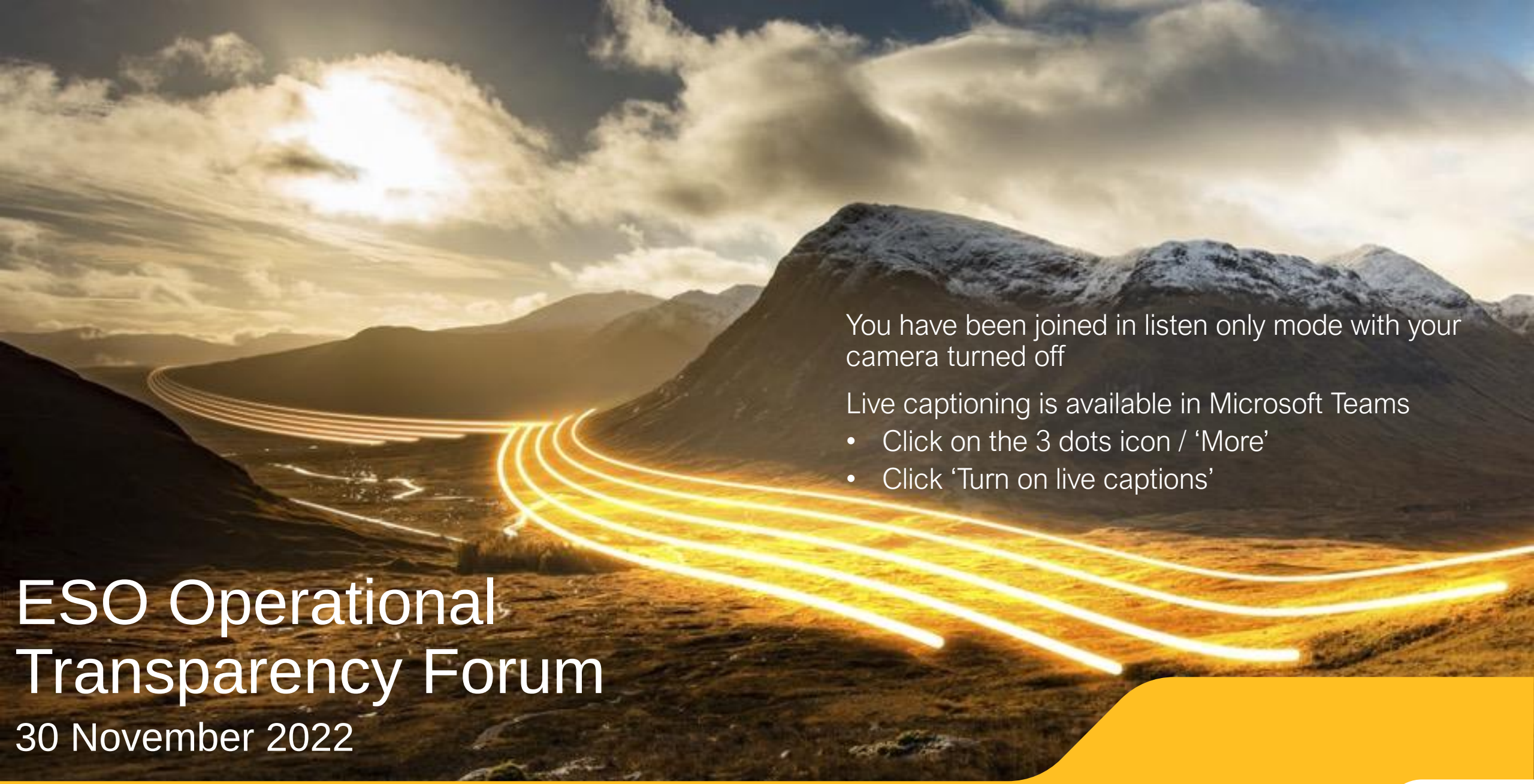


You have been joined in listen only mode with your camera turned off

Live captioning is available in Microsoft Teams

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

# ESO Operational Transparency Forum

30 November 2022

ESO

# Introduction | Sli.do code #OTF

Please visit www.sli.do and enter the code #OTF to ask questions & provide us with post event feedback.

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

**To tailor our forum and topics further we have asked for names (or organisations, or industry sector) against Sli.do questions. If you do not feel able to ask a question in this way please use the email:** box.NC.Customer@nationalgrideso.com

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

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

# Future deep dive/ response topics

**Today:**

Stability Phase 3 results

Constraints Pathfinder

**Coming soon:**

Response markets deep dive – 7th December

Reserve Reform update – 14th December

Feedback welcomed on our proposed deep dive topics

# Dispatch Transparency (“Skip Rate”) Event - Monday 5th December

We would like to invite you to Wokingham for a transparent discussion about how we dispatch and "Skip Rates".

The event will take place in person at our Wokingham offices on **Monday 5th December**. Lunch will be provided and a visit to the control room viewing gallery will be organised.

A Skip refers to an event when a BOA is instructed at a higher cost than an alternative option. The ESO strives to have zero skip rates, unless not preventable. We would like to invite you to discuss our dispatching process (including some examples) as well as the dispatch transparency data available on our portal. This event will also be an opportunity to share your questions regarding skip rates.

**We very much look forward to seeing you at this event.**

**Key information**

**Date:** Monday 5th December

**Venue:** National Grid ESO Wokingham Office

**Time:** 10:00 – 14:30

**Signup link:**

https://forms.office.com/r/VrcCkVz2th

# Annual C16 and Relevant Balancing Services (RBS) Guidelines Early Consultation 2022/23

We welcome industry's views on the proposed changes within our informal consultation.

Please find the consultation documents on our C16 web page

*Standard Condition Licence C16 "Procurement and use of balancing services" sets out the obligation on the ESO to publish five statements addressing the procurement and use of balancing services. In accordance with C16 of its Transmission Licence, we are required to conduct an annual review of all licence statements, regular reviews of the methodologies and, if appropriate, to propose changes to these documents*.

This early consultation does not form part of the C16 Licence Condition or RBS Governance and is an additional one that allows NGESO to do more fact finding and create a more efficient and thorough review.

Please respond by **6th December 2022.**

Any questions please contact balancingservices@nationalgrideso.com

# Signpost – Balancing Reserve Consultation

**Balancing Reserve (BR) Update**

- The Article 18 EBR Consultation for the new Balancing Reserve service went live on 14 November. The documents can be found on our website here.
- The closing date for consultation responses is Wednesday 14 December at 17:00.
- We'd like to encourage people to submit responses early where possible as the ESO consultation review period falls over Christmas.
- Any providers who would like a 1-1, please contact vicci.page@nationalgrideso.com

# Demand Flexibility Service

**Details for the DFS Test being run today:**

- Date 30/11/2022
- 17:30 - 18:00: 250MW
- 18:00 - 18:30: 250MW
- Bids accepted / rejected for today:
  - 158 MW accepted
  - 68 MW rejected
  - Bids received from 13 providers.

An Anticipated Requirement Notice has just been issued for a test tomorrow - a DFS Service Requirement might be published today at 14:30.

DFS Test data is available here: https://data.nationalgrideso.com/dfs/demand-flexibility-service-test-events/r/utilisation_report_summary_-_test

To get in touch with the team email: demandflexibility@nationalgrideso.com

# Winter Contingency Service (coal) – Proving Runs

No further proving runs are planned at present

For the avoidance of doubt, where NGESO instructs any contracted unit, either for initial proving runs or service instructions, across all three contracted sites (EDF, Drax and Uniper) NGESO will inform the market via the BMRS.

Example BMRS notification below

| | | |
|---|---|---|
| | 2022-10-26 05:15 | From : Power System Manager - National Grid Electricity Control Centre NATIONAL GRID NOTIFICATION Nature of Notification COAL CONTRACT TEST RUN ACTIVE Unit: WBUPS-2 Estimated Capacity: Max 400MW / 12 Hours Earliest Sync time / date: 07:00 27/10/22 System Flag Notification Issued at 06:15 hrs on 26/10/2022 Issued by Angela Wilks National Grid Electricity Control Centre. |

# Notable Events

29 November – Frequency Event – Generator tripped at 12:19

28 November – Capacity Market Notice Cancelled at 2:04 pm

28 November – Capacity Market Notice Issued at 1:33 pm

## Electricity Capacity Market Notice Cancelled

**Posted by National Grid Electricity System Operator at 2:04pm on Monday 28th November 2022**

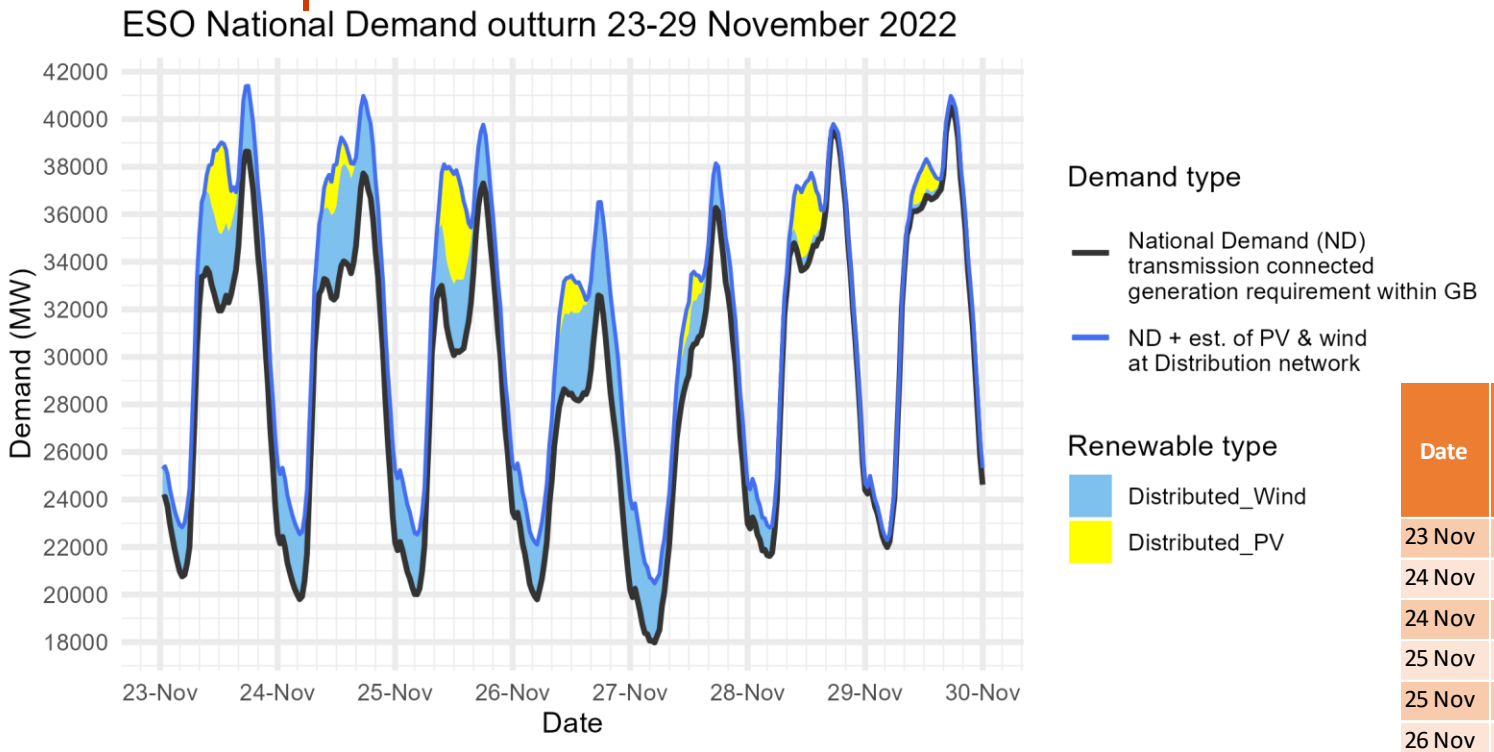
The Capacity Market Notice originally active from 6:00pm on Monday 28th November 2022 has been cancelled from 6:00pm on Monday 28th November 2022

## Electricity Capacity Market Notice Currently Active

**Posted by National Grid Electricity System Operator at 1:33pm on Monday 28th November 2022**

| | |
|---|---|
| **Commencement time of notice** | 6:00pm on Monday 28th November 2022 |
| **Circumstances that triggered notice** | Margin below threshold set out in Capacity Market Rules |
| **Transmission Demand and Operating Margin (MW)** | 38,338 |
| **Aggregate Capacity of BM Units expected (MW)** | 38,784 |
| **Additional Capacity (MW)** | No definitive information regarding additional capacity is currently available to the Electricity System Operator. |

# Demand | Last week demand out-turn




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

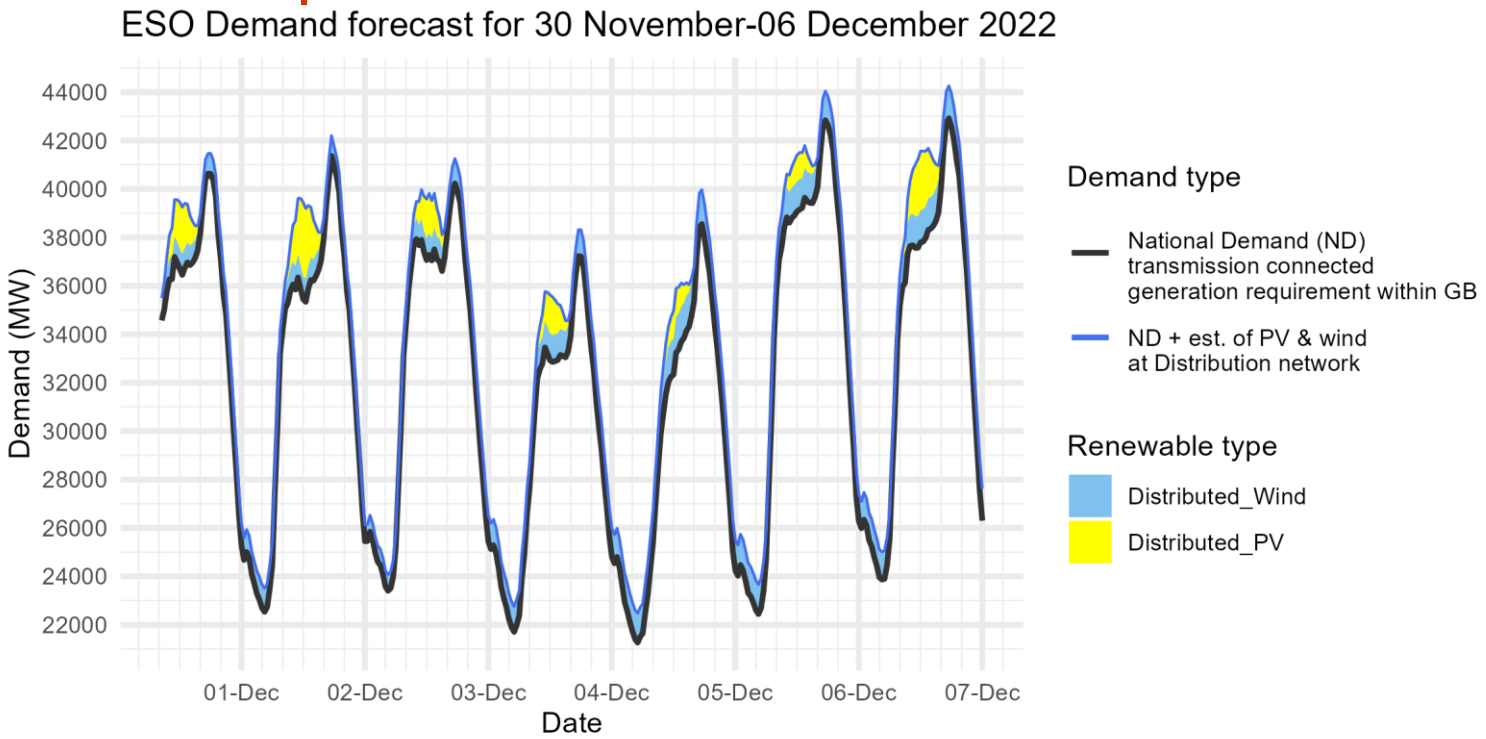
ND values **do not include** export on interconnectors or pumping or station load

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

| | | FORECAST (Wed 23 Nov) | | OUTTURN | | | |
|---|---|---|---|---|---|---|---|
| Date | Forecasting Point | National Demand (GW) | Dist. wind (GW) | National Demand (GW) | Triad Avoidance est. (GW) | N. Demand adjusted for TA (GW) | Dist. wind (GW) |
| 23 Nov | Evening Peak | 38.1 | 2.7 | 38.6 | 0.0 | 38.6 | 2.7 |
| 24 Nov | Overnight Min | 20.0 | 2.6 | 19.8 | n/a | n/a | 2.7 |
| 24 Nov | Evening Peak | 36.8 | 3.5 | 37.7 | 0.0 | 37.7 | 3.3 |
| 25 Nov | Overnight Min | 20.0 | 2.6 | 20.0 | n/a | n/a | 2.5 |
| 25 Nov | Evening Peak | 37.3 | 2.1 | 37.3 | 0.0 | 37.3 | 2.5 |
| 26 Nov | Overnight Min | 19.8 | 1.8 | 19.8 | n/a | n/a | 2.3 |
| 26 Nov | Evening Peak | 32.2 | 3.5 | 32.6 | 0.0 | 32.6 | 3.9 |
| 27 Nov | Overnight Min | 17.0 | 2.8 | 18.0 | n/a | n/a | 2.5 |
| 27 Nov | Evening Peak | 34.8 | 2.1 | 36.3 | 0.0 | 36.3 | 1.9 |
| 28 Nov | Overnight Min | 19.6 | 1.8 | 21.6 | n/a | n/a | 1.2 |
| 28 Nov | Evening Peak | 39.7 | 1.6 | 39.5 | 0.8 | 40.3 | 0.3 |
| 29 Nov | Overnight Min | 21.8 | 1.3 | 22.0 | n/a | n/a | 0.3 |
| 29 Nov | Evening Peak | 40.2 | 1.7 | 40.5 | 0.0 | 40.5 | 0.5 |

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

# Demand | Week Ahead

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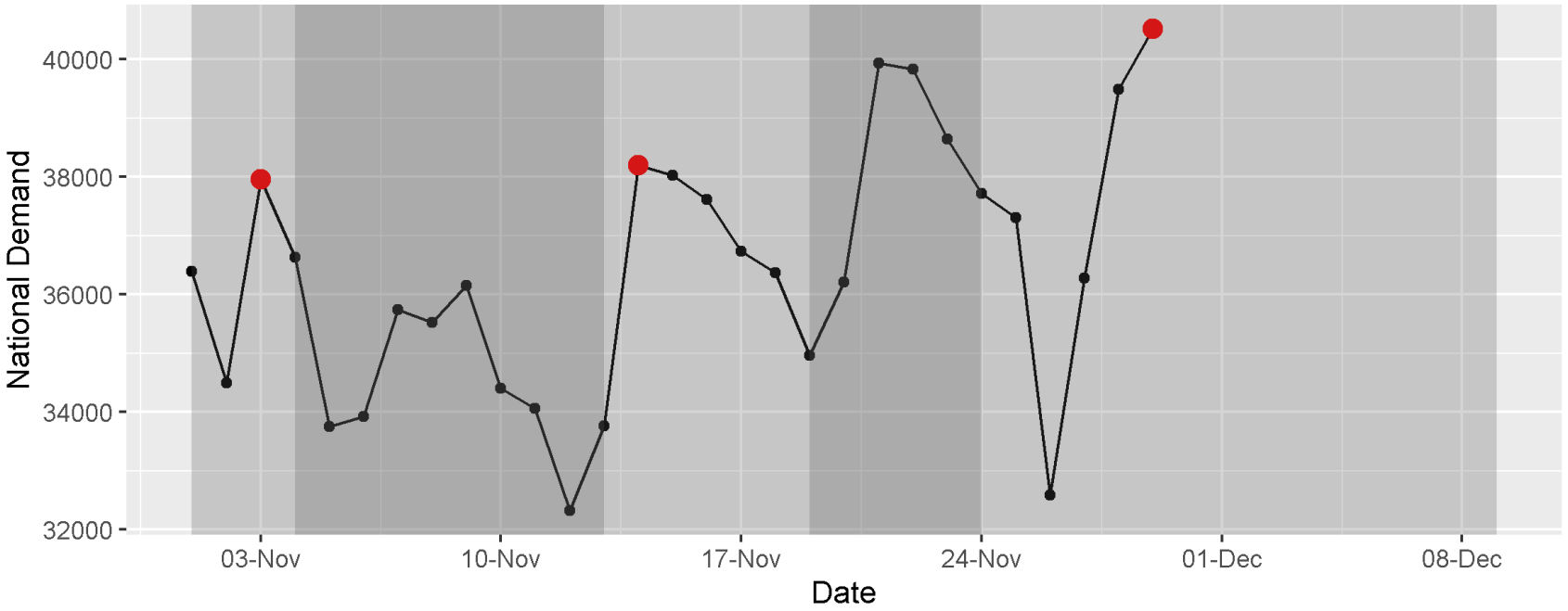
Historic out-turn data can be found on the ESO Data Portal in the following data sets: Historic Demand Data & Demand Data Update

| | | FORECAST (Wed 30 Nov) | |
|---|---|---|---|
| Date | Forecasting Point | National Demand (GW) | Dist. wind (GW) |
| 30 Nov 2022 | Evening Peak | 40.6 | 0.8 |
| 01 Dec 2022 | Overnight Min | 22.5 | 1.0 |
| 01 Dec 2022 | Evening Peak | 41.4 | 0.8 |
| 02 Dec 2022 | Overnight Min | 23.4 | 0.7 |
| 02 Dec 2022 | Evening Peak | 40.2 | 1.0 |
| 03 Dec 2022 | Overnight Min | 21.7 | 1.1 |
| 03 Dec 2022 | Evening Peak | 37.2 | 1.1 |
| 04 Dec 2022 | Overnight Min | 21.3 | 1.2 |
| 04 Dec 2022 | Evening Peak | 38.6 | 1.4 |
| 05 Dec 2022 | Overnight Min | 22.4 | 1.2 |
| 05 Dec 2022 | Evening Peak | 42.8 | 1.2 |
| 06 Dec 2022 | Overnight Min | 23.9 | 1.1 |
| 06 Dec 2022 | Evening Peak | 42.9 | 1.3 |

# Triad avoidance: indicative triad data based on operational metering




| ESO operational metering | | | |
|---|---|---|---|
| Date | Time (HH ending) | National Demand (MW) | Estimated triad avoidance (HH corresponding with the time of the peak) (MW) |
| 29/11/2022 | 1730 | 40516 | 0 |
| 14/11/2022 | 1800 | 38193 | 0 |
| 03/11/2022 | 1800 | 37957 | 0 |

ESO does not include station load.

Indicative triad demand on Elexon's BMRS website quotes "GB Demand" which is based on the Transmission System Demand definition (it adds 500MW of station load onto the National Demand). Also, it shows time as half hour **beginning**.

# 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 National Grid ESO as of 30 November 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 ESO needing to use its operational tools.

For higher surplus values, margins are expected to be adequate and there is a low likelihood of the ESO 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 ESO needing to use its tools, such as 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.

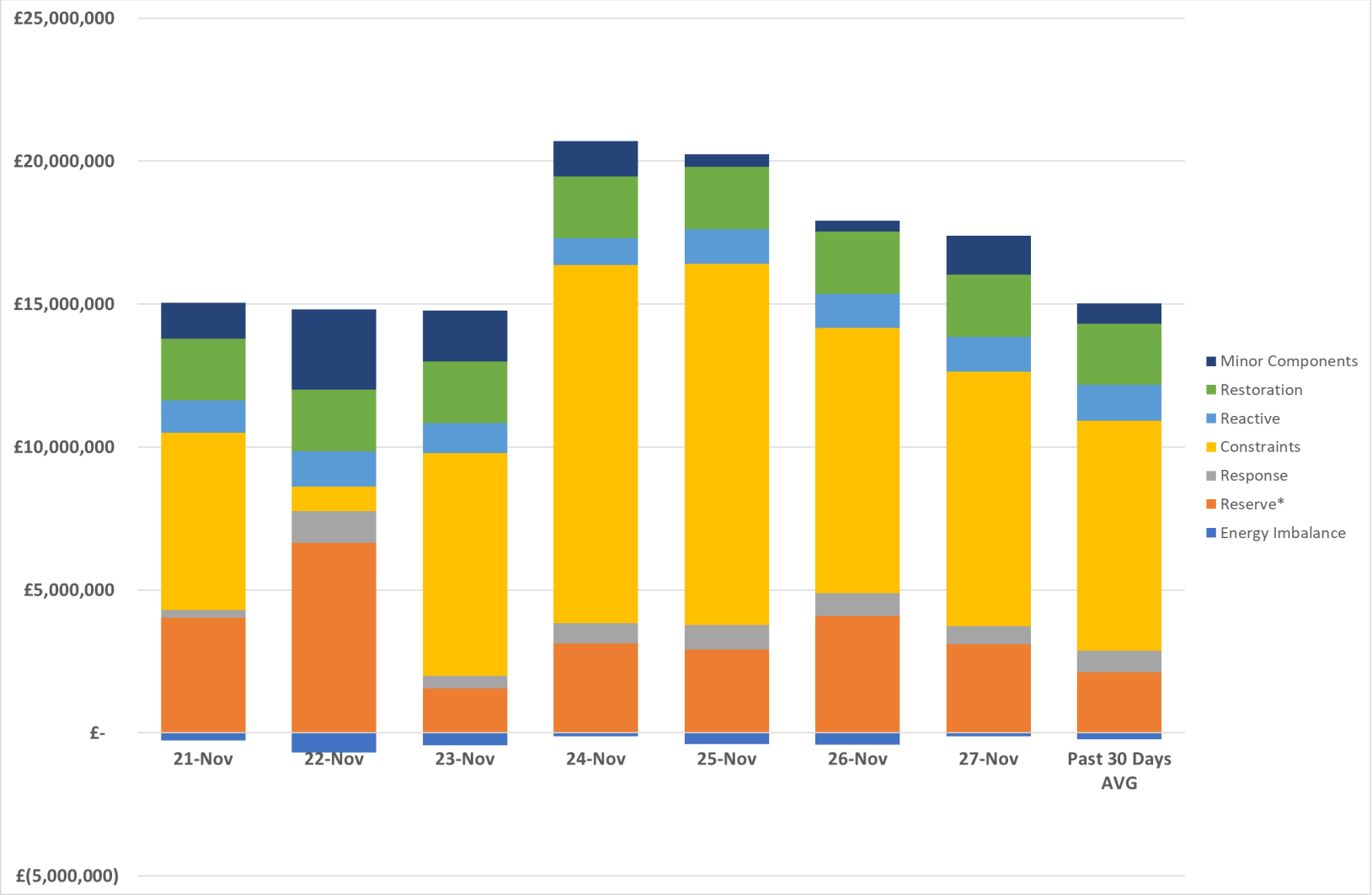
| Day | Date | Notified Generation (MW) | Wind (MW) | IC Flows* (MW) | Peak demand (MW) | Indicative surplus (MW) |
|---|---|---|---|---|---|---|
| Thu | 01/12/2022 | 40259 | 3170 | 4020 | 41600 | 1220 |
| Fri | 02/12/2022 | 40369 | 5040 | 4020 | 41220 | 3570 |
| Sat | 03/12/2022 | 38832 | 5280 | 4020 | 38020 | 5550 |
| Sun | 04/12/2022 | 39942 | 6470 | 4020 | 39280 | 6530 |
| Mon | 05/12/2022 | 42412 | 4480 | 4020 | 42990 | 3200 |
| Tue | 06/12/2022 | 42582 | 4960 | 4020 | 42890 | 3960 |
| Wed | 07/12/2022 | 42732 | 6470 | 4020 | 42860 | 5600 |

*Interconnector flow in line with the Winter Outlook Report Base Case but will ultimately flow to market price

Margins do not include NGESO enhanced or emergency actions (Outlined here: download (nationalgrideso.com))

Adequate when Indicative Surplus >= 1000 MW

# ESO Actions | Category costs breakdown for the last week

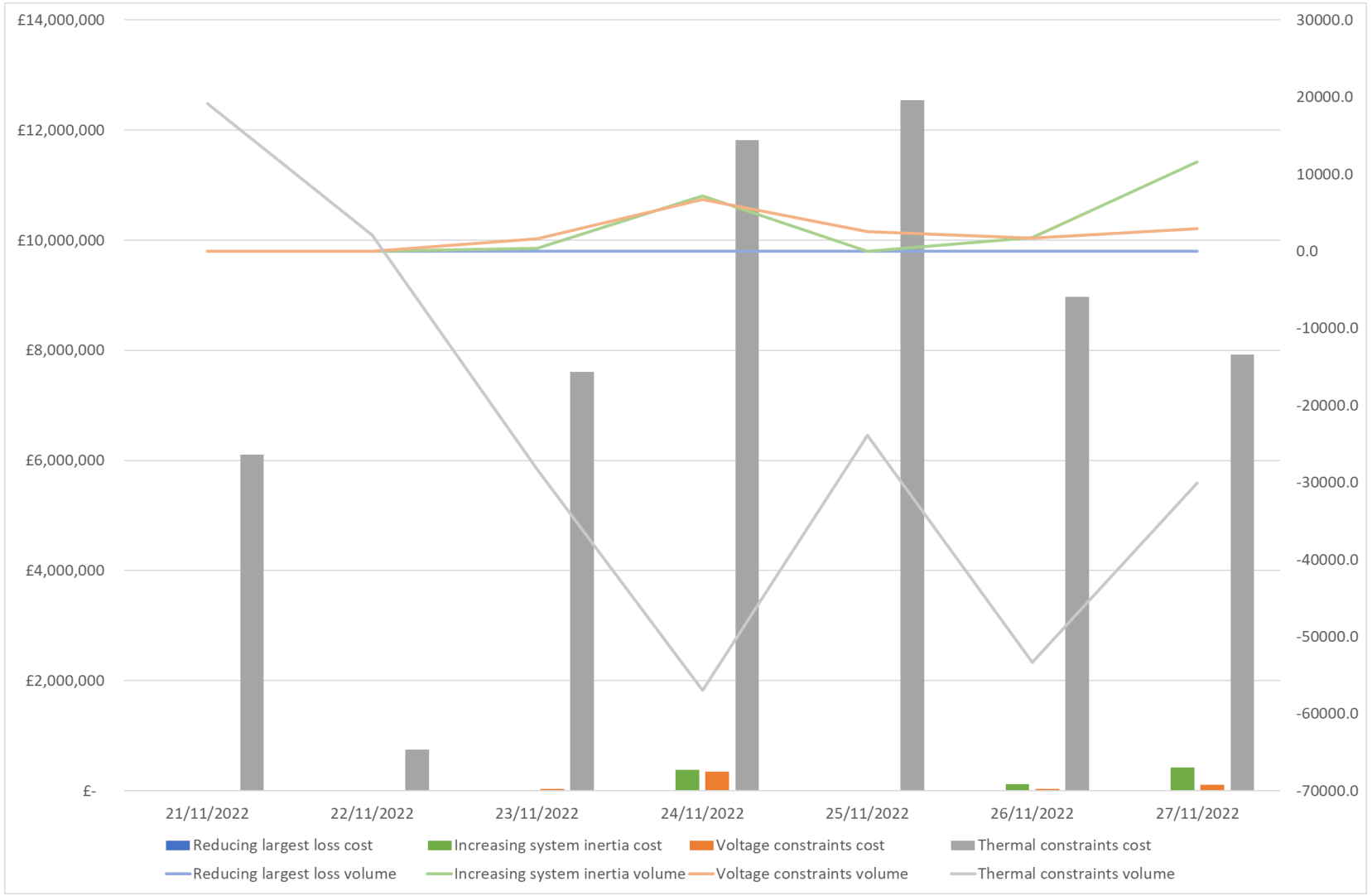



| Date | Total (£m) |
|---|---|
| 21/11/2022 | 14.8 |
| 22/11/2022 | 14.1 |
| 23/11/2022 | 14.3 |
| 24/11/2022 | 20.6 |
| 25/11/2022 | 19.8 |
| 26/11/2022 | 17.5 |
| 27/11/2022 | 17.3 |
| Weekly Total | 118.5 |

Constraints costs (mostly thermal) were the key cost component throughout the week.

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

# ESO Actions | Constraint Cost Breakdown



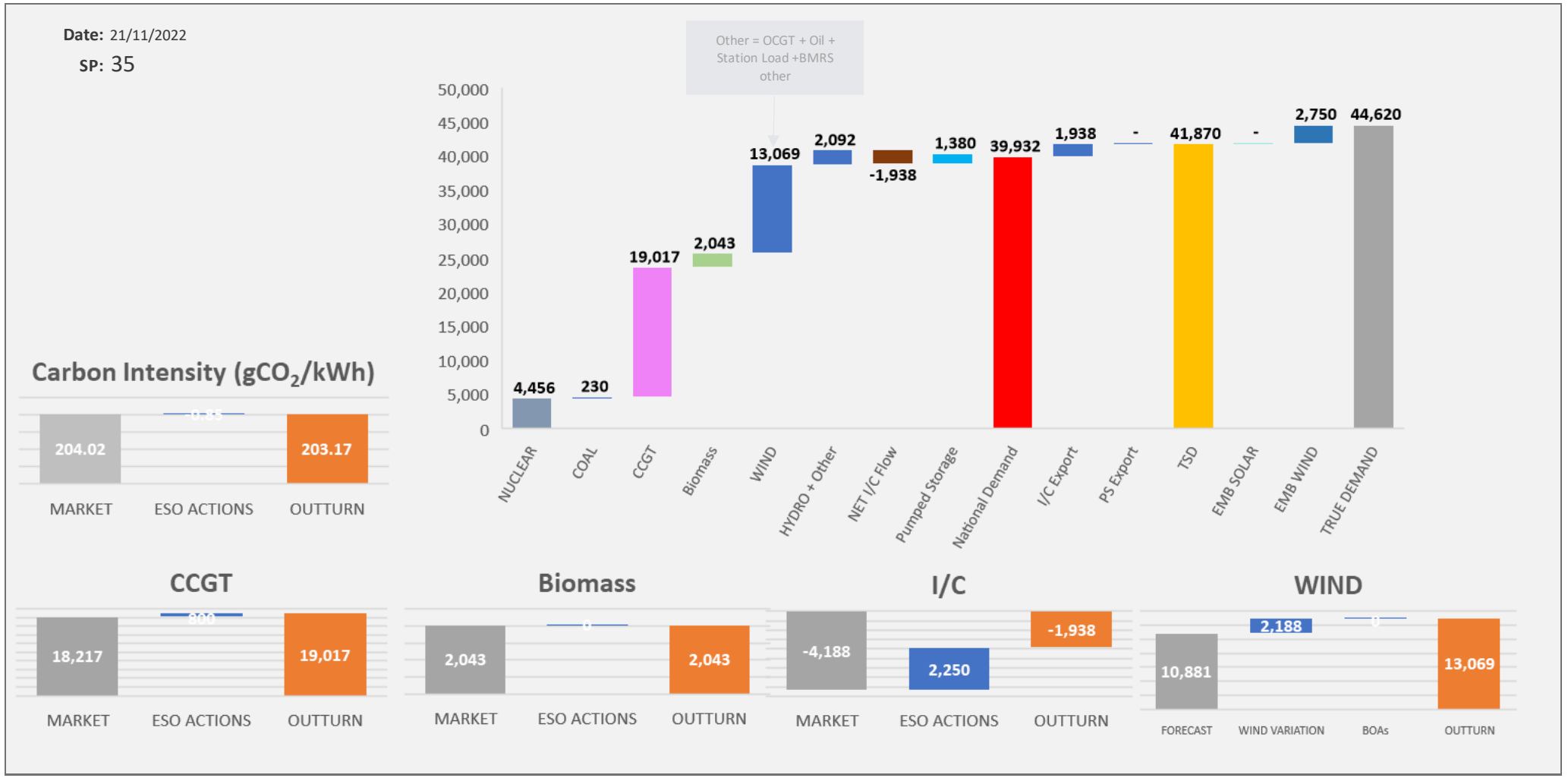

**Thermal – network congestion**
Actions required to manage Thermal Constraints throughout the week.

**Voltage**
Intervention to manage the voltage levels from Wednesday to Sunday.

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

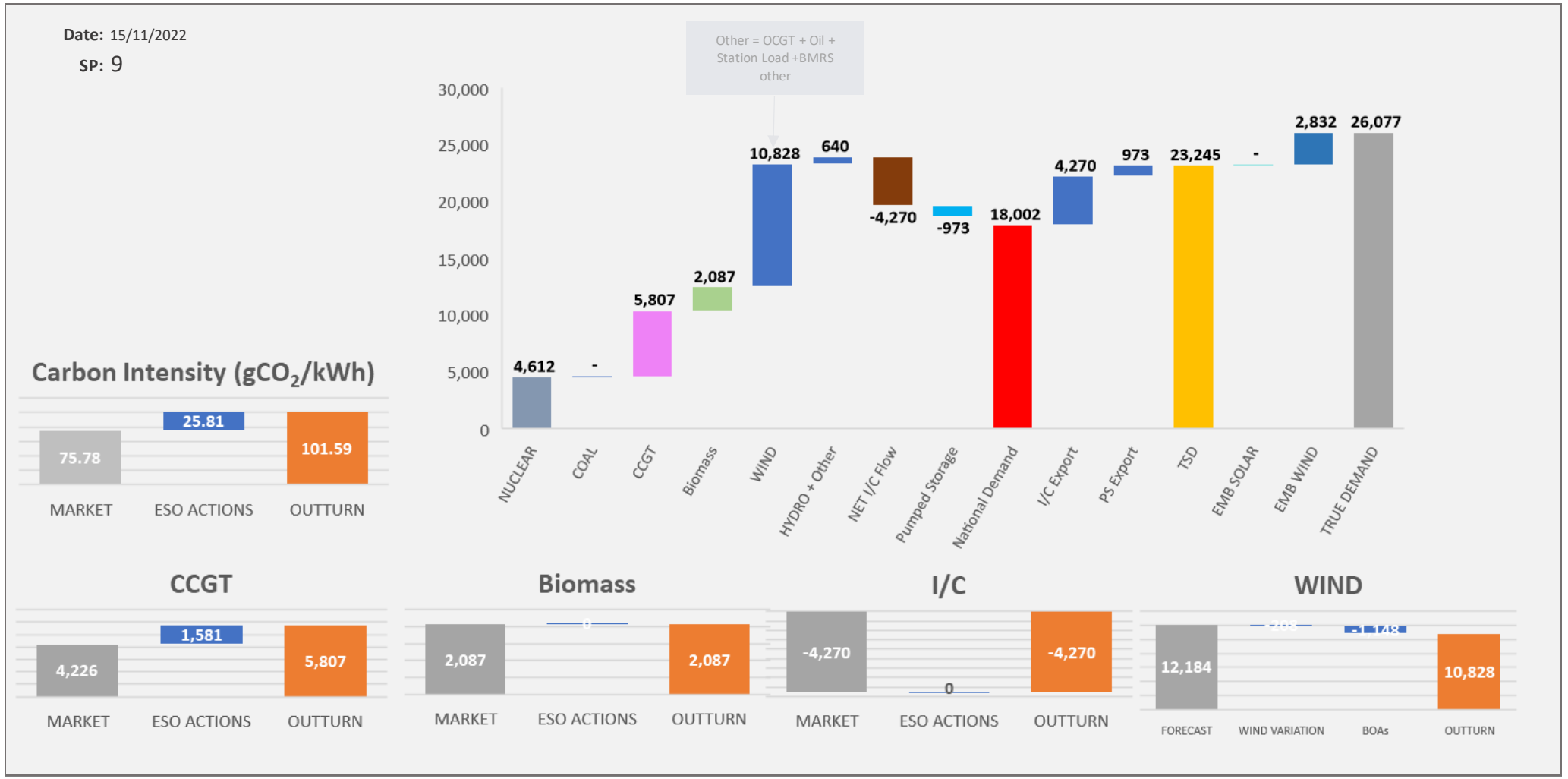
**Increasing inertia**
Intervention required to manage system inertia on Thursday, Saturday and Sunday.

# ESO Actions | Monday 21 November – Peak Demand – SP spend ~£273k



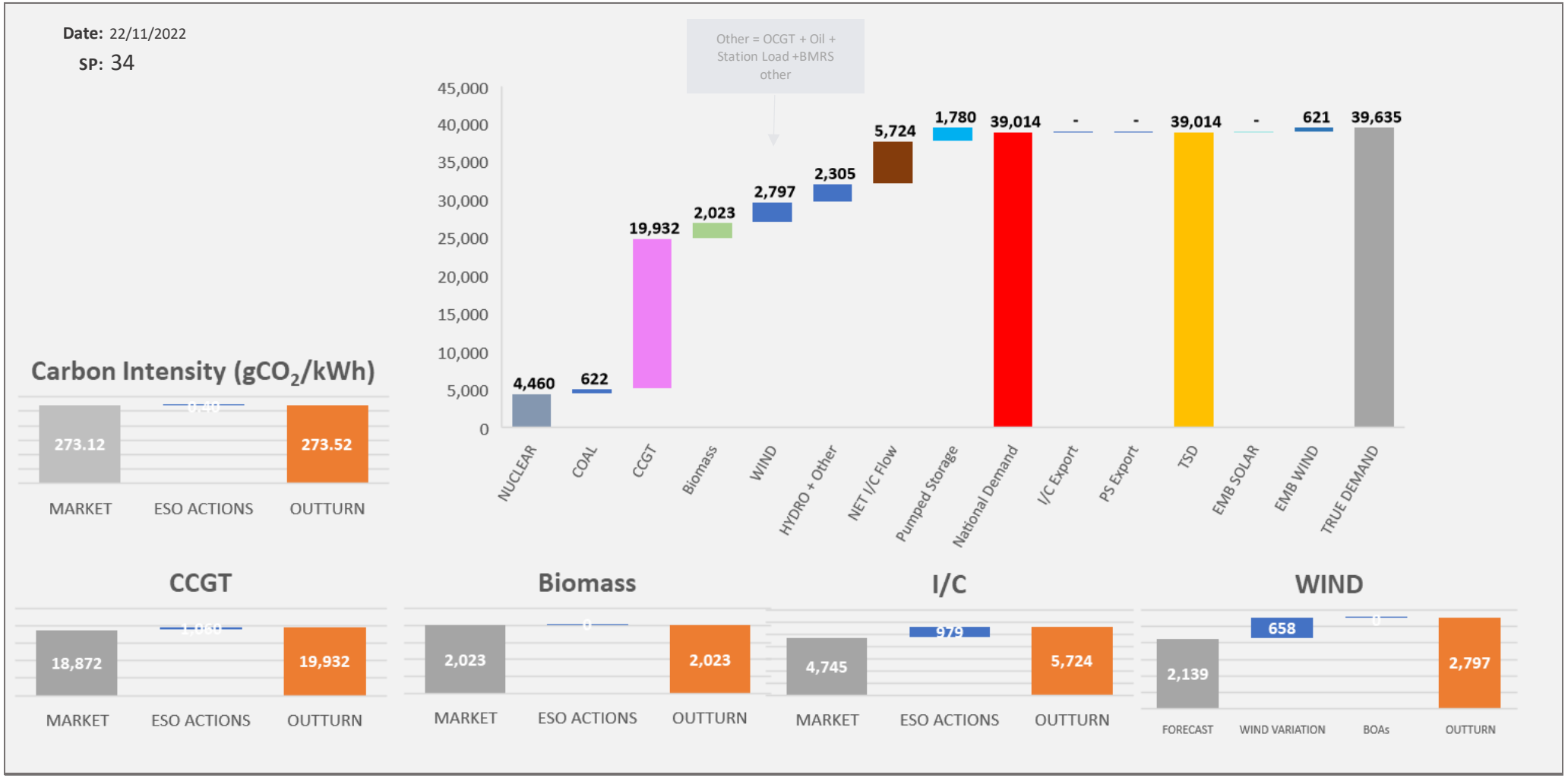

Carbon Intensity data on data portal: https://data.nationalgrideso.com/carbon-intensity1/carbon-intensity-of-balancing-actions

# ESO Actions | Sunday 27 November – Minimum Demand – SP Spend ~£273k



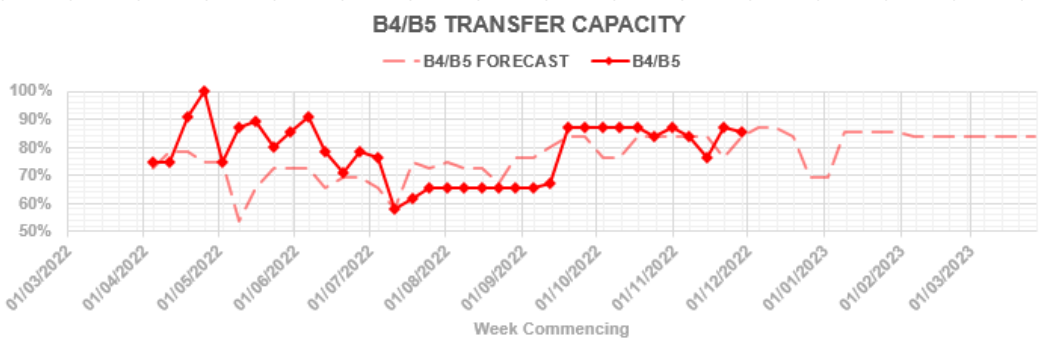

Carbon Intensity data on data portal: https://data.nationalgrideso.com/carbon-intensity1/carbon-intensity-of-balancing-actions

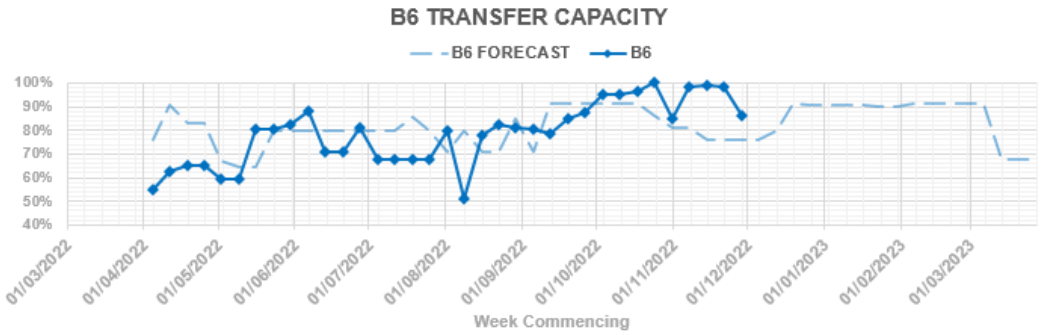
# ESO Actions | Tuesday 22 November – Highest SP Spend ~£633k over

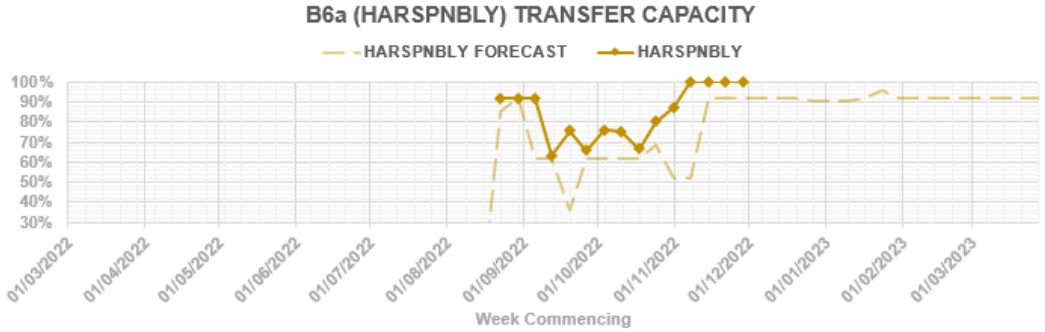



Carbon Intensity data on data portal: https://data.nationalgrideso.com/carbon-intensity1/carbon-intensity-of-balancing-actions

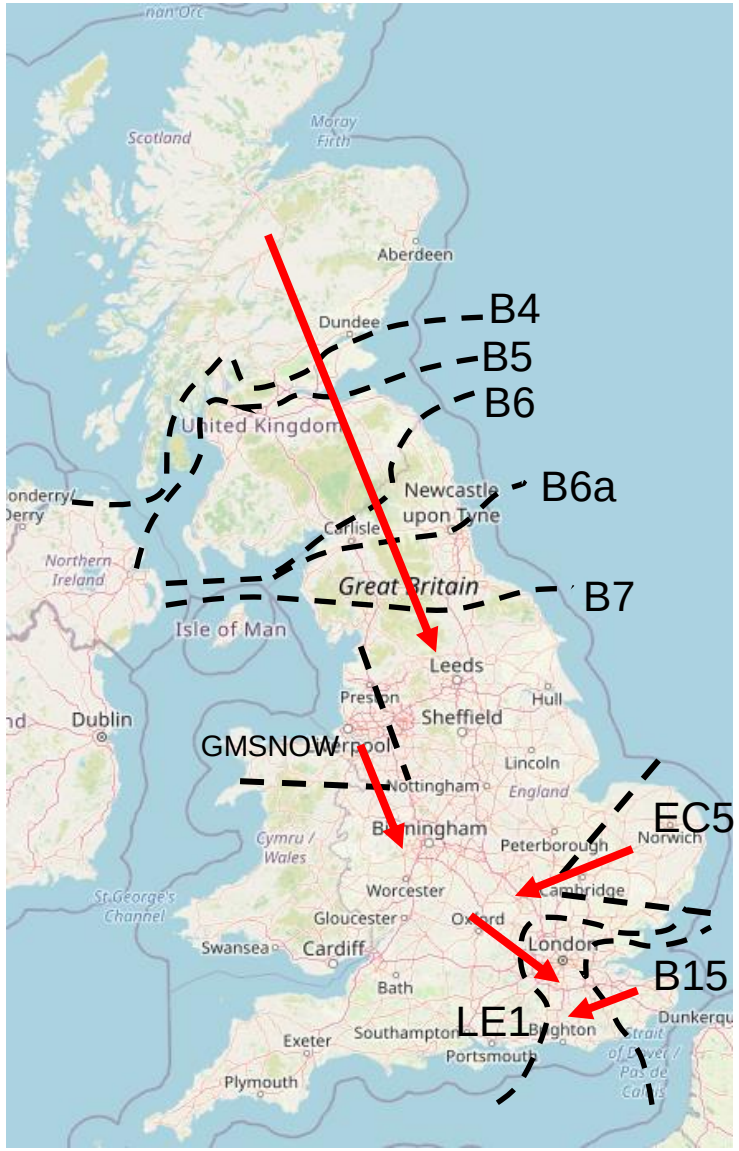
# Transparency | Network Congestion



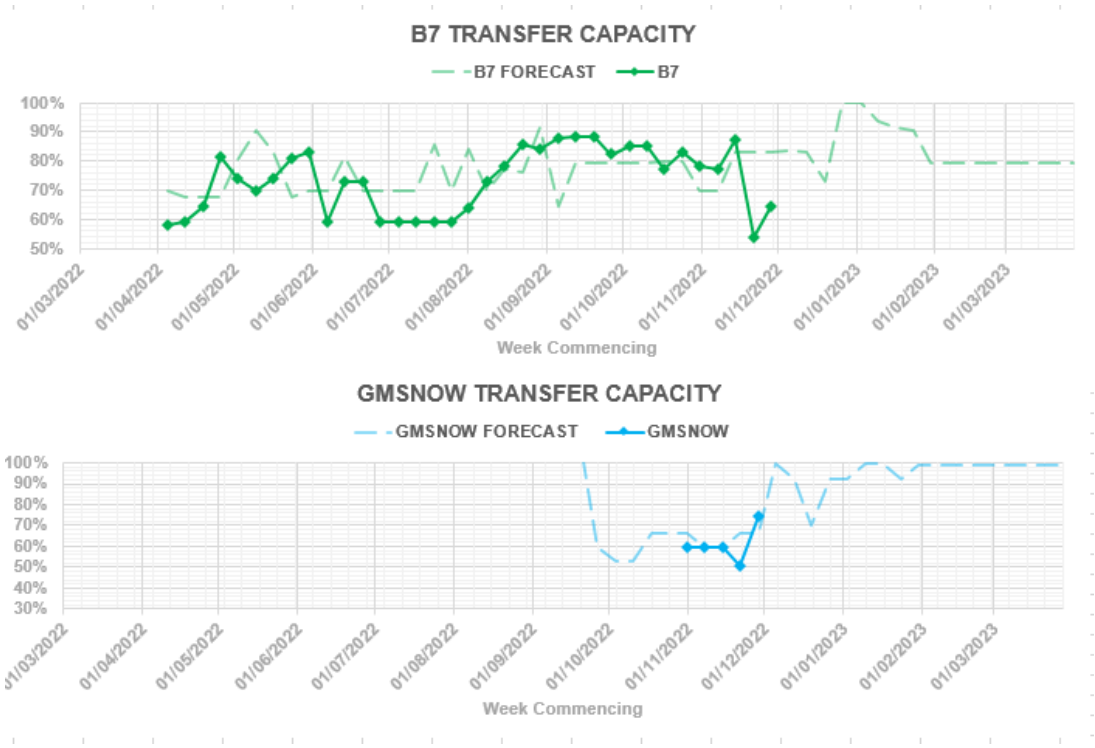




| Boundary | Max. Capacity (MW) |
|---|---|
| B4/B5 | 2750 |
| B6 | 5900 |
| B6a | 6300 |
| B7 | 9300 |
| GMSNOW | 4550 |
| EC5 | 5000 |
| LE1 | 8400 |
| B15 | 7500 |




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

# Transparency | Network Congestion

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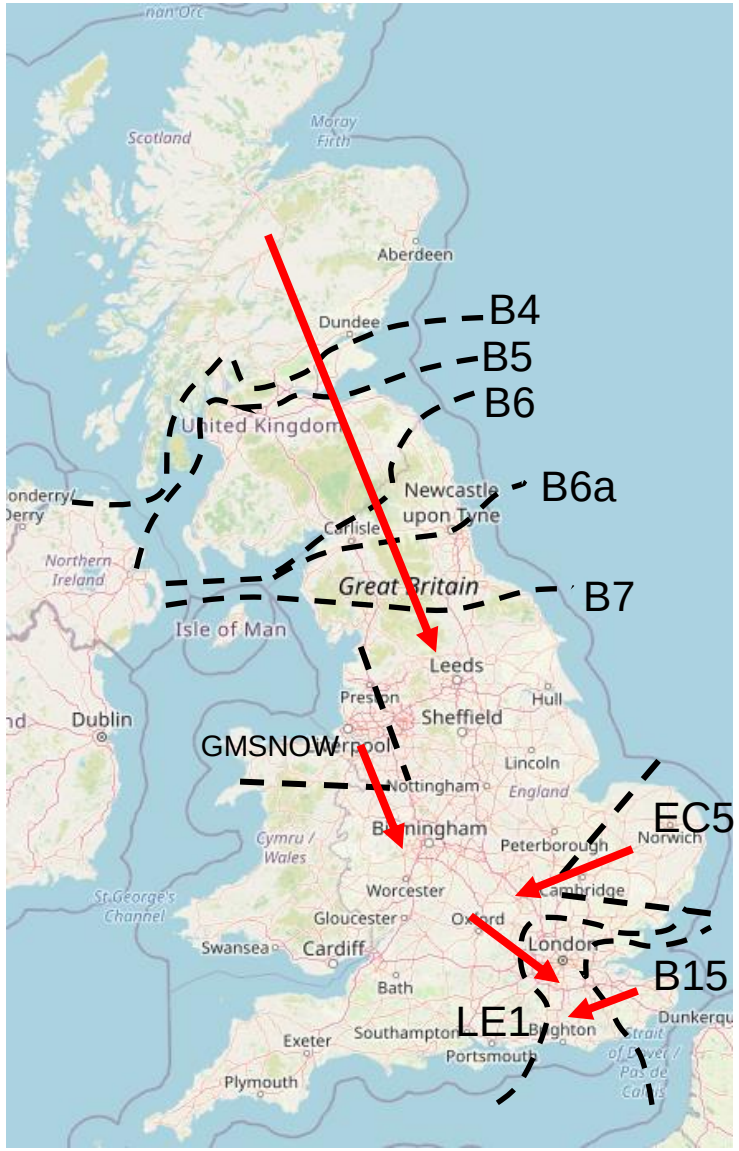


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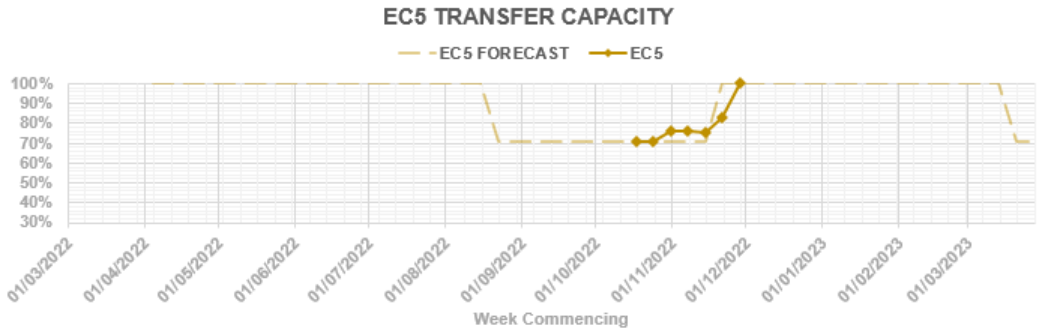
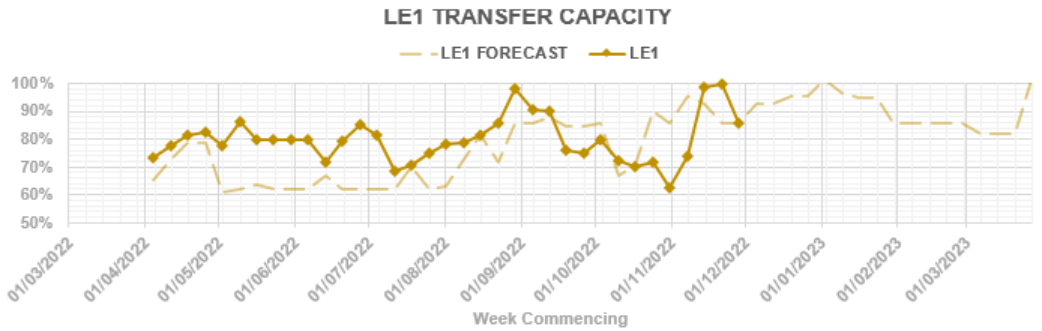
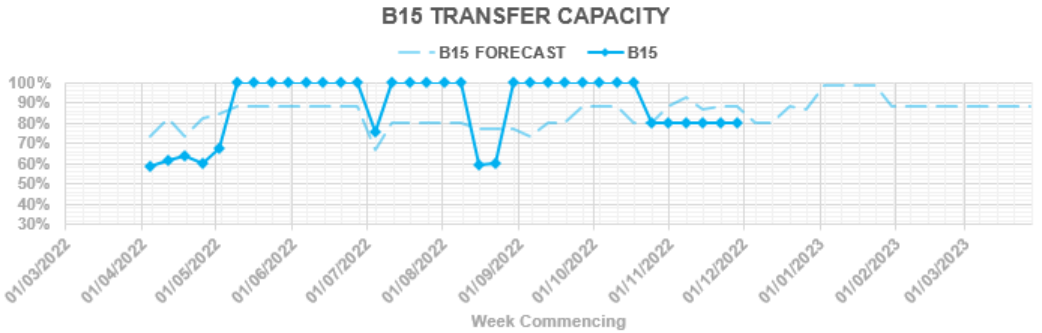
# Transparency | Network Congestion

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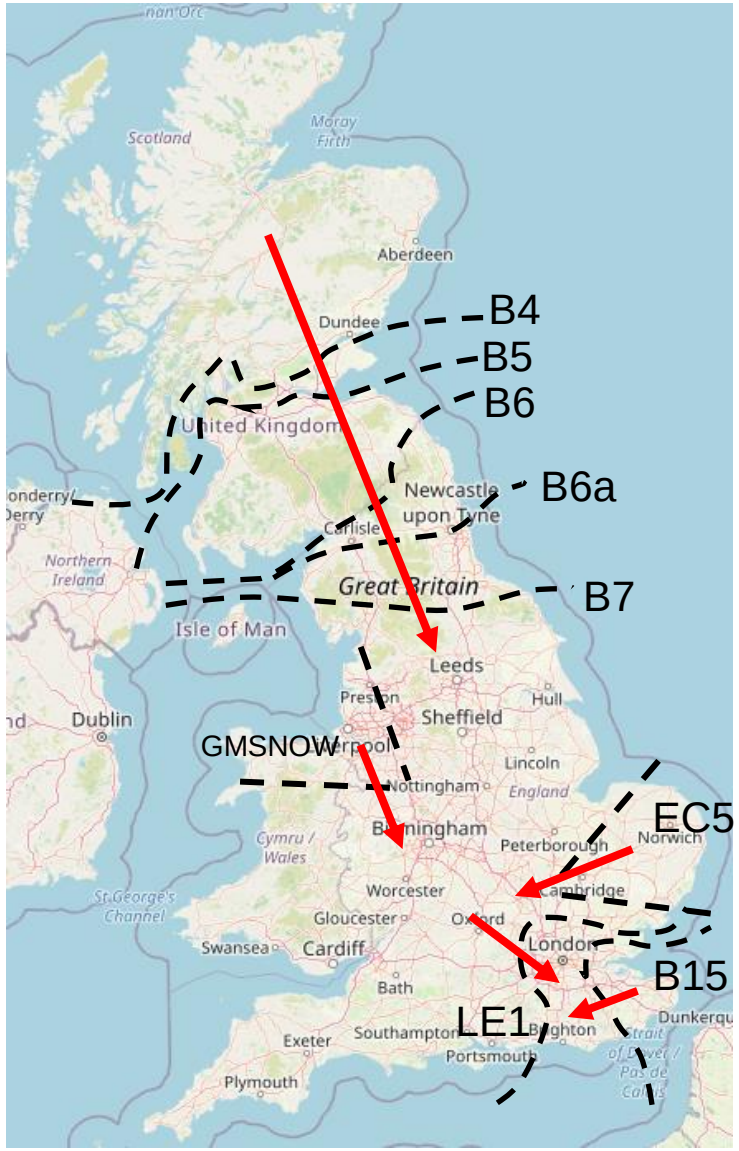


Day ahead flows and limits, and the 24 month constraint limit forecast are published on the ESO Data Portal:
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# Stability Pathfinder Phase 3

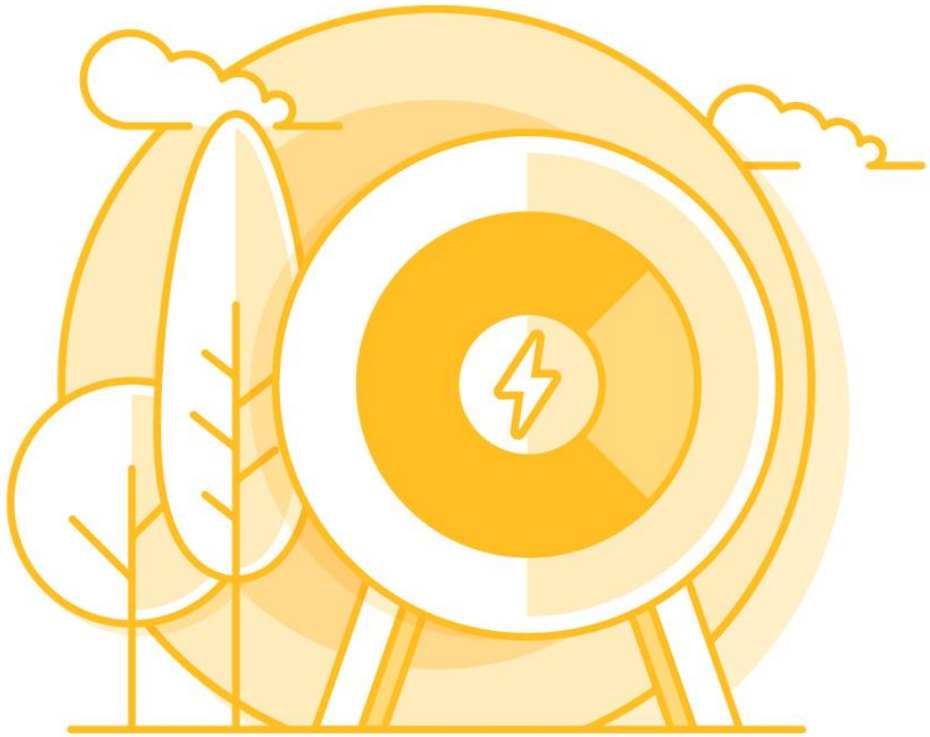
## On Wednesday 23rd November ESO announced the results of Stability Pathfinder Phase 3

### *Background*

As traditional coal and gas plants are being replaced by renewable forms of generation in Britain's energy system, the transmission system inertia and short circuit levels are falling. Renewable generators like wind and solar connect to the grid in a different way, which doesn't provide the network with the same stabilising properties.

Following the Stability Pathfinder Phases 1 and 2 tenders, the Stability Phase 3 tender was launched in December 2021 to increase short circuit level and inertia across various regions in England and Wales.

The tender has completed and ESO have awarded contracts to the successful solutions.



### *Results*

29 contracts have been awarded to 6 providers for the provision of long-term stability services between 2025 and 2035

These contracts will provide **12.7GVA** of effective short circuit level and **17.1GW.s** of inertia

These contracts will help reduce the carbon intensity of the grid, supporting the ESO's ambition to operate the network with zero-carbon by 2025 and set up the UK to deliver a net-zero electricity system

If this Pathfinder had not been completed, the cost to manage these stability needs in England and Wales could cost an additional £14.9bn for the same 10-year period

For more information, please read our recent blog post, visit the Stability Phase 3 webpage, or for specific questions please email box.ESO.StabilityP3@nationalgrideso.com

### *Winning providers*

| | | |
|---|---|---|
| **Conrad Energy Limited** | **RWE Generation UK PLC** | **Transmission Investment Holdings Limited** |
| **Green Frog Power Limited** | **Statkraft UK Limited** | **WP Grid Services Limited** |

# Constraint Management Intertrip Services (formally known as the Constraint Management Pathfinders)

## On Friday 25 November ESO announced the results of the B6 CMP 2024/25 tender

### *NOA B6 Constraint Management Pathfinder 2024-25*

Contracts have successfully been awarded for the second B6 CMP tender to 15 generators for service delivery between October 2024 and September 2025. Predicted to **save the consumer £70m** in constraint costs across the duration of the contract period.

As a reminder, the B6 CMP is a post-fault intertrip that rapidly (sub-150ms) disconnects selected generators in the event of a network fault on one of the circuits that the intertrip scheme monitors and as such aims to reduce network constraint costs on the Anglo-Scottish (B6) boundary.

The results of the tender were published on Friday 25 November and you can view the results on the ESO CMP webpage, here.

### *Interim B6 CMP Savings*

Last year the B6 CMP team awarded contracts via the B6 CMP 2023/24 tender.

Four parties were already connected to the intertrip scheme, so these four contracts were able to start earlier than the B6 CMP 2023/24 contract start date of October 2023.

These contracts went live in April 2022 and in the **first month saved** approximately **72 thousand tonnes of CO2** and furthermore, **saved the consumer £30m** in constraint costs over the **first four months alone**.

### *New EC5 (East-Anglia) Constraint Management Intertrip Service*

The CMIS (previously CMP) team are delighted to announce that they will be delivering a constraint management intertrip service in the East-Anglian region. Further details will be announced in the future.

# Clarifications on CMN issued last week
# CMN interactions with Winter Contingency Contracts & Demand Flexibility Service

Richard Price – Short Term Operability Senior Analyst

ESO

Sli.do code #OTF

# CMN issued on Tuesday 22nd November 2022

A CMN was issued at 2:33pm on 22nd November for the 7pm darkness peak period at 4.5HA.

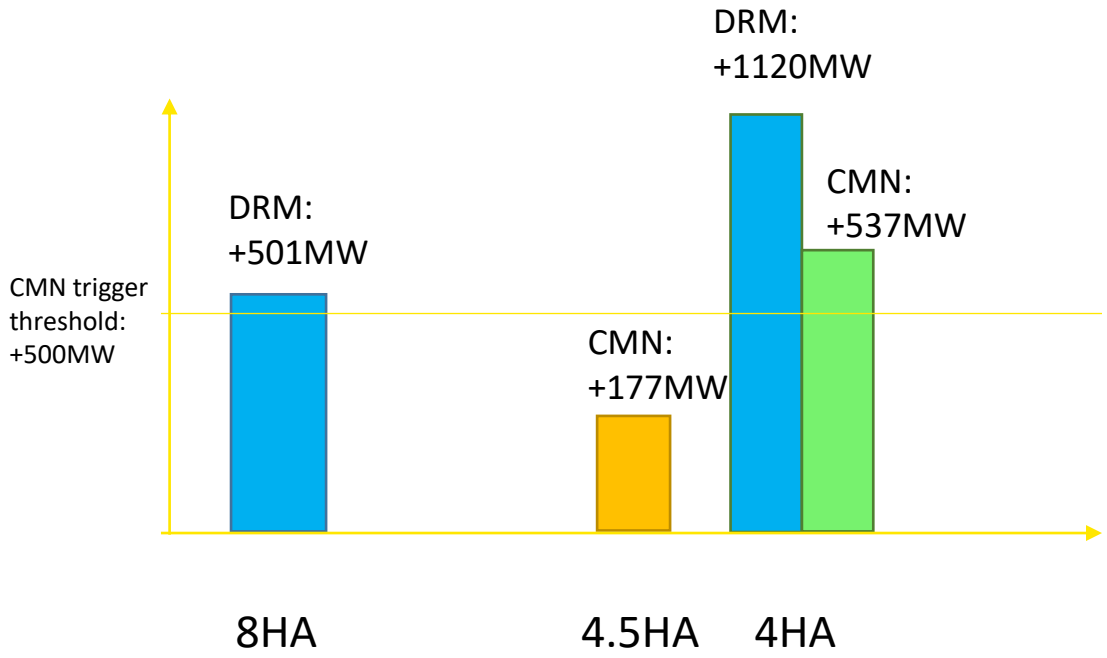
At the time the published De-rated Margin (DRM) on bmreports for 8HA was 501MW and the 4HA value published half an hour after the CMN was 1120MW.

The difference between the two calculations has been analysed and the key difference is that a single large unit was discounted by the CMN calculation because it had just desynchronised and would not be available again for the 7pm period due to its Minimum Zero Time (MZT).

The DRM calculation uses a simpler logic that if a unit has been generating at any time in the 8 hours preceding the target time, it assumes that it could have been delay desynced (kept on) by the control room if needed for margin.

The CMN was cancelled half an hour later at 3:05pm because the calculated margin had improved. The main reason for this was an increase in the wind forecast for 7pm of ~400MW compared with the previous half hour.

At all times, the control room were confident in the operating margins available to them using everyday actions.



# When a CMN is issued

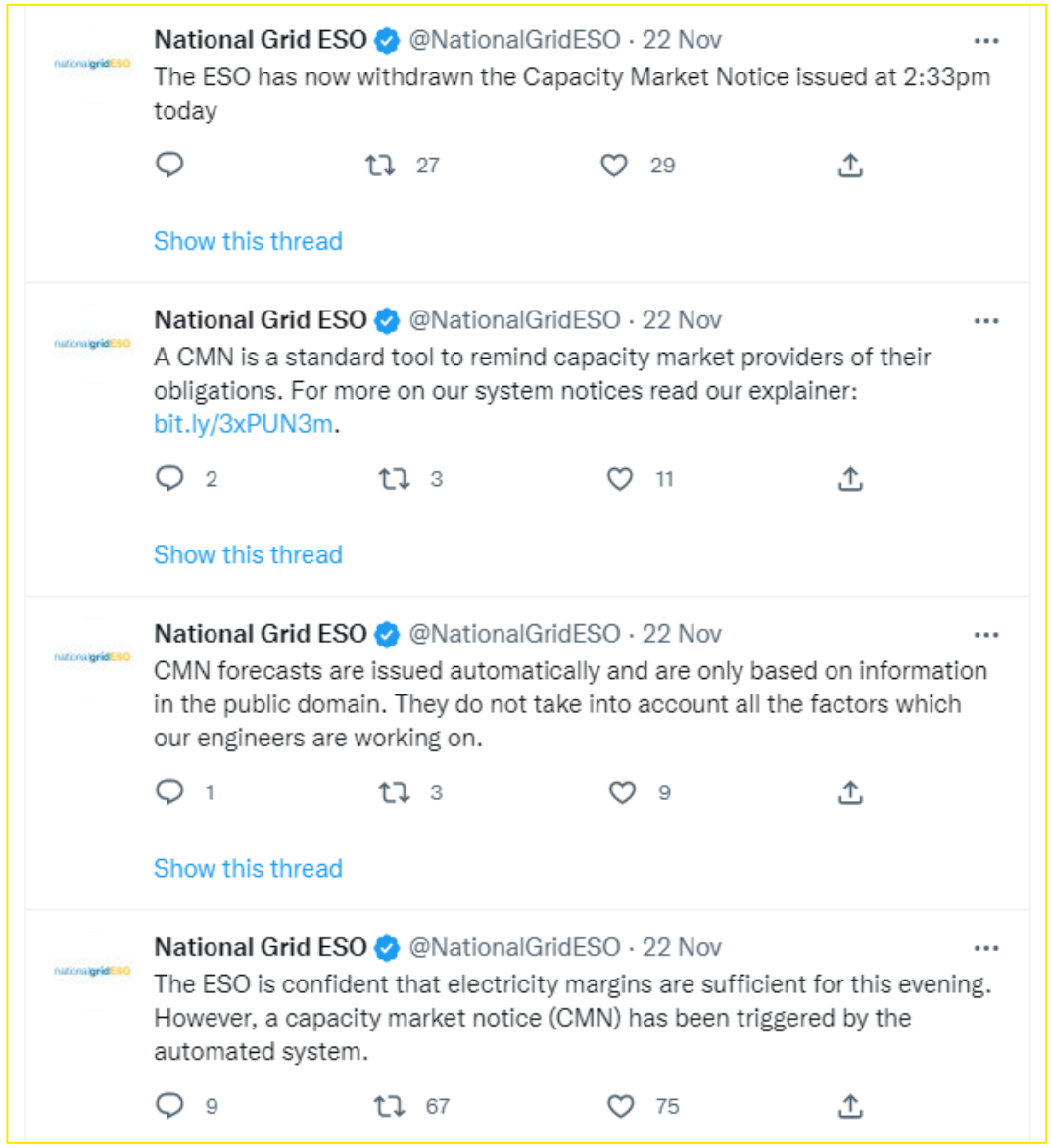
When a CMN is issued:

**Check the CMN website:** https://gbcmn.nationalgrideso.com/
On this occasion the margin was +177MW i.e. the forecast is that NGESO will be able to meet demand and its reserve requirements and still have a 200MW cushion on top of that.

**Check the BMRS:**
https://www.bmreports.com/bmrs/?q=transmission/lossloadProbDerateMargin
On this occasion the de-rated 8HA margin was 501MW and subsequently the 4HA was1120MW (more favourable than the CMN margin).

**Has NGESO issued an EMN?** Check BMRS system warnings page:
https://www.bmreports.com/bmrs/?q=transmission/systemwarning
On this occasion, no EMN (Electricity Margin Notice) had been issued. This means the control room are likely to be relatively comfortable that they have sufficient margin to meet their total requirements for the peak.

**Check Twitter:** https://twitter.com/NationalGridESO the messages opposite were posted to provide additional context and helpful information. They confirm that we were confident that margins were sufficient and it can therefore be inferred that the likelihood of Demand Control or a System Stress Event (SSE) was very low.



# Treatment of winter coal units and DFS in the CMN calculation

The Winter Contingency Contracts (WCC) and Demand Flexibility Service (DFS) will have an impact on the automated CMN margin calculations.

## Impact on CMN

### DFS

- Our demand forecasts will not be updated to reflect the instructed volume of demand flexibility. This means that the use of DFS will not feed into the CMN calculation.  The forecast margins calculated may as a result be slightly pessimistic depending on the actual delivered volumes of DFS on the day.
- The rationale for not adjusting the demand forecast is that the service is unproven with potentially significant shortfall or surplus from the instructed figure.

### WCC

- Once the coal units are warmed and have a Notice to Deviate from Zero (NDZ) time of less than 89 minutes, their availability will be captured by the CMN calculation in the same way as another other CM/BM units.
- This reflects the certainty which we will have when instructing these units to generate as they are registered Balancing Mechanism Units. This is also in line with the CM Rules.

# Previous weeks questions

Q: Have DC costs now added to the monthly MBSS balancing cost reports?

A: The Dynamic Containment (DC) costs are reported in the MBSS: in the latest MBSS they are shown in the table displayed below the response service cost chart on page 38. Link to MBSS reports and datasets on the data portal: https://data.nationalgrideso.com/balancing/mbss

Q: I'm a little confused by the answer on CM Rules and System Stress Events from last week. While I appreciate that ESO doesn't make the CM rules, isn't it the ESO which determines whether a SSE has occurred? If so, surely it must be able to say whether certain actions count as an SSE?

A: Yes we will determine whether a period is an SSE or not post event based on specific criteria.  We provided a link to a page on our website which gives more detail about the criteria, and the criteria are also included in the CM rules.

What is a System Stress Event? (nationalgrideso.com)

Q: We've seen some interconnector trades with reason code SC1 lately. It appears from your boundary documentation that B15 corresponds to SC1.5, so which of the boundaries on the boundary limit slides refer to SC1?

A: SC1 stands for South Coast 1, and is an import constraint which includes the continental interconnectors. It is similar to LE1, and restricts power flow to the south coast and interconnector exports. There was an outage earlier this week that will have triggered SC1 to constrain rather than LE1.

Q: Will demand control by voltage reduction affect imbalance price?

A: No

# Previous weeks questions

Q: Has the Crowdflex project considered the outputs from NIA Project REV? https://smarter.energynetworks.org/projects/nia2_ngeso006/

A: Thank you for pointing out the excellent work being done on Project REV. Crowdflex is currently in the Alpha stage looking at the service offering and planning for the trial of services. The trail is planned for the later stage and we hope to incorporate learnings from other projects including project REV.

Q:Is there anything ESO happy to share for feasibility study of CrowdFlex?

A: Yes –everything CrowdFlex has output is available on the ENA website and we can provide the link.

NIA - https://smarter.energynetworks.org/projects/nia2_ngeso001/

Discovery - https://smarter.energynetworks.org/projects/10027180/

Alpha - https://smarter.energynetworks.org/projects/10037410/

Q: How much notice will be given for crowdflex? How much will they get paid?

A: The trial and its parameters are being designed in the current SIF Alpha project; however, we can confirm that the aim of the Beta is to explore factors such as notice period and price sensitivity.

Q: My question on domestic flexibility is always how will this benefit the poorest consumers directly rather than just the "bougies" (including myself) than can afford smart-devices? Will subsidies for helping the poorest be designed in to CrowdFlex? (highlighted in the risk register)

A: Crowdflex is currently exploring all options, including both turn-up and turn-down events, which should enable greater participation. It is also looking to include both smart and non-smart / manual devices and we are looking to use the flexibility capital approach to ensure broad benefit and participation. We are working closely with Citizen's Advice Bureau and are aiming to include local authorities in the trial design, as we are very keen to ensure Low Income & Vulnerable consumers can take part and benefit. The project steer is to be as inclusive as possible, ensuring we do not exclude vulnerable customers.

# Previous weeks questions

Q: Why are the 12:00 DRM and LoLP forecast changes over time and is not saved anywhere?

A: The subsequent day's midday run overwrites the data from the previous day with more accurate data and so the previous data is superseded. If there is a need to see the previous data, then a request would need to be made to ELEXON who manage BMRS.

Q: I think the question on CM System Stress Events was more about eg. do CM obligations fall away once ESEC actions are initiated? If only voltage control is used, is that a SSE?

A: A System Stress event is a settlement period where a System Operator Instigated Demand Control Event occurs where such event lasts at least 15 continuous minutes, if it falls across multiple consecutive Settlement Periods, each of those Settlement Periods will be a System Stress Event. A System Operator Instigated Demand Control Event is when;

- The System Operator gives a Demand Reduction Instruction and/or an Emergency Manual Disconnection Instruction to one or more DNOs
- An Automatic Low Frequency Demand Disconnection takes place
- Unless the action is the result of a fault in the Transmission or Distribution systems
- Unless the volumes of bid offer acceptances or emergency actions to reduce output exceed the volume of the Demand Reduction instruction
- The action has an associated System Management Action Flag attached in accordance with Section Q6 (Submission of Data by the Transmission Company) of the BSC.

# Advance questions

A; Demand outturn on Monday 29th was well below all forecasts. Are there options available to the ESO to manage demand outside of DFS and the Balancing Mechanism?

-more clarification needed please

A: Was a penalty value applied in the optimisation to SCL not procured for the largest-loss requirement? If so, what was the number/curve?

-more clarification needed please

A: How can we tell which assets (both successful and unsuccessful) had their capacity considered collectively for the largest-loss calculations? If this is in an unpublished data set, please could the data be released?

-more clarification needed please

# Questions outstanding we are still working on

Q: VOLL diff GB cf EU=back off interconnector flow ahead of market suspension-assumes we are treating interconnector demand equivalent to GB demand. Arranging large block load reductions of interconnectors in this situation limit cost/ avoid demand reduction? Where does this sit in the hierarchy of actions?

Q: Shouldn't an instruction under for voltage control be signalled under P305?

Q: Can you provide a clear date for when the DM/DR volume cap of 100 MW will be raised? We'd like to know it in advance so we can get ready

Q: When will you publish the 2023 DC requirement? Are you going to publish them once a year going forward?

Q: Re the question about access to minute-by-minute data is there a way download historic minute by minute data? We have a use case where ideally; we would like even high time resolution, down to second-by-second. This related to load steps at settlement period boundaries. al@sygensys.com

Q: On 16th November settlement period 35, 3 assets were bid at -£500, for energy. Why? There is nothing on dispatch transparency. Ignoring the positive prices available to NG during the time, bidding a windfarm would have been cheaper. Bids taken significantly out of merit over the peak appears BAU.

slido

# Audience Q&A Session

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

# Feedback

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

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

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

ESO