to the government, they highlight it particularly in their New Dispatch pathway, therefore is it essential for National Grid & NESO to assess its current state when it comes to implementation of this technology. However, CC technology is new with a great deal of assumptions around it.

We would like to know of feasibility of implementing carbon capture in the UK on large scale and whether it will help achieve our net zero targets.

**A:** These topics are outside the scope of the OTF. However, NESO has done some work in this area which is published on the NESO website:

The <u>Future Energy Scenarios</u> work (FES) has a lot of content on CCUS and hydrogen production, the chapter on "Reducing Great Britain's emissions" has a page of carbon capture for instance, and low carbon h2 supply has its own section in the "Energy Supply" chapter.

There is an associated webinar recording here too, although this covers more than just CCUS and hydrogen.

We also produce an "Energy Background" document that gives information about a range of topics and technologies

More recently, assumptions about carbon capture have been included in the <u>Clean Power 2030</u> report



Slido code #OTF

**Q** (10/01/2025): On Wed. 8th January, it appears that NESO conducted a SO-SO trade with the Danish SO to flow MW across the Viking Link in periods 34-38.

On the BMRS these trades appear T-flagged for system reason but at zero price. The NESO DataPortal also shows the volume at £0/MWh and T-flagged.

With the trade input at £0/MWh, the volume is unlikely to occupy its correct place in the Offer stack and .: the presented indicative view of cashout to the market on the BMRS won't be as good as it could be.\*\*

Is there a reason why when, the SO-SO trade is entered, that a price cannot be input too at the same time so that the market has a better indicative cashout view?

Market participants will now have to wait until Settlement Run data is published, the earliest possible would be II run on 15th January with SF run on 30th January.

**Q** (13/01/2025): Will NESO be able to share the price agreed with the Danish SO to increase the GB import via Viking Link on Wed 8th Jan during the EMN? At the moment the SO-SO action is showed with a zero price in the BSAD data in the BMRS.

Q: (18/12/2024): Hi, could you outline what further changes (engineering or control room protocols) are still required to be made to enable periods of zero-carbon running?



## **Outstanding Questions**



**Q:** Now its 2025, do you forecast any periods that could result in 100% low carbon dispatch? and could NESO balance that?



## Reminder about answering questions at the NESO 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: <a href="marketreporting@nationalenergyso.com">marketreporting@nationalenergyso.com</a>
- 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: <a href="https://www.neso.energy/what-we-do/systems-operations/operational-transparency-forum">https://www.neso.energy/what-we-do/systems-operations/operational-transparency-forum</a>
- 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



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

## Slido code #OTF

### 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: <a href="mailto:box.nc.customer@nationalenergyso.com">box.nc.customer@nationalenergyso.com</a>



## Appendix



## Purpose and scope of the NESO 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 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



- OTF participants can ask questions in the following ways:
  - Live via Slido code #OTF
  - In advance (before 12:00 on Monday) at <a href="https://forms.office.com/r/k0AEfKnai3">https://forms.office.com/r/k0AEfKnai3</a>
  - At any time to <u>box.nc.customer@nationalenergyso.com</u>
- All questions asked through Sli.do will be recorded and published, with answers, in the Operational Transparency Forum Q&A on the webpage: <u>Operational Transparency Forum | NESO</u>
- 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 found in the appendix of this slide pack.