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NESO Operational Transparency Forum

19 February 2025

NESO
National Energy System Operator

Slido update: click on the three lines to the left of forum title to access previous OTF webinars on our webpage

Introduction | Sli.do 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
- **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

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)

NESO National Energy System Operator

Future deep dive / focus topics

Slido code #OTF

Today's deep dives

High level introduction to TNUoS

Capacity Markets overview

Future

NESO Settlements overview (BSAD questions Follow Up) – 26 February

Interconnector Special refresh – 5 March (extended **90 minute** OTF)

Overview of NESO System Access Planning process – 12 March

If you have questions/suggestions of areas to cover during above presentations or ideas for deep dives or focus topics you would like us to consider, please send them to us at: box.nc.customer@nationalenergyso.com

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DFS Overview

Slido code #OTF

A recording has been published which provides a review of the Demand Flexibility Service (DFS) so far, following the evolution of the design

Watch the recording via the DFS website or

Click here

The team will be hosting a live Q&A webinar on 20 February from 2pm-3pm.

Register here

Slido is now open for submitting questions before and during the webinar.

Reach out directly via demandflexibility@nationalenergyso.com

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Quick Reserve Phase 2

Launch of EBR Article 18 consultation

We have now launched the EBR Article 18 consultation for phase 2 of Quick Reserve, which primarily seeks to introduce participation from non-Balancing Mechanism (non-BM) units.

Share your views and help shape the new service. All consultation and supporting documents can be found on our Quick Reserve webpage, along with a link to provide your response. The consultation will run until close of business 14 March 2025.

https://www.neso.energy/industry-information/balancing-services/reserve-services/quick-reserve#QR2-EBR-article-18-Consultation-documents

Slow Reserve

Slido code #OTF

On 11th Feb 2025 we presented the Slow Reserve deep-dive on service and procurement design incorporating both Balancing Mechanism and non-Balancing Mechanism market participants. Please click on individual links for the recording, slides and requirement and procurement options.

Please share your thoughts on the Short Term Operating Reserve (STOR) to Slow Reserve transition via the form (Deadline: 5th March 2025).

For any feedback on questions on the Service Design you can contact the team:

box.futureofbalancingservices@nationalenergyso.com

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Mandatory Services Overview Update

Further to the Mandatory Services Agreement (MSA) overview originally presented by Steve Miller at the OTF on 7th August 2024.

The NESO website has been updated to include FAQs re:

- Obligatory Reactive Power Service (ORPS)
https://www.neso.energy/industry-information/balancing-services/reactive-power-services/obligatory-reactive-power-service-orps

- Mandatory Frequency Response (MFR)
https://www.neso.energy/industry-information/balancing-services/frequency-response-services/mandatory-frequency-response-mfr

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Obligatory Reactive Power Service (ORPS) methodology review - webinar

- Our NIA innovation-funded ORPS project is approaching the end of its first phase, which has been focussed on industry engagement.
- We would like to invite ORPS service providers and industry representatives to a webinar to share their views on the current payment mechanism and considerations for future compensation mechanisms.
- NESO's project partners DNV are hosting the webinar on **Wednesday 19th February 14:00 to 15:30**
- If you are interested in attending, please contact innovation@nationalenergyso.com

You can find more information on the current ORPS at: Obligatory reactive power service (ORPS) | National Energy System Operator

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Webinar: Battery Storage & Skip Rates (data, methodology & next steps)

Slido code #OTF

We will be hosting a Skip Rates Webinar on **27 February 2025**.

This webinar will be facilitated by NESO leaders and technical experts. We will be covering more on data, methodology and next steps on our roadmap. You will also have the opportunity to ask questions.

Date & Time details:

Date:	27 February 2025
Time:	13:00 – 14:30

Attendance & who this forum is suited for:

This webinar is specifically tailored for professionals closely involved in dispatch efficiency, battery storage and skip rates.

If you are interested in attending, please register via this link.

For any enquiries please contact us by email - Box.Battery-Storage-Strategy@nationalenergyso.com

Skip Rates website

We will be publishing content from this webinar on our website after the event for those who are not able to attend.

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Future Event Summary

Event	Date & Time	Link
ORPS methodology review	19th February (14:00-15:30)	Contact: innovation@nationalenergyso.com
DFS Q&A webinar	20th February (14:00-15:00)	Register here
C9 Annual Review Closing Date	21st February 2025, by 17:00	Link here
Battery storage & skip rates	27th February 2025 (13:00-14:30)	Register here
Pre-Fault Frequency Control Modelling Webinar	5th March 2025 (14:00-15:30)	Register here
Balancing Programme March 2025 Webinar	6th March 2025(14:00-15:30)	Register here

Wind Physical Notification (PN) Accuracy Update

Slido code #OTF

NESO have released a revised Guidance Note for Wind FPN Accuracy on 10/02/2025.

Alongside this, a copy of consultation feedback has been uploaded to the Balancing Costs webpage and a summary of NESOs responses.

Revised Guidance Note: Guidance Note - Good Industry Practice

Consultation Feedback: Consultation responses

NESO feedback summary: NESO feedback

We would like to thank those who provided feedback to the consultation, your contributions have been crucial in shaping the revised Guidance Note.

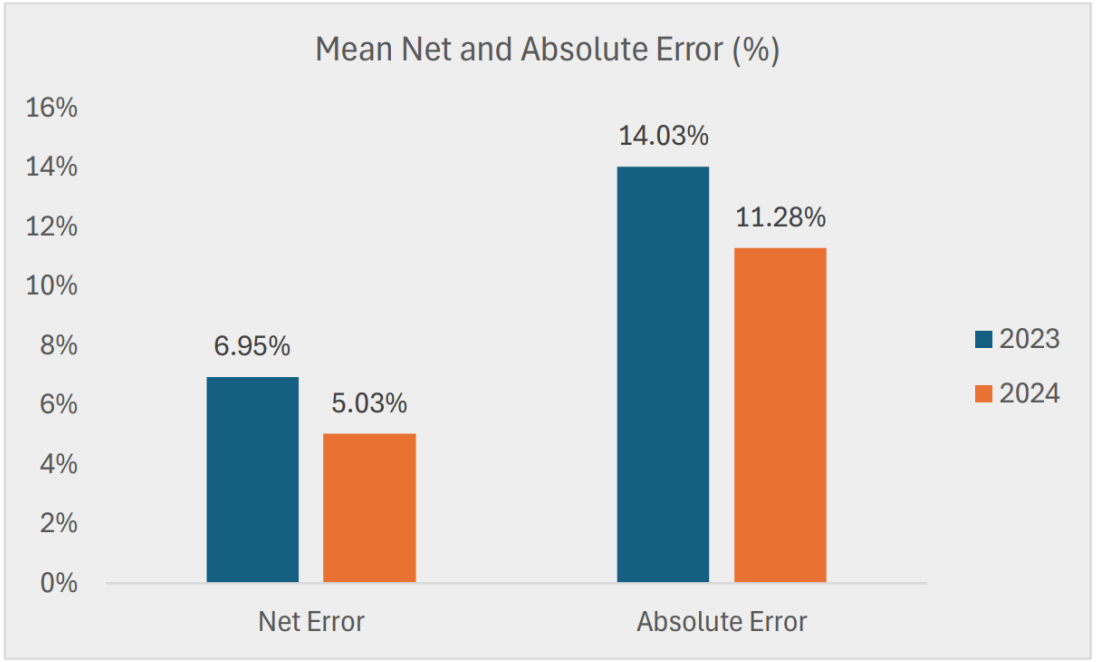

Figure 1: Mean net and absolute errors, 2023 vs 2024.

There has been significant improvements on some BMUs since the initial release of the Guidance Note in August 2024, and this has continued into 2025. The graph shows the mean Net and Absolute errors, demonstrating improvements in FPN accuracy between 2023 and 2024.

FPN – Final Physical Notification: this is the final notification of expected level of generation made by units in the Balancing Mechanism at least 60 minutes ahead of each settlement period

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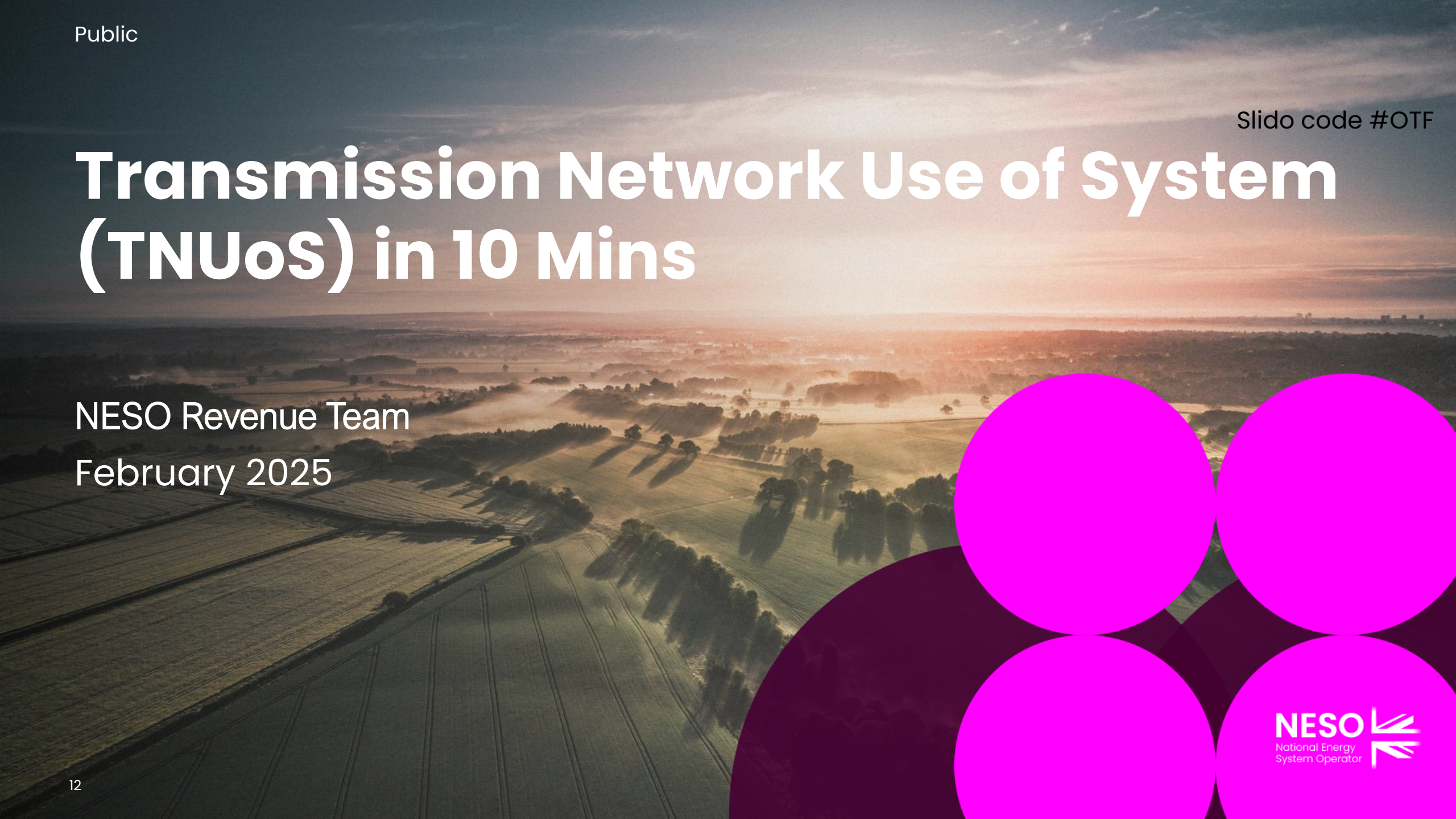
Transmission Network Use of System (TNUoS) in 10 Mins

NESO Revenue Team

February 2025



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Transmission Network Charges

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All users of the GB electricity network pay to use it in some way. Generators use the network to transport their electricity to where it is needed. Demand users use the network to consume electricity when they need it. Users of the network pay for use of the transmission system through the below charges:

TNUoS

Transmission Network Use of System Charges
~ £4.2bn TO Revenue *

Connection Charges

Charges for connecting to the transmission network (inc one-off + cap cons)
~ £400m TO Revenue *

AAHEDC Charges

Assistance for Areas with High Electricity Distribution Costs
~ £110m SHEPD Revenue *

BSUoS

Balancing Services Use of System Charges
~ £2.7bn Revenue *

Figures from Final TNUoS Tariffs for 2024/25
- For FY2024/25
- Note: figures have been rounded to the nearest £1m

What is TNUoS?

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TNUoS is the Transmission Network Use of System charge and recovers the allowed revenue for Transmission Owners for the cost of building and maintaining transmission infrastructure

Locational charge: reflects the incremental cost of power being added to/taken off the system at different geographical points

Adjustment charge: used to ensure generation tariffs are compliant with EU legislation.

Residual charge: what is not recovered under the Locational charge is recovered in this charge so that the Transmission Owners (TO's) recover their total allowed revenue

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TNUoS Revenue Components

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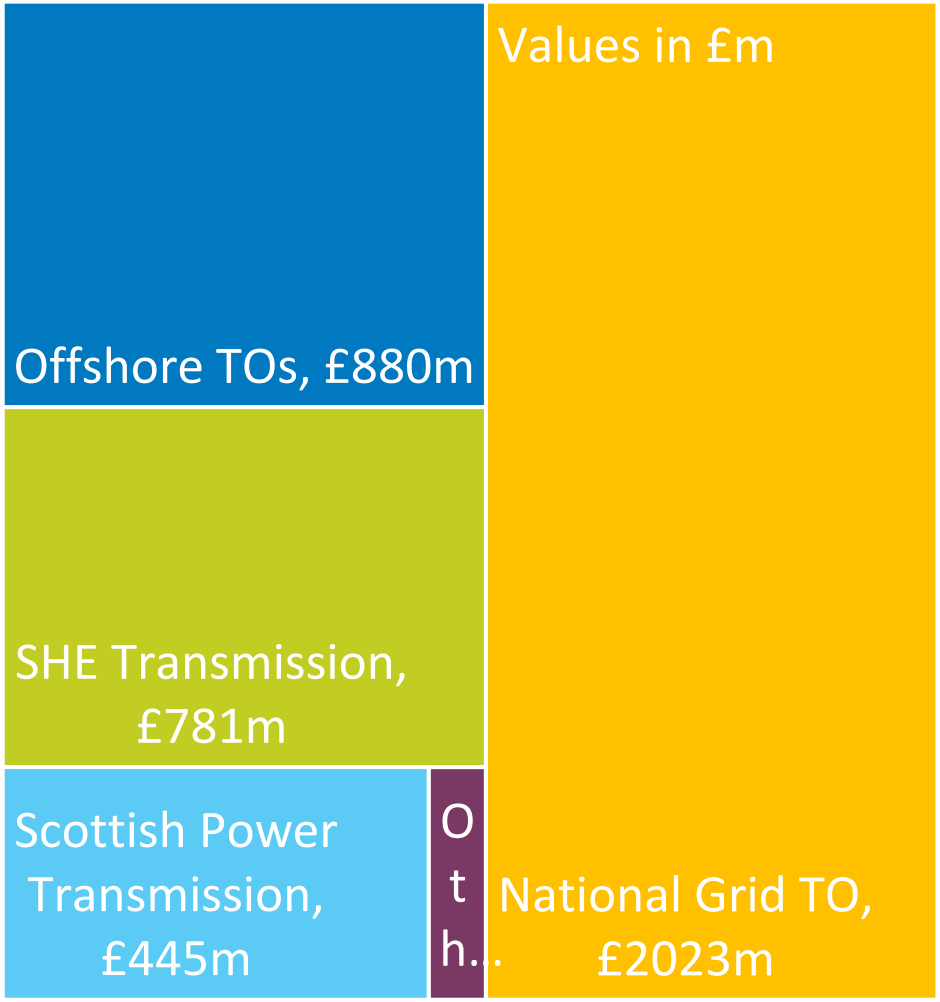


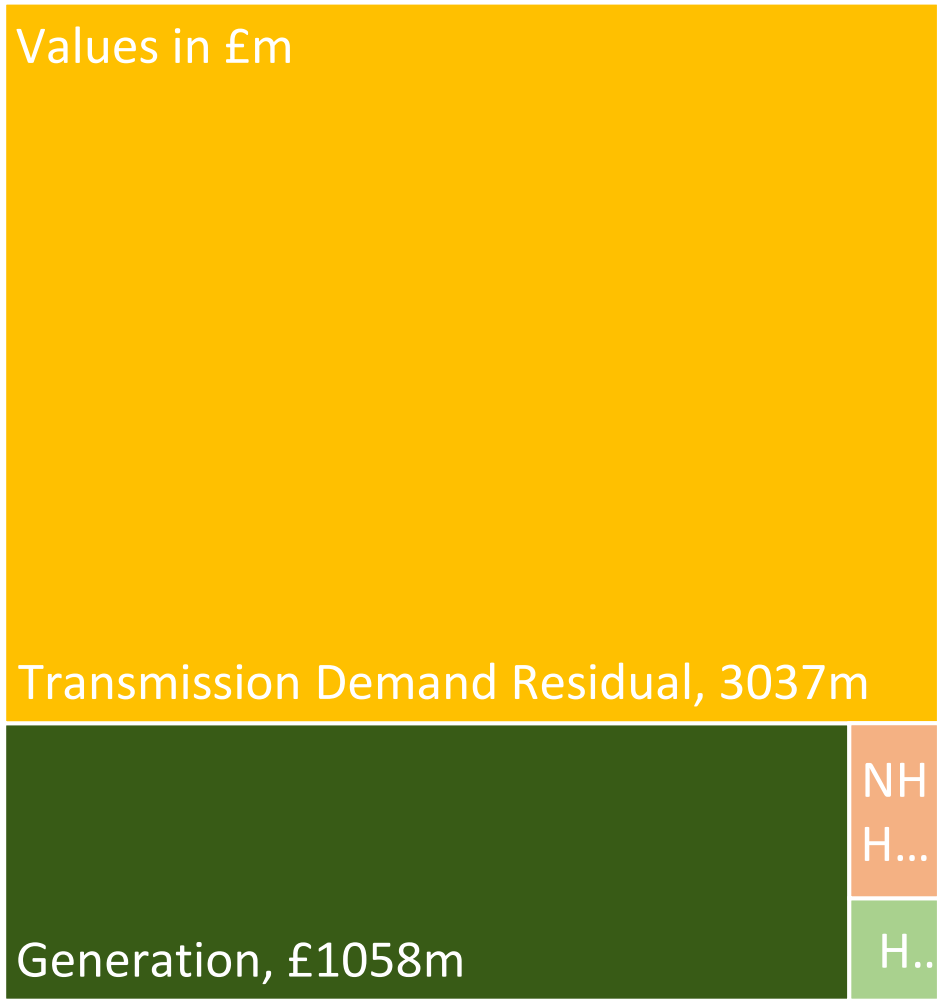
Recovers revenue for:

- Onshore TOs
  - National Grid Electricity Transmission
  - Scottish Power Transmission
  - Scottish Hydro Electricity (SHE) Transmission
- Offshore TOs
- Other

Figures from Final TNUoS Tariffs for 2024/25
Note: figures have been rounded to the nearest £1m

TNUoS paid by

- Total TNUoS Revenue for 2024/25, £4,189m
- Demand Revenue £3,131m
    - HH Demand £41m (Green Box)
    - NHH Demand £71m (Orange Box)
    - Embedded Export -£19m (No Box)
    - Transmission Demand Residual £3,037m
- Generation £1,058m



Figures from Final TNUoS Tariffs for 2024/25
Note: figures have been rounded to the nearest £1m

How TNUoS is Charged

Demand

- All licenced suppliers are liable for TNUoS charges, for their gross demand from the transmission network in one of the following 3 categories;

Half-Hourly metered demand on the basis of Triads

or

Non Half-Hourly demand, total 4pm-7pm annual consumption

or

Embedded Export credited for export over Triads

+

Transmission Demand Residual

Generators

- that are directly connected to the transmission network & Embedded generators ≥100MW TEC are chargeable

Generation TNUoS is charged on the basis of Transmission Entry Capacity (TEC)

Generators are also liable for Demand TNUoS if they take net demand during the Triad

Generator TNUoS Charge

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Two Generator Charging examples are shown below;

Gen	Gen. Zone	Fuel Type	Technology Type	Plant Type	ALF	TEC (MW)	Peak Security (£/kW)	Year Round Shared (£/kW)	Year Round Not Shared (£/kW)	Adjustment (£/kW)	Tariff	Annual Cost
C	11	CCGT_CHP	Conventional	CAR	40%	500	£2.408183	£13.364269	£5.302762	-£1.529118	£8.345877	**£ 4,172,939**
W	11	Onshore_Wind	Intermittent	INT	45%	250	£2.408183	£13.364269	£5.302762	-£1.529118	£9.787565	**£ 2,446,891**

Conventional Carbon Generators

for example: Biomass, Coal, Gas, Pumped Storage, Battery

Intermittent Generators

for example: Wind, Wave, Tidal, Solar

Note: Examples above are for MITS (Main Interconnected Transmission System) connected generators.
Excludes Local Circuit Tariffs for Non-MITS connected nodes and Local Substation Tariffs

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Tariff Timetable

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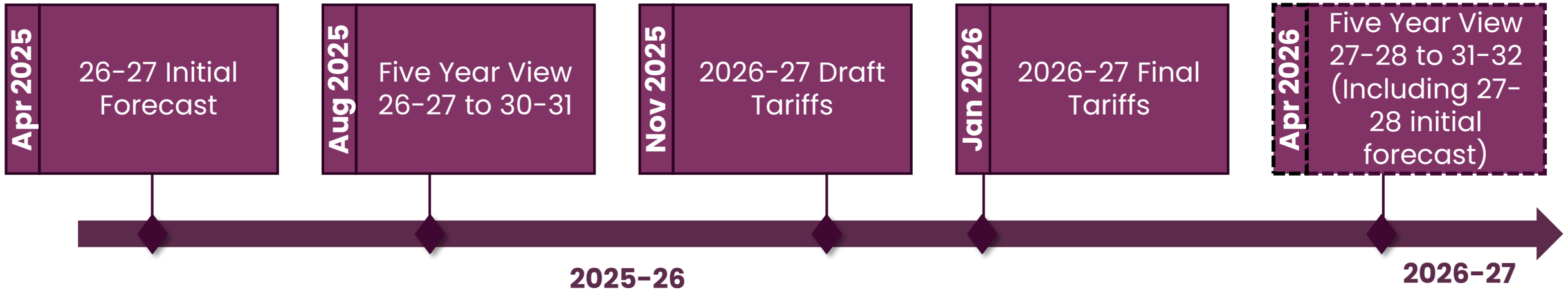

- The TNUoS forecast timetable for 2026/27 was published on 31st January 2025.
- There are currently many ongoing changes (RIIO-3 Price Control Parameter Reset & CUSC Modifications) that will impact the TNUoS charging methodology and affect the value of our forecasts. As a result, we have moved the Five-Year View to summer to allow us to make the best use of the available input data.
- The next publication will be the Initial Forecast for 2026/27 which will be published in April 2025.

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Getting involved/Other Resources

Transmission Charging Methodology Forum (TCMF)

- Further details can be found on the NESO website

Charging Future Forum

- Further information can be found on the Charging Futures Website

TNUoS Website

- Further details can be found on the TNUoS Website

TNUoS Final Tariffs

TNUoS Tariffs for 2025/26 are available at Final Tariffs 2025/26

Revenue & Charging Forum

- Presentation and Recordings of the last Forum can be found at Revenue & Charging 2024

Transport and Tariff Model Training

- Please provide suggestions and register your interest via TNUoS.queries@nationalenergyso.com
- The recordings from the last training session can be found Training Videos

If you're not already subscribed to our mailing list, you can subscribe here

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tnuos.queries@nationalenergyso.com

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Public

Introduction to the Capacity Market

19th February 2025

Slido code #OTF

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Capacity Market Overview

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- Introduced by the Energy Act 2013.
    - Ensure the security of Great Britain's Electricity Supply.
    - Incentivise investment in maintain and refurbishing existing Capacity and incentivise financing New Build Capacity.
    - Provides incentive for Capacity to be on the Electricity system and deliver during System Stress Events
- Involvement in the Capacity Market **does not** exclude Units from participating within the Wholesale Market but does have restrictions as to other subsidies the Unit can receive, such as the unit is unable to participate in Contracts for Difference.
- 20 Capacity Auctions have been conducted since the Capacity Markets inception in 2013.
    - A total of **542.6 GW procured** across all Auctions conducted since 2014.
    - **6,372 Capacity Agreements** awarded in total.
    - **3,324 Agreements** are classified as **Active** (227.6 GW of Capacity) covering current and future Delivery Years.
    - **2,623 Agreements** have **Expired** (295.9 GW of Capacity).
    - **368 Capacity Agreements** have been **Terminated** across the 20 Auctions representing 14.6 GW.
- Average Clearing Price of £27.65 kW/per Annum across all Auctions conducted.
    - Highest Clearing Price of £75.00 kW/per Annum (T-1 Delivery Year 2022/23).
    - Lowest Clearing Price of £0.77 kW/per Annum (T-1 Delivery Year 2019/20).

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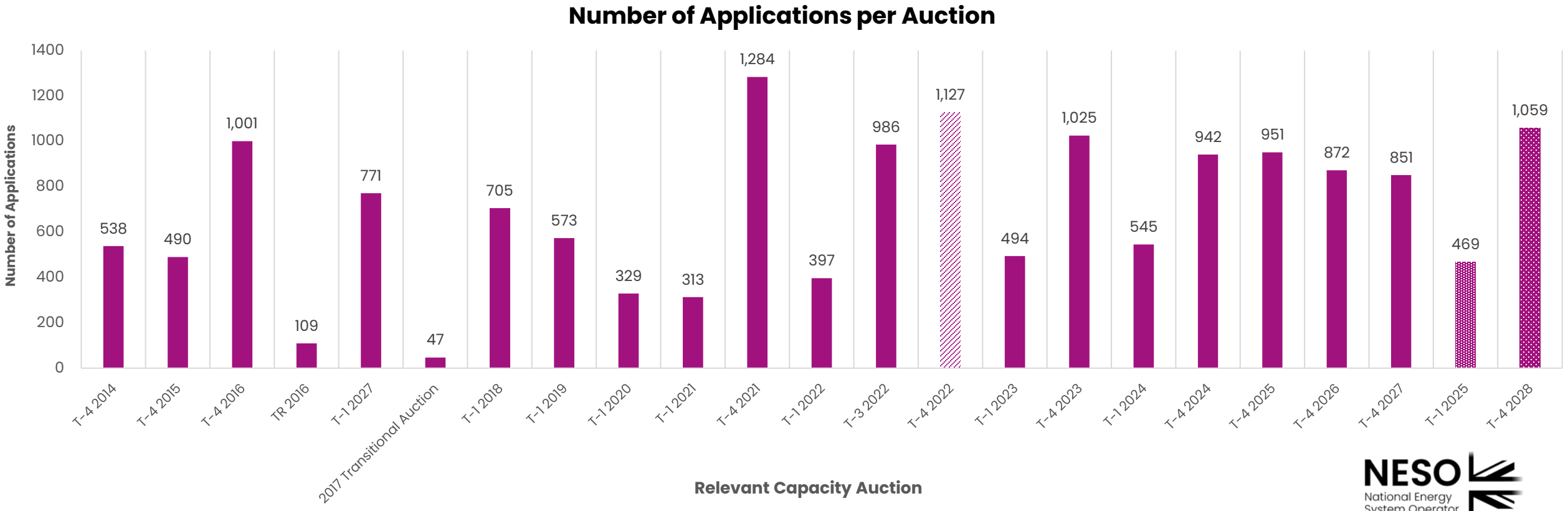
Involvement within the Capacity Market

- Since the implementation of the Capacity Market, the total number of Auctions which the EMR Delivery Body have conducted is 20.
- Although 20 Capacity Auctions have taken place, the EMR Delivery Body has administered **22 Prequalification periods**. This is due to the judicial review of the Capacity Market which caused a standstill from 2018 to 2019, with the T-4 Delivery Year 2022 – 2023 replaced by the T-3 2022 Auction, as well as the 2 Auctions which will take place 4th and 11th of March 2025.
- Across the 22 Prequalification rounds, the Delivery Body has received a total of **15,878 Applications** or Opt-Out Notifications.
- The graph below depicts the growth of the involvement within the Capacity Market over time.



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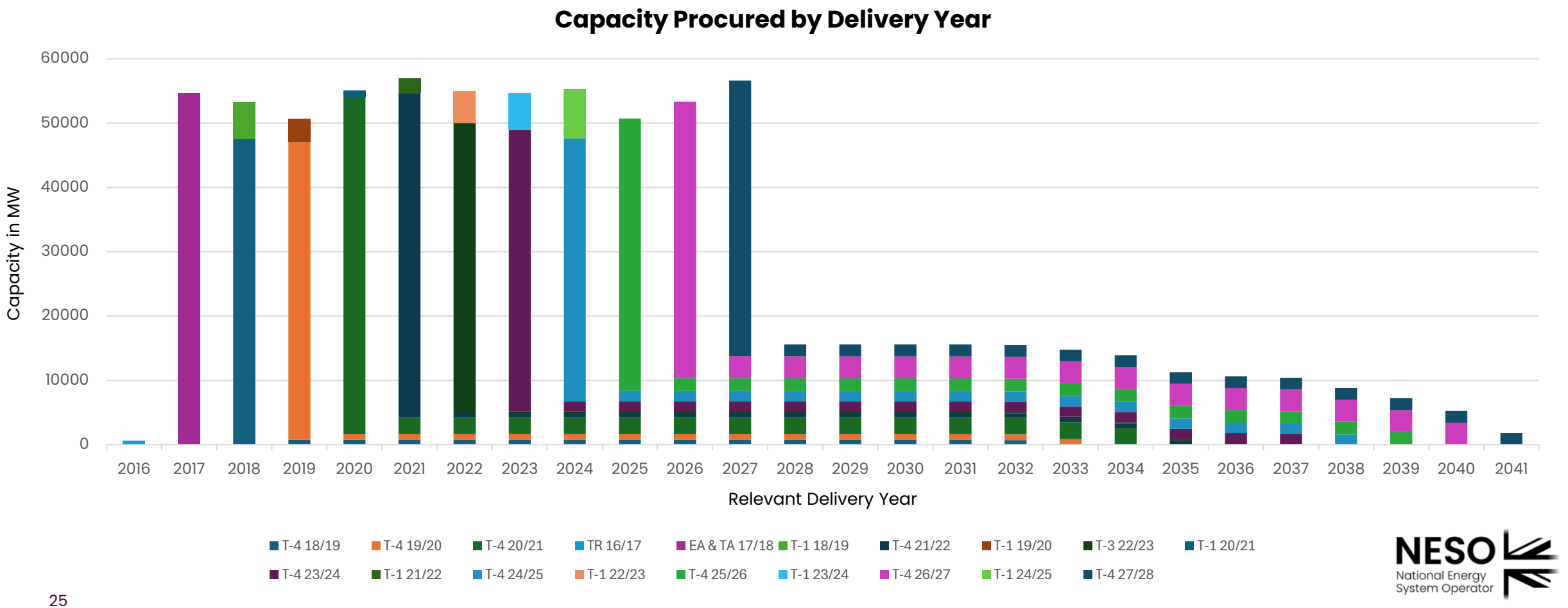
Capacity procured within the Capacity Market

- A T-4 Auction is conducted 4 years ahead of the 1st Delivery Year, with the T-1 is conducted 1 year ahead of the 1st Delivery Year and is used to ensure relevant Capacity is secured for that Delivery Year.
- Due to the Multi-Year Agreements awarded in the T-4 Auctions; you can see how this affects future Delivery Years over time.
- The graph below depicts the amount of Capacity procured for the relevant Delivery Year and by the relevant Auction.



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CM Delivery Partners

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Department for Energy Security & Net Zero

Department for Energy Security & Net Zero (DESNZ)

Sets the Capacity Market policy and oversees the changes to the scheme . The role also includes reviewing the Capacity Market legislation.

ofgem

Ofgem

Regulates the Delivery Body to ensure that market arrangements are fit for purpose. It monitors the Capacity Market, manages the changes to the Rules and is responsible for handling Tier 2 application appeals.

EMR SETTLEMENT LIMITED

EMR Settlement Limited (EMRS)

Responsible for the settlement of the Capacity Market, manage and collect metering data for key processes in addition to calculating, managing and collecting the settlement of payments by Capacity Providers.

Electricity Settlements Company

The Electricity Settlements Company (ESC)

Provides control of the monies collected and disbursed under the Capacity Market (Payment) Regulations.

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Working with Delivery Partners

- We are a trusted adviser to DESNZ and Ofgem, both because of our operational expertise and because we are able to provide insights and challenge to balance out what stakeholders say with regards to issues and changes, as we do not have commercial drivers.
- We engage with Delivery Partners through a number of established regular meetings, but also have regular ad hoc engagement at working level to raise issues to DESNZ, feed into their policy thinking and propose detailed implementation solutions.

Established

Steering Board
Monthly senior meeting to consider operational and policy issues
Department for Energy Security & Net Zero · ofgem · EMR SETTLEMENT LIMITED · Electricity Settlements Company

Delivery Group
Monthly working level meeting to address operational issues
Department for Energy Security & Net Zero · ofgem · EMR SETTLEMENT LIMITED · Electricity Settlements Company

Fortnightly 121 meeting
Regular meeting with policy team (EMRDB is regulated by a different team)
ofgem

CM Advisory Group
Industry group established by Ofgem to identify operational changes
ofgem · Stakeholders

Operational tripartite
Regular meetings to cover system, interface and process issues
EMR SETTLEMENT LIMITED · Electricity Settlements Company

Ad hoc

Working groups (e.g. REMA)
Member of groups debating and developing policy changes to CM
Department for Energy Security & Net Zero · ofgem · Electricity Settlements Company

Detailed design SMEs
Provide regular detailed input into design of policy changes. Often at short notice with tight turnaround.
Department for Energy Security & Net Zero · ofgem

Ongoing engagement
Regular calls and emails on policy questions, to identify emerging issues and seek a steer for stakeholders
Department for Energy Security & Net Zero

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Prequalification Overview

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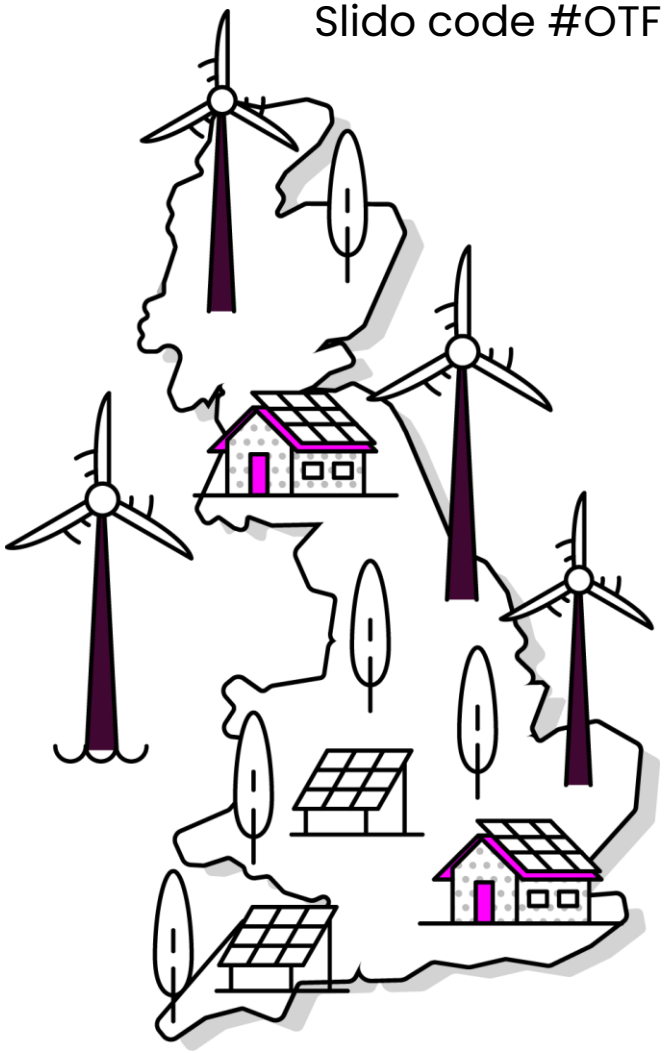
- Prequalification is a process where Applicants submit Applications to take part in the Capacity Market Auctions.
- Following assessment by the EMR Delivery Body, each Application is given a status:
  - Prequalified
  - Conditionally Prequalified
  - Rejected
- A CMU is required to have a status of “Prequalified” to enter a Capacity Auction.
- For a T-4 Auction, Applicants can apply for up to a 15-year agreement providing the CMU is either:
  - New Build CMU
  - Refurbishing CMU
  - Unproven DSR CMU
- The above CMU types are classified as Prospective within the Capacity Market Rules
- The Existing CMU types (Existing Generating and Proven DSR) and all Interconnector CMU types can only apply for a 1-year Agreement.
- For a T-1 Auction, all Applicants regardless of CMU type are limited to a 1-year Agreement.



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Prequalification Process

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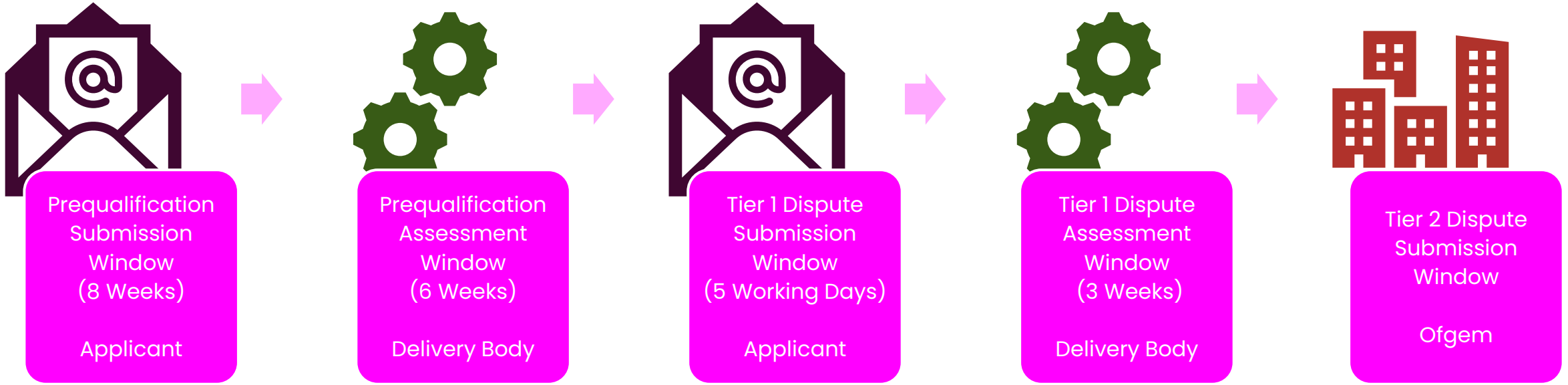

Demand Curve

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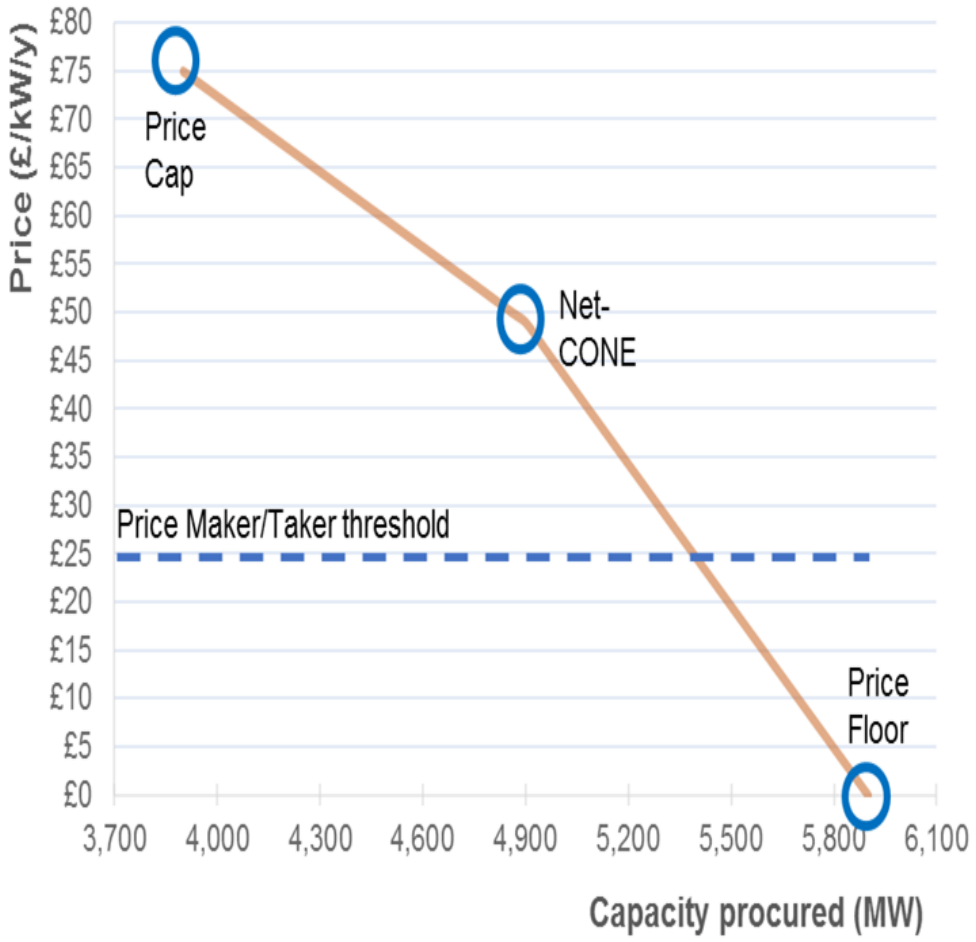
- The Demand Curve is used to determine the amount of Capacity sought to procure within the relevant round of the Capacity Auction.

- The below co-ordinates are determined by DESNZ following the Electricity Capacity Report (ECR) published by the ESO, prior to the Prequalification window. The Demand Curve could be revised up to 15 Working Days prior to the Auction.

- The Demand Curve of a Capacity Auction is determined by three target volumes:
    - **Price Cap** - the maximum level of Capacity which would be procured if the Capacity Auction cleared at £75/kW/year.
    - **Net CONE*** - "Cost of new Entrant" the Target Capacity when the Capacity Auction is at £49/kW/year.
    - **Price Floor** - the level of Capacity which would be procured if the Capacity Auction cleared at £0/kW/year.

- A **Price-Maker** CMU is able to place an Exit Bid within the Auction between £75 - £0.

- A **Price-Taker** CMU is able to place an Exit Bid within the Auction between £25 - £0.



** Net-CONE is defined as the cost of a new entrant after accounting for wholesale and ancillary market revenues. It is the key anchor point for the CM demand curve, by providing an estimate of CM revenue requirements of a new entrant.*

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Capacity Auction Format

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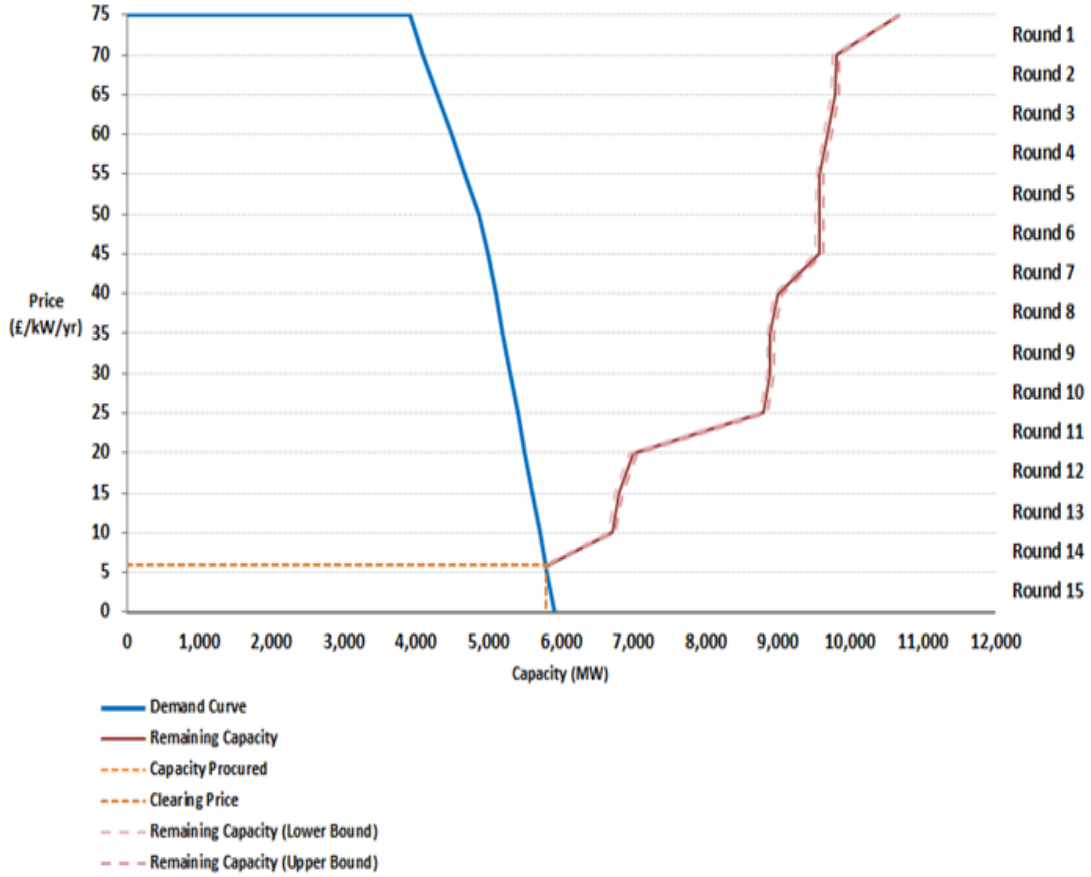
- The Capacity Auctions are run as a Descending clock Auction, the Capacity Auction starts with all Capacity and then Capacity exits the Auction.
- The Capacity Auction is a pay as clear Auction, Otherwise, all successful CMUs receive the same Clearing Price in £/kW/year.
- All eligible CMUs are in the Capacity Auction at the start of auction, with the first round between £75/kW/year, classified as the Round Price Cap, and £70/kW/year, Round Price Floor.
- The price reduces by £5/kW/year each round and the amount of Capacity sought will increase, which provides a Demand Curve.
- An Exit Bid is required for a CMU to exit the Capacity Auction. Otherwise, it may receive Capacity Agreement at clearing price.
- The Capacity Auction will clear once the Demand Curve and the remaining Capacity (Supply) meet.



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Agreement Management

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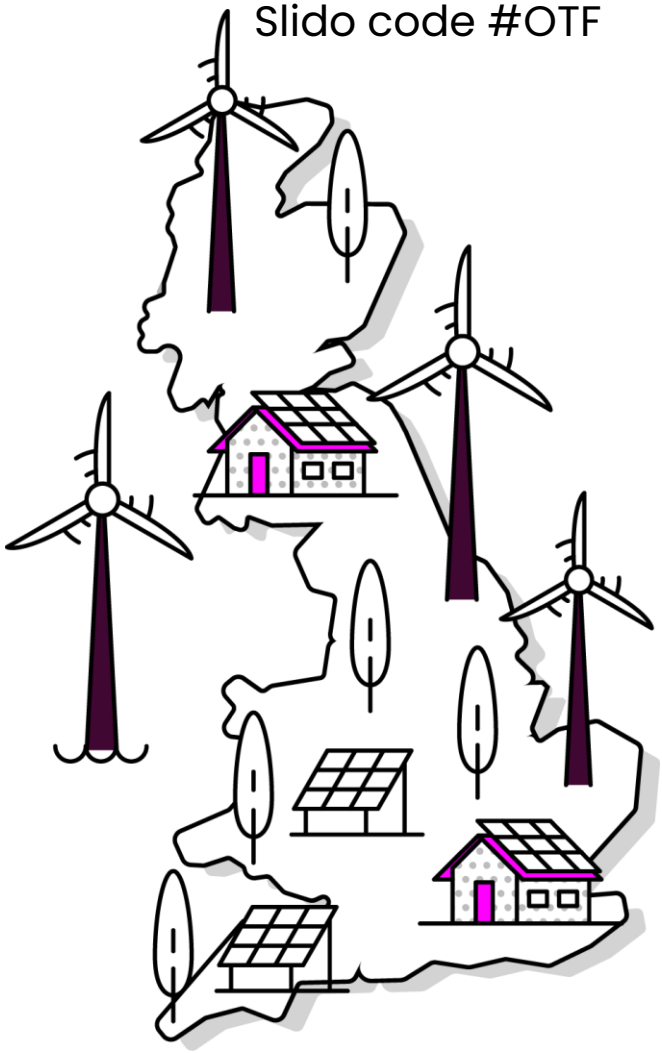
- A successful Applicant in a Capacity Market Auction will be awarded a Capacity Agreement Notice (CAN).
- The CAN is issued by the EMR Delivery Body to an Applicant which sets out the terms of the Capacity Agreement, such as Capacity Obligation and Length of Agreement, for the relevant Capacity Committed CMU.
- As a Capacity Committed CMU, the Capacity provider is subject to meeting specific obligations ahead of the relevant Delivery Year, as well as throughout the length of their Agreement.
- The relevant obligations which are required to be fulfilled depends on the CMU type.
- A **Prospective CMUs** obligations include (but are not limited to):
  - Substantial Completion Milestone (SCM)
  - Financial Commitment Milestone (FCM)
  - Connection Agreements (if deferred at Prequalification stage)
  - Satisfactory Performance Days (SPDs) (*subject to achieving SCM)
- An **Existing CMUs** obligations include:
  - Satisfactory Performance Days (SPDs)
  - Emissions (if deferred at prequalification)
  - Metering
- An '**Unproven' Demand Side Response CMUs** obligations include:
  - Metering
  - DSR Test Certificate ('proving' level of performance)
  - Satisfactory Performance Days (SPDs) (*subject to passing DSR Test)



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System Stress Event

A System Stress Event is when a Settlement Period in which a System Operator Instigated Demand Control Event occurs where such event lasts at least 15 continuous minutes.

Where the event falls across multiple consecutive Settlement Periods, each of those Settlement Periods will be a System Stress Event.

System Operator Instigated Demand Control Events:

- Demand Reduction Instruction and/or an Emergency Manual Disconnection Instruction*
- Automatic Low Frequency Demand Disconnection*

*Subject to exceptions stated in CM Rules 8.4.2

CMN automatically issued at least 4 hours ahead

T – 4 hours

→

NESO instigates Demand Control activities

T

→

NESO analyses the event and determines that a System Stress Event occurred

T + WD2 to WD5

→

NESO publishes details of the System Stress Event

Post Determination of a Stress Event

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More Information

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- **Capacity Market Information**
  - Capacity Market Guidance Site
  - Capacity Market Registers
  - Electricity Capacity Reports

- **Capacity Market Prequalification**
  - Prequalification Landing Page
  - Capacity Market Operational Plan

- **Capacity Market Auctions**
  - Auction Guidelines and Parameters
  - Auction Readiness Webinar
  - Auction Results

- **Capacity Market Agreement Management**
  - Agreement Management Landing Page

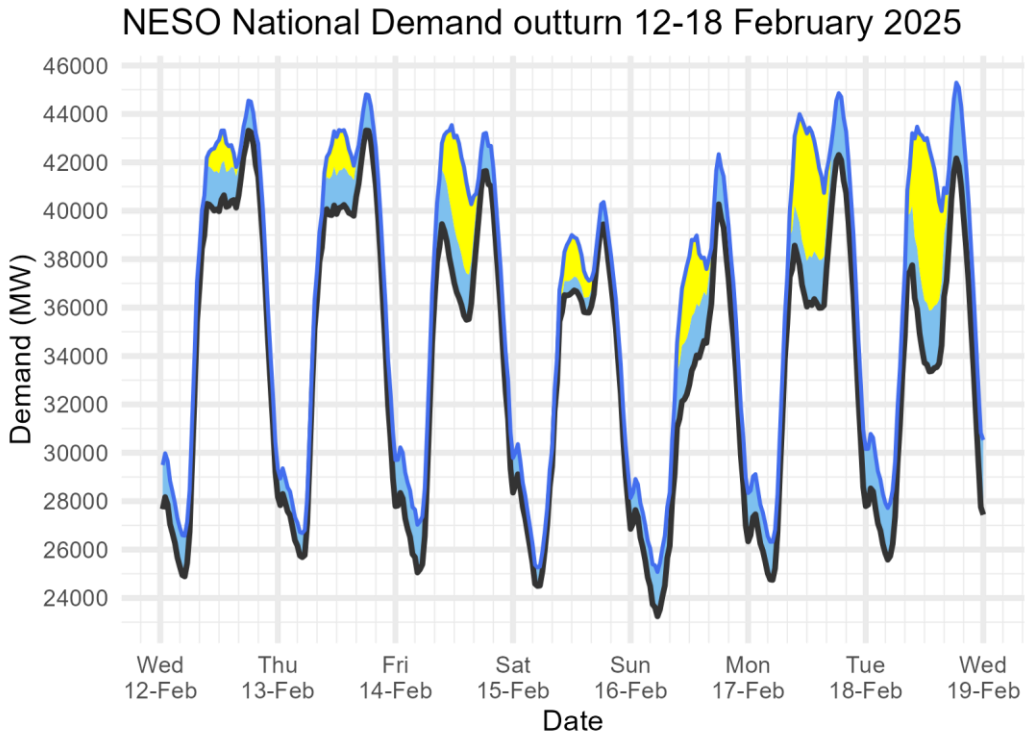
- **System Stress Event**
  - Capacity Market Notice
  - Electricity Market Notice
  - NESO's Ops Forum 'deep dive' on margins and system warnings
  - Relevant Balancing Services Guidelines
  - CM Stress Event Guide

Contact Us:

E-mail: emr@nationalenergyso.com

Demand | Last week demand out-turn

Slido code #OTF



Distributed generation

Peak values by day

Date	OUTTURN	
	Daily Max Dist. PV (GW)	Daily Max Dist. Wind (GW)
12 Feb 2025	1.4	1.8
13 Feb 2025	1.7	1.9
14 Feb 2025	4.2	2.4
15 Feb 2025	1.8	1.3
16 Feb 2025	3.2	2.3
17 Feb 2025	5.3	2.6
18 Feb 2025	6.8	3.4

National Demand

Peaks and troughs

Date	Forecasting Point	OUTTURN			
		National Demand (GW)	Triad Avoidance est. (GW)	N. Demand adjusted for TA (GW)	Dist. wind (GW)
12 Feb 2025	Evening Peak	43.3	0.0	43.3	1.2
13 Feb 2025	Overnight Min	25.7	n/a	n/a	1.0
13 Feb 2025	Evening Peak	43.3	0.0	43.3	1.5
14 Feb 2025	Overnight Min	25.1	n/a	n/a	2.0
14 Feb 2025	Evening Peak	41.6	0.0	41.6	1.6
15 Feb 2025	Overnight Min	24.5	n/a	n/a	0.8
15 Feb 2025	Evening Peak	39.4	0.0	39.4	0.9
16 Feb 2025	Overnight Min	23.2	n/a	n/a	1.8
16 Feb 2025	Evening Peak	40.3	0.0	40.3	2.1
17 Feb 2025	Overnight Min	24.7	n/a	n/a	1.6
17 Feb 2025	Evening Peak	42.3	0.0	42.3	2.5
18 Feb 2025	Overnight Min	25.6	n/a	n/a	2.1
18 Feb 2025	Evening Peak	42.2	0.0	42.2	3.1

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

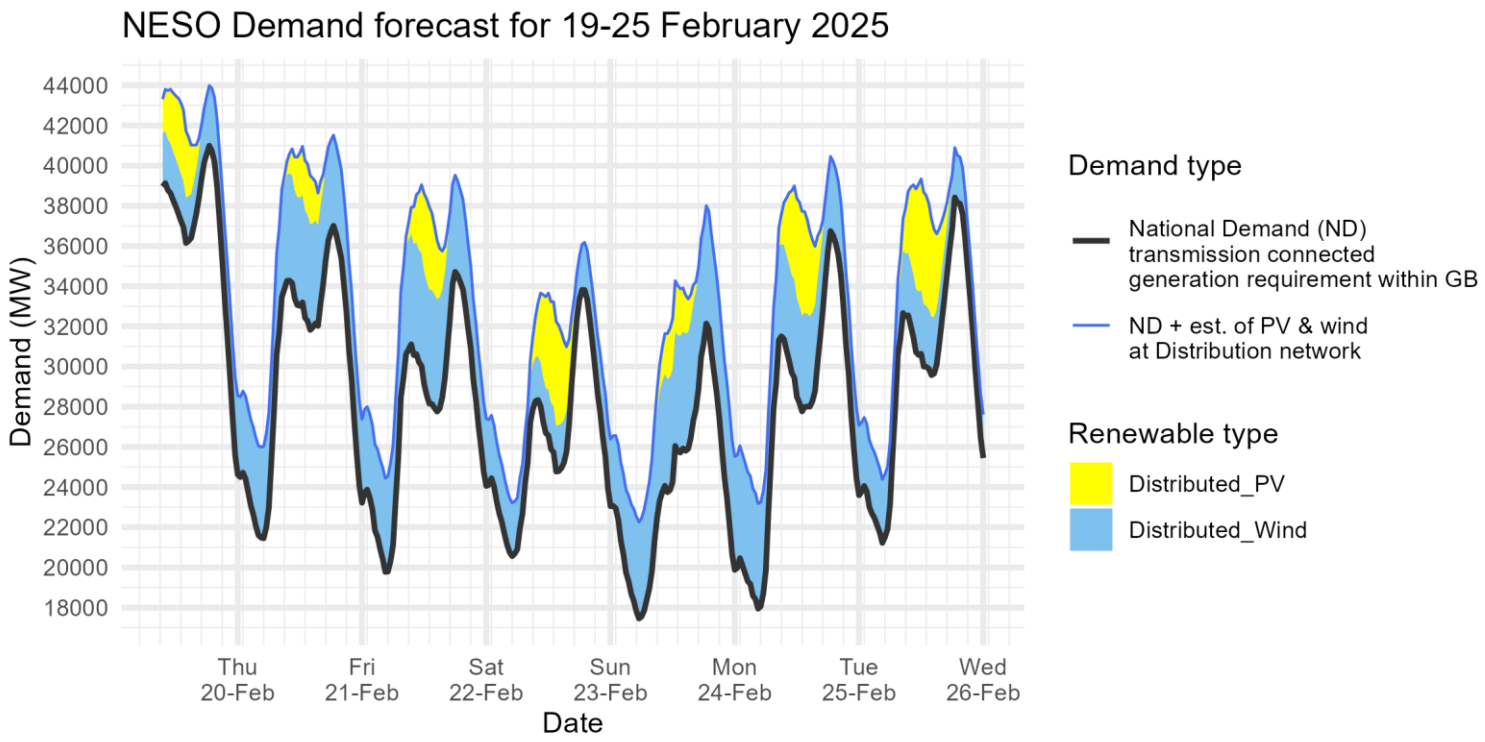
ND values do not include export on interconnectors or pumping or station load

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



National Demand

Peaks and troughs

		FORECAST (Wed 19 Feb)	
Date	Forecasting Point	National Demand (GW)	Dist. wind (GW)
19 Feb 2025	Evening Peak	41.0	3.0
20 Feb 2025	Overnight Min	21.4	4.6
20 Feb 2025	Evening Peak	37.0	4.5
21 Feb 2025	Overnight Min	19.8	4.7
21 Feb 2025	Evening Peak	34.7	4.8
22 Feb 2025	Overnight Min	20.6	2.7
22 Feb 2025	Evening Peak	33.8	2.3
23 Feb 2025	Overnight Min	17.5	4.8
23 Feb 2025	Evening Peak	32.1	5.9
24 Feb 2025	Overnight Min	17.9	5.2
24 Feb 2025	Evening Peak	36.7	3.7
25 Feb 2025	Overnight Min	21.2	3.2
25 Feb 2025	Evening Peak	38.4	2.4

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

Operational Margins | Week Ahead

Slido code #OTF

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 22nd 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 Generation (MW)	Wind (MW)	IC Flows* (MW)	Peak demand (MW)	Indicative surplus (MW)
Thu	20/02/2025	43607	18020	4740	37460	19690
Fri	21/02/2025	43955	18070	5120	35480	22570
Sat	22/02/2025	43000	11480	5120	34240	17870
Sun	23/02/2025	43192	18570	5120	32680	24920
Mon	24/02/2025	44928	16890	5120	37460	20980
Tue	25/02/2025	44941	11500	5120	39240	16060
Wed	26/02/2025	45393	10580	5120	40210	14920

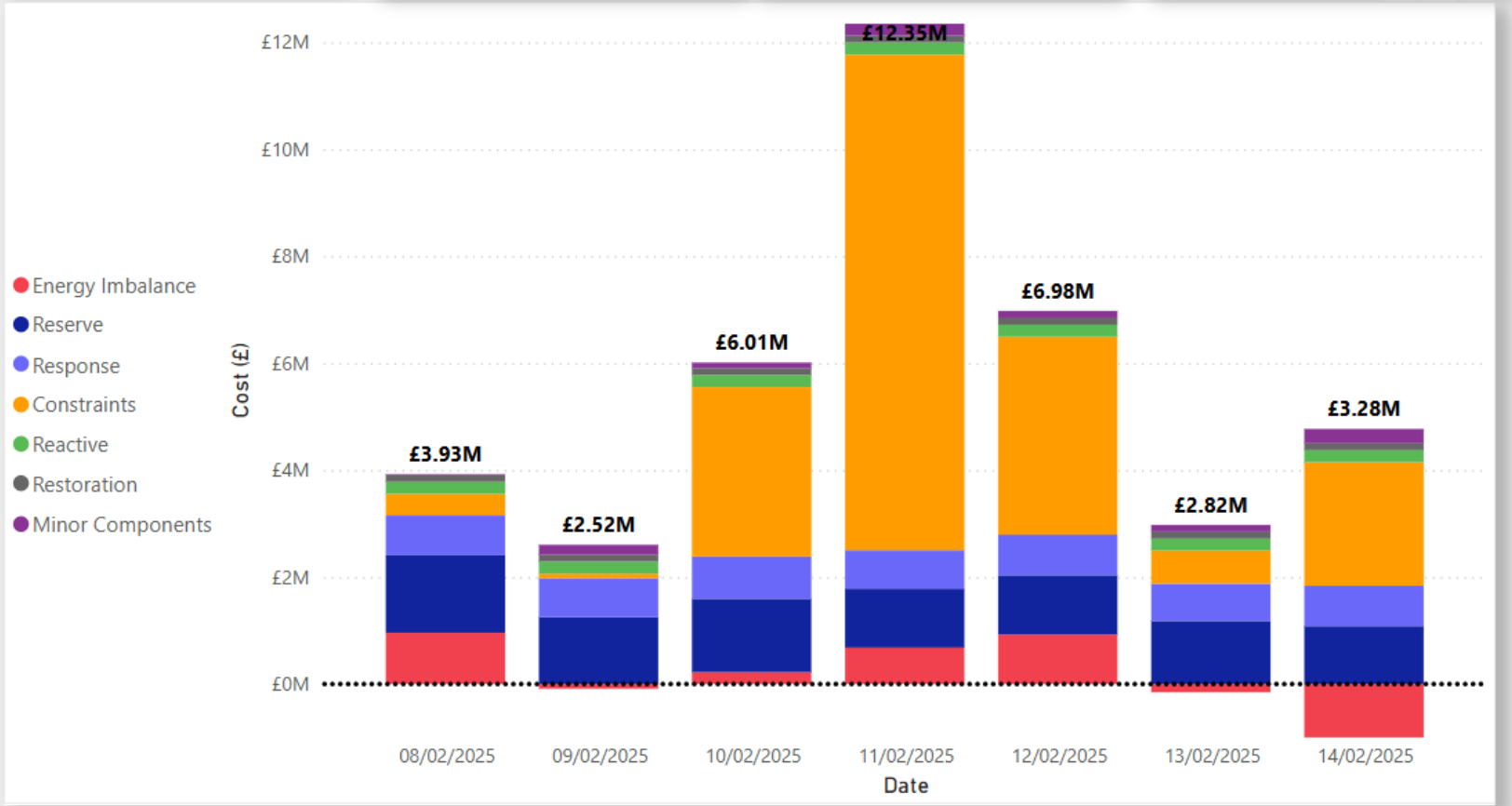
*Interconnector flow in line with the Winter Outlook Report Base Case but will ultimately flow to market price

Margins do not include NESO enhanced or emergency actions

NESO Actions | Category Cost Breakdown

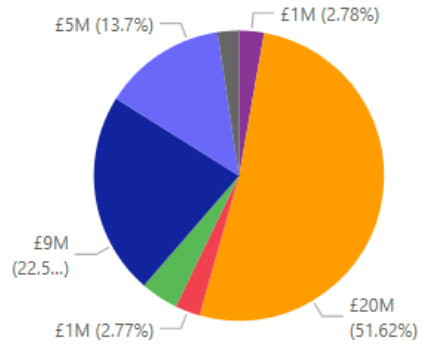
Date
08/02/2025 14/02/2025

Weekly Total Costs (£)	Last Week Total Costs (£)	Past 30-Day Average Costs (£)
£37.9M	£75.9M	£7.0M



Date	Total Outturn Cost
08/02/2025	£3,927,655
09/02/2025	£2,515,523
10/02/2025	£6,011,852
11/02/2025	£12,349,400
12/02/2025	£6,979,342
13/02/2025	£2,821,636
14/02/2025	£3,277,838
Total	£37,883,246

Weekly Cost (£) and Share (%)



NESO Actions | Constraint Cost Breakdown

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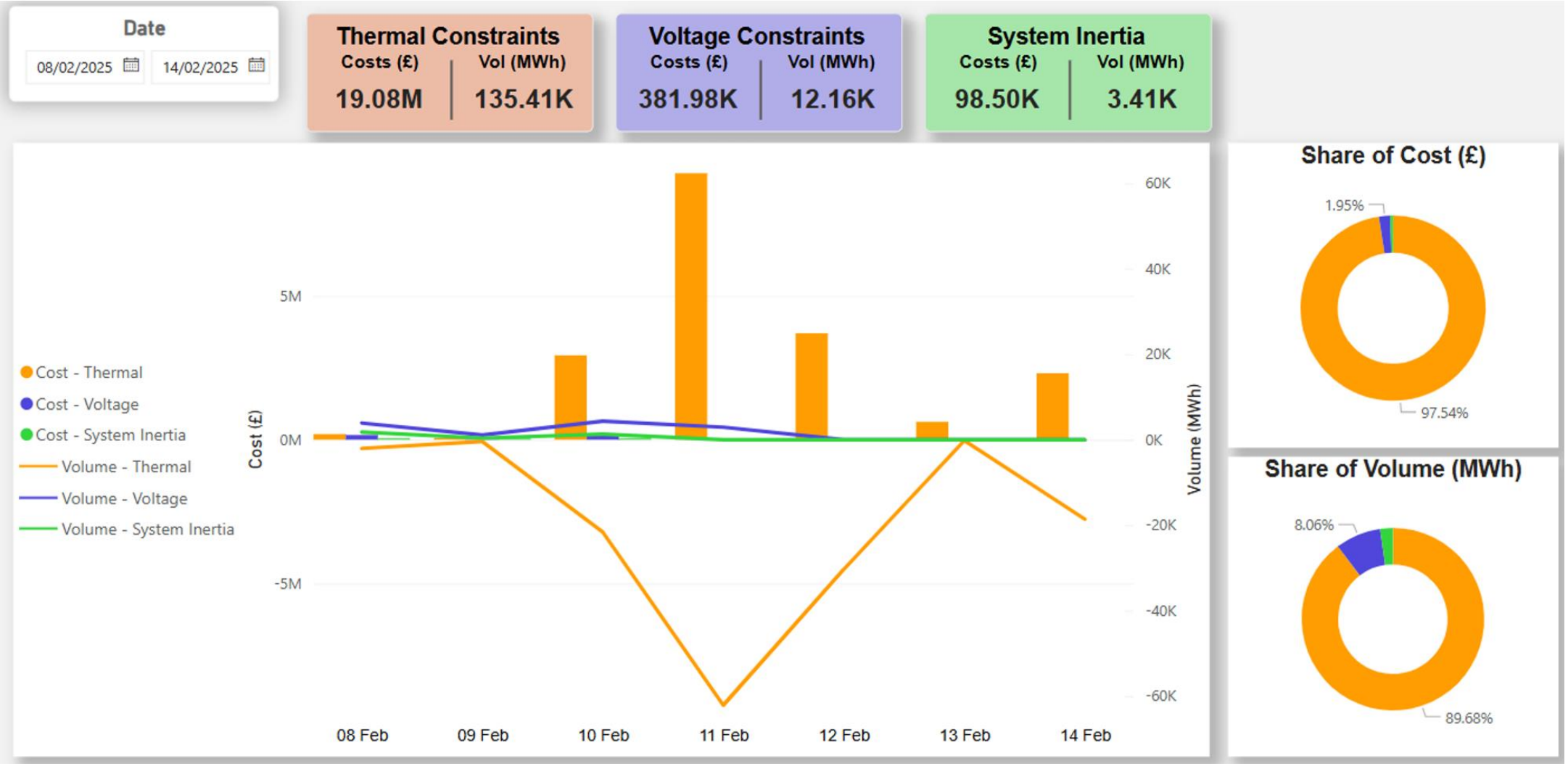
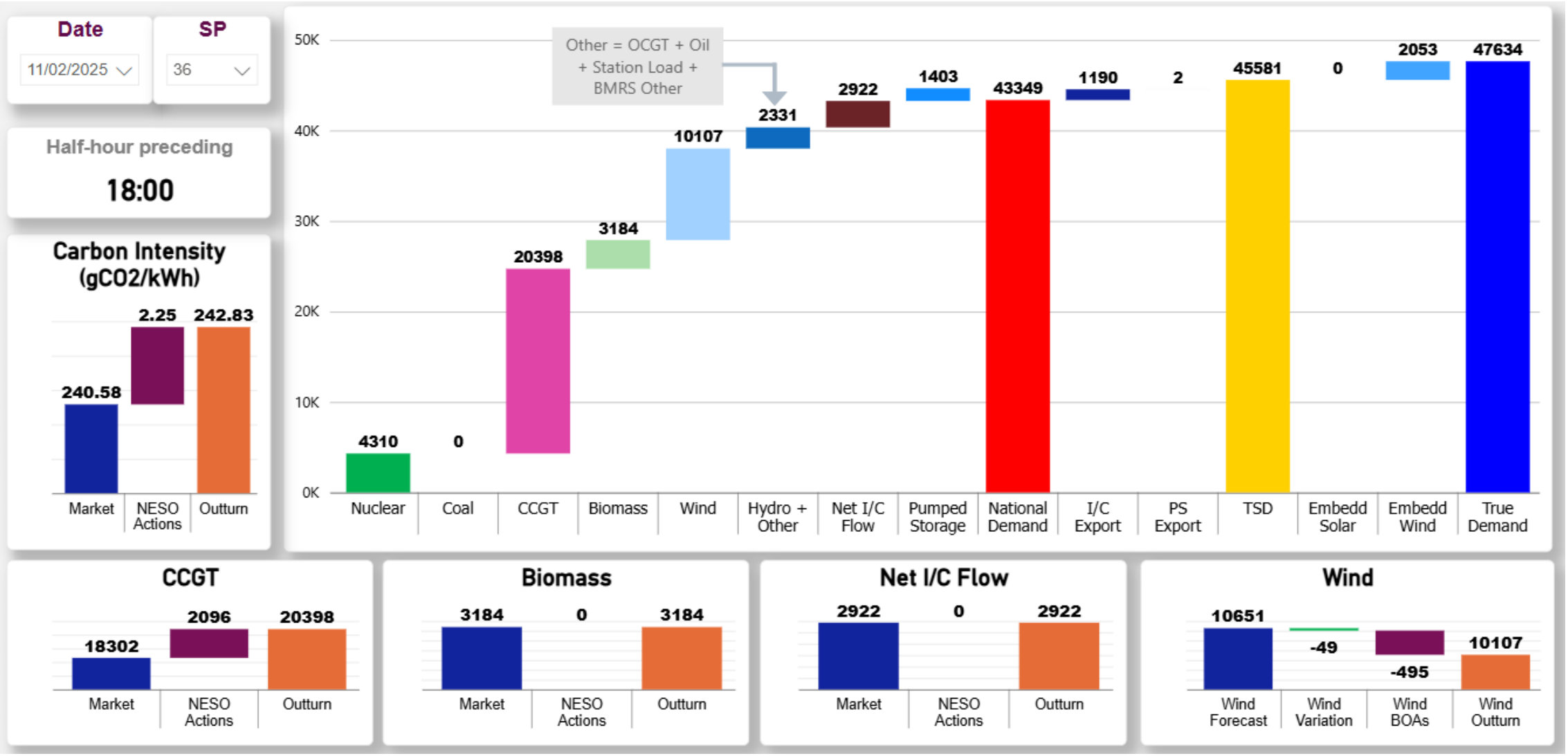


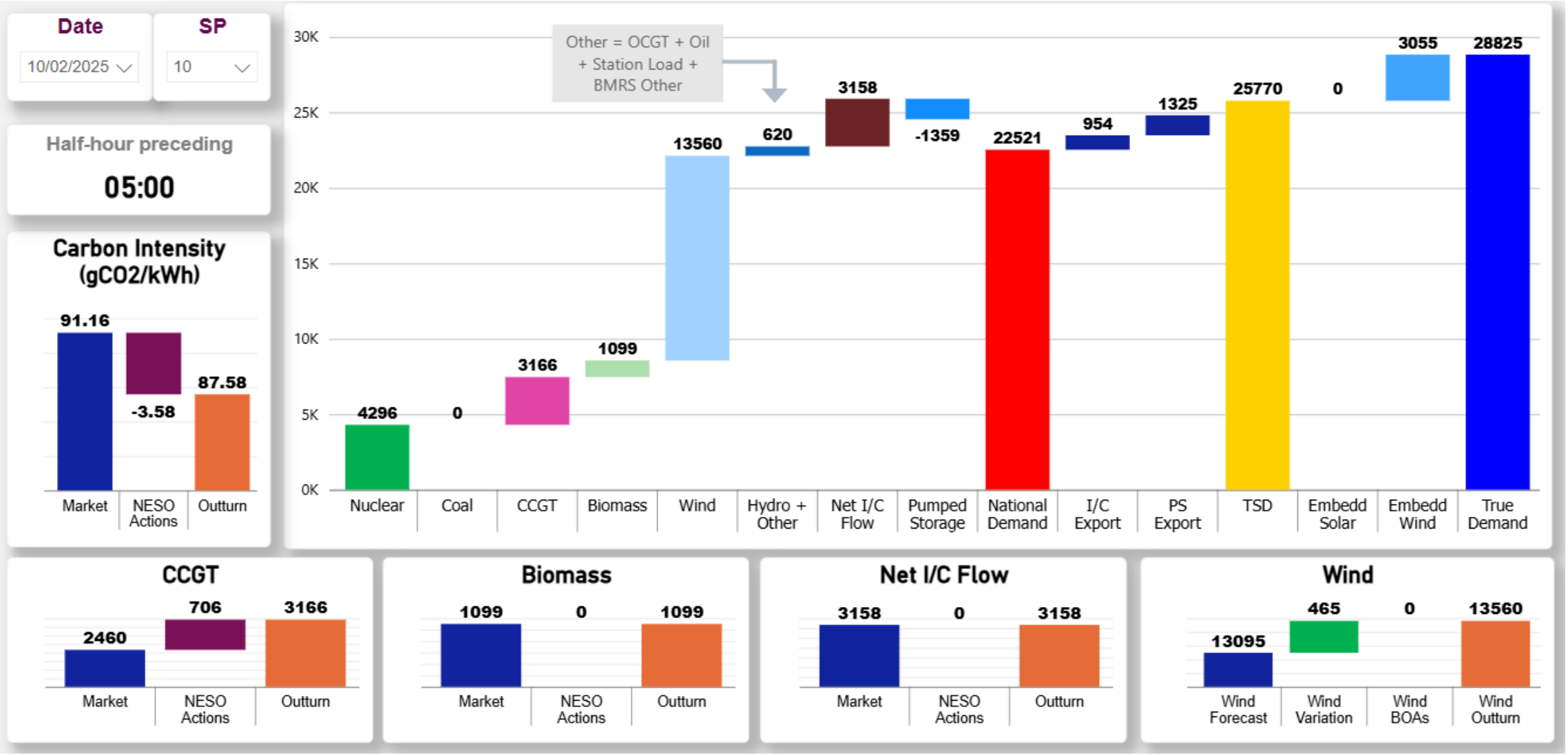
NESO Actions | Peak Demand – SP spend ~ £243k
Tuesday 11th February

Slido code #OTF



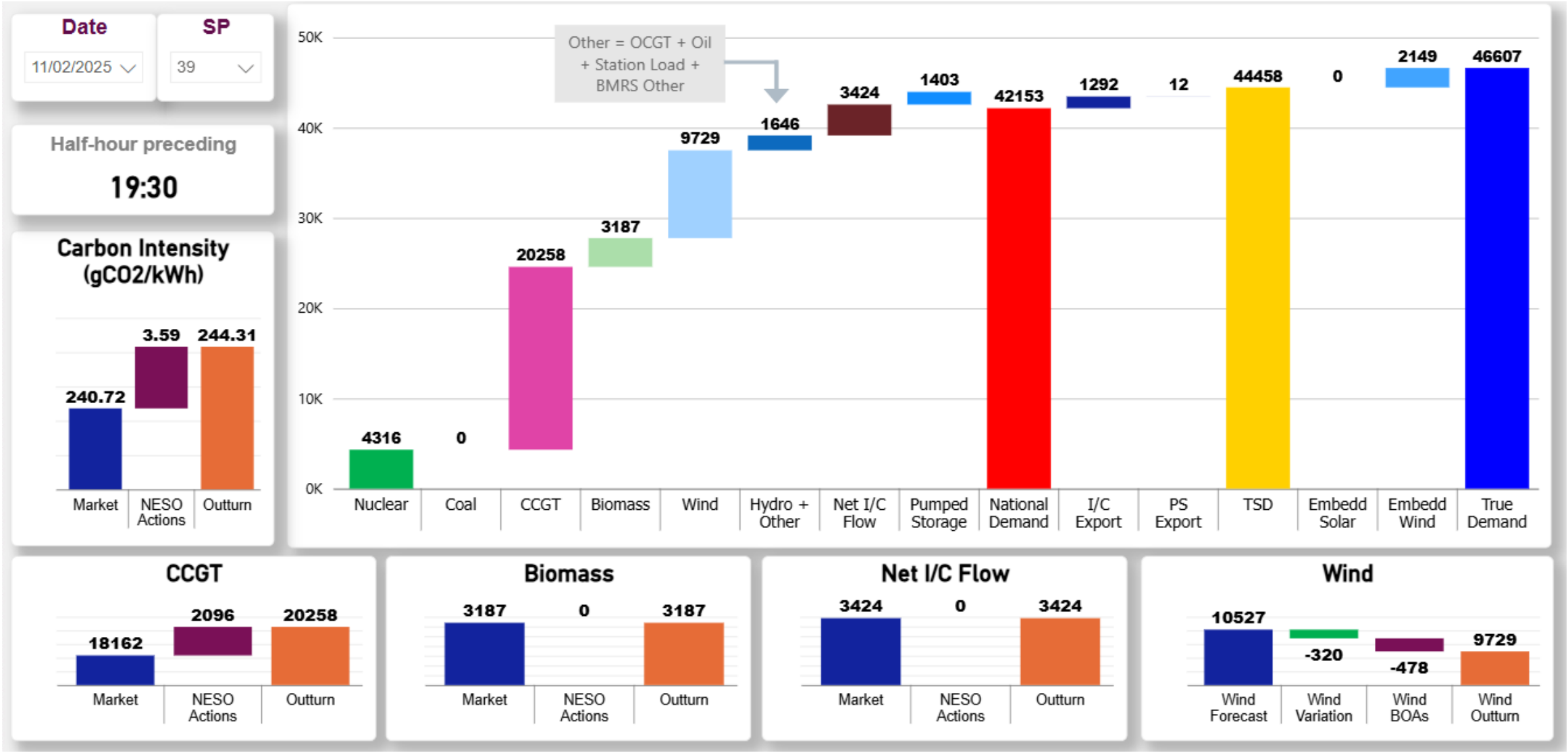
NESO Actions | Minimum Demand – SP spend ~ £31k
Monday 10th February

Slido code #OTF



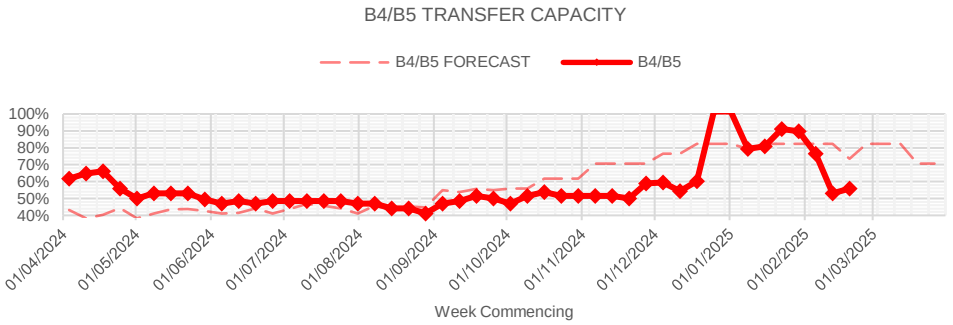
NESO Actions | – Highest SP spend ~ £316k
Tuesday 11th February

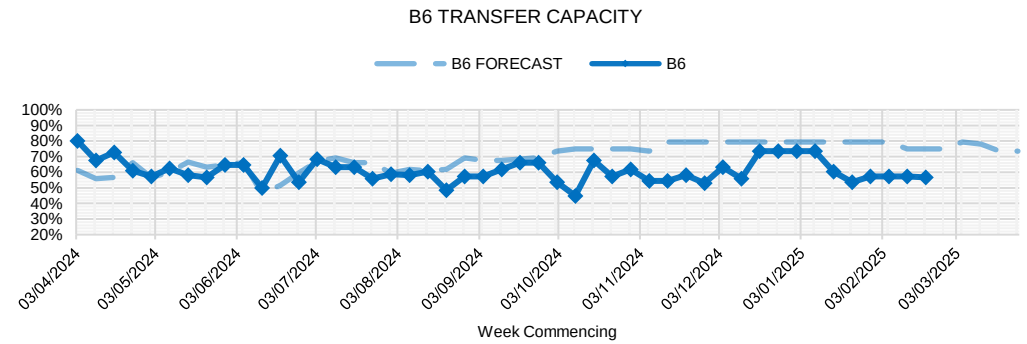
Slido code #OTF

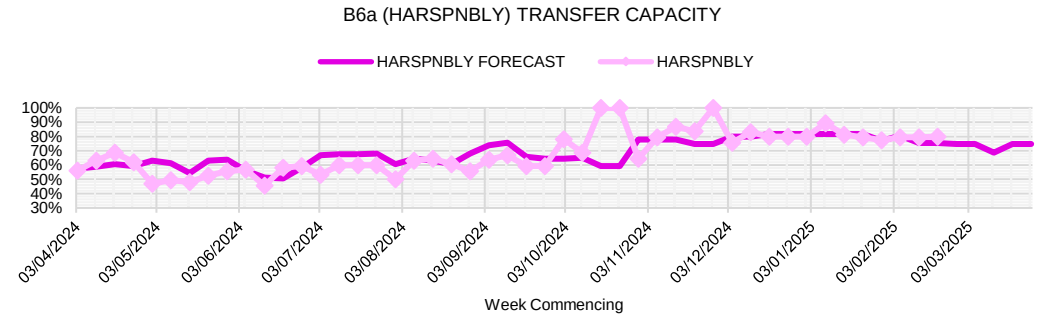


Transparency | Network Congestion

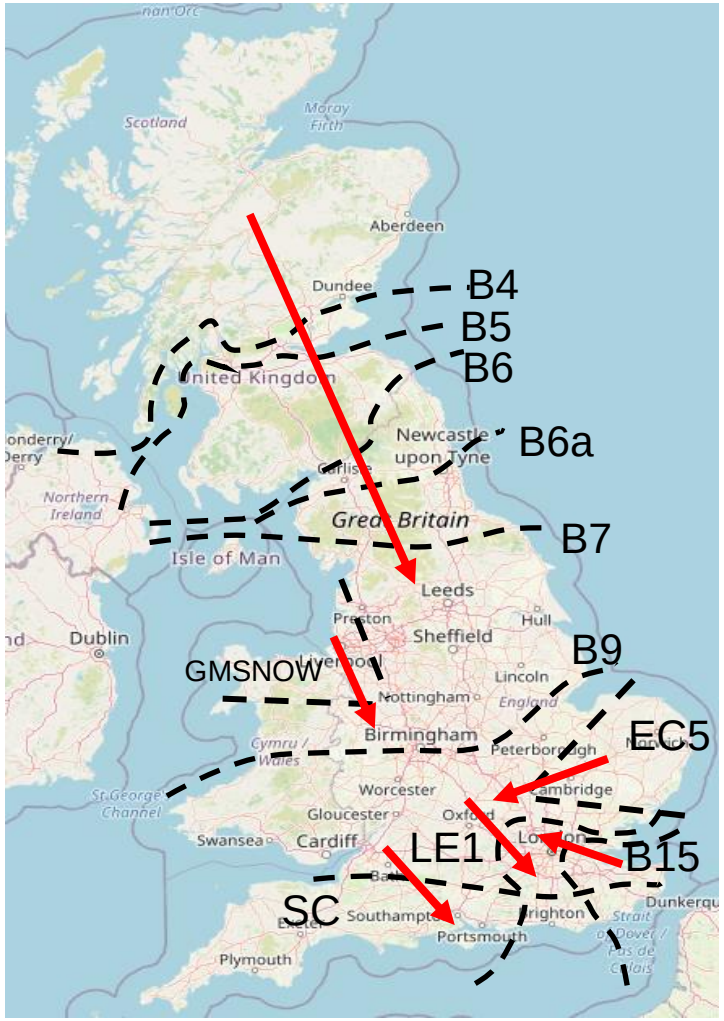
Slido code #OTF







Boundary	Max. Capacity (MW)	Current Capacity (%)
B4/B5	3400	56%
B6 (SCOTEX)	6800	57%
HARSPNBLY	8000	80%
B7 (SSHARN)	8325	90%
GMSNOW	4700	55%
EC5	5000	100%
LE1 (SEIMP)	8500	51%
B15 (ESTEX)	7500	88%
SC1	7300	100%



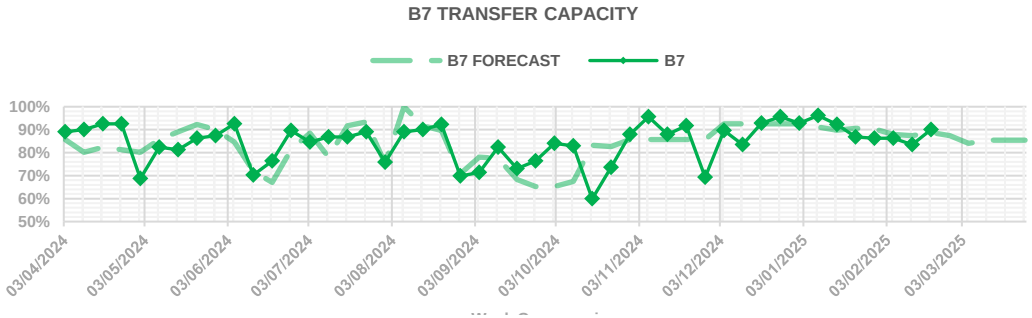
Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal: Constraints Management

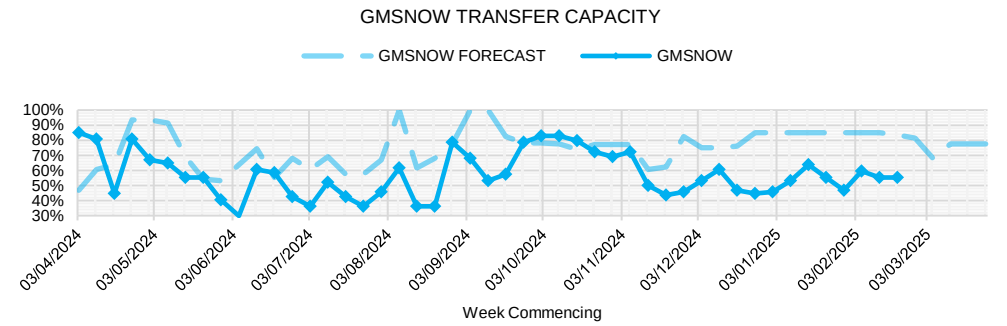
(The forecast and day ahead limits may vary due to changes in the outage plan. The plan is reviewed periodically throughout the year to ensure we are optimising system conditions, whilst managing any necessary outage plan changes)

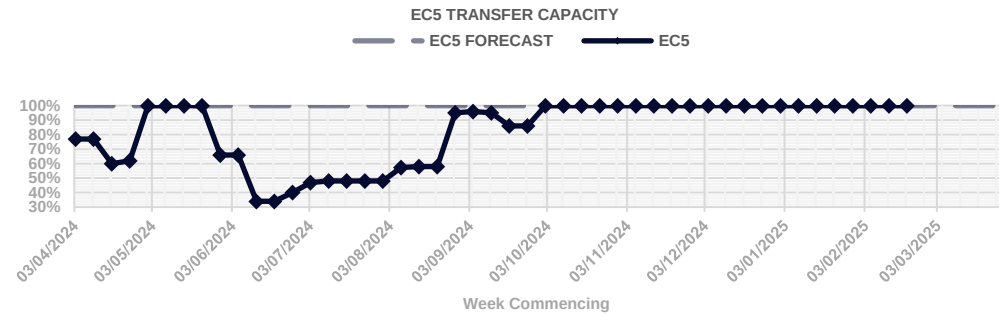
NESO National Energy System Operator

Transparency | Network Congestion

Slido code #OTF







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EC5	5000	100%
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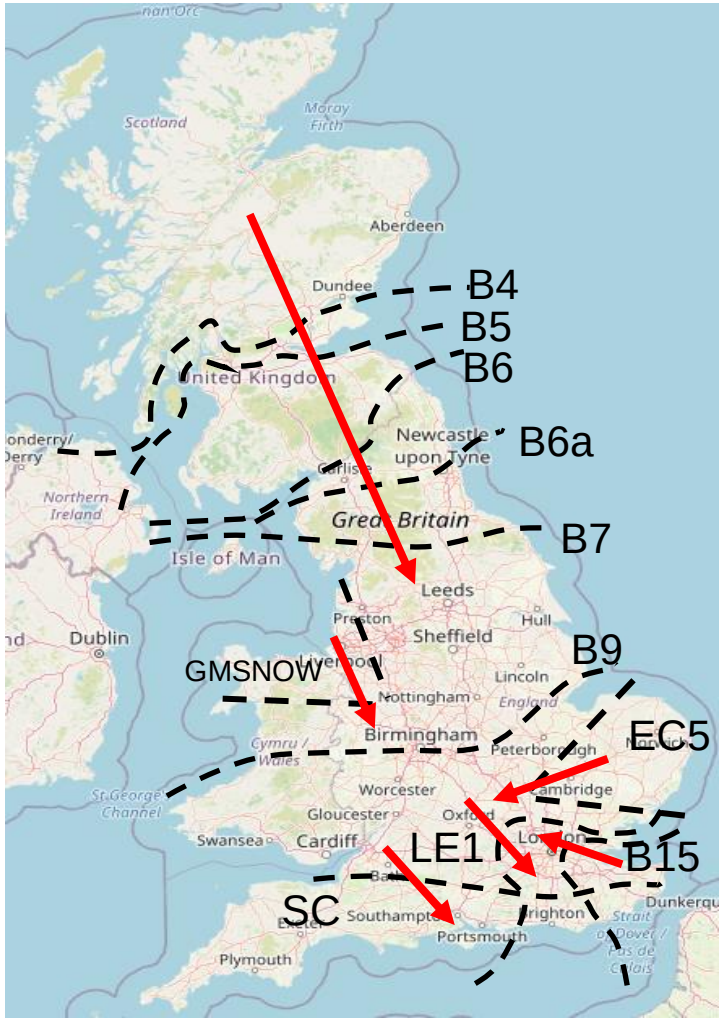
SC1	7300	100%



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Transparency | Network Congestion

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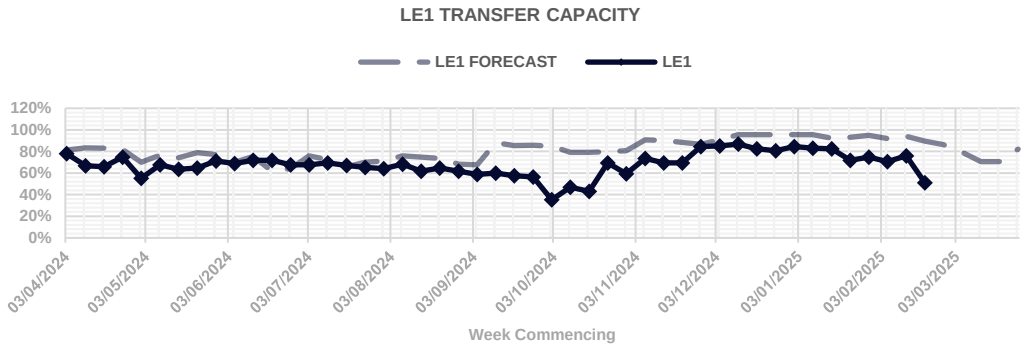

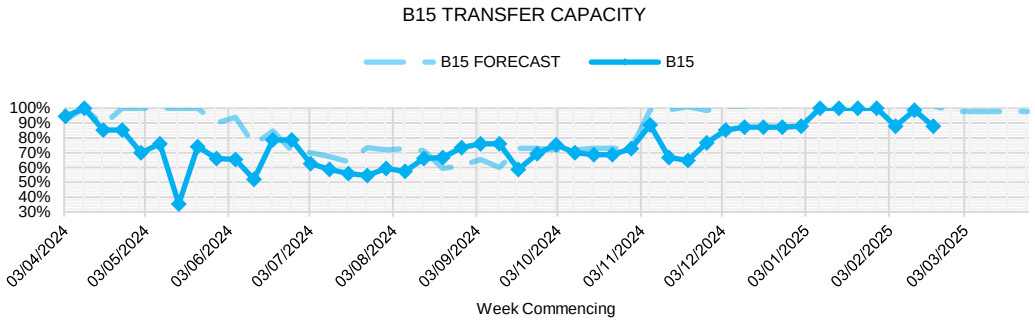

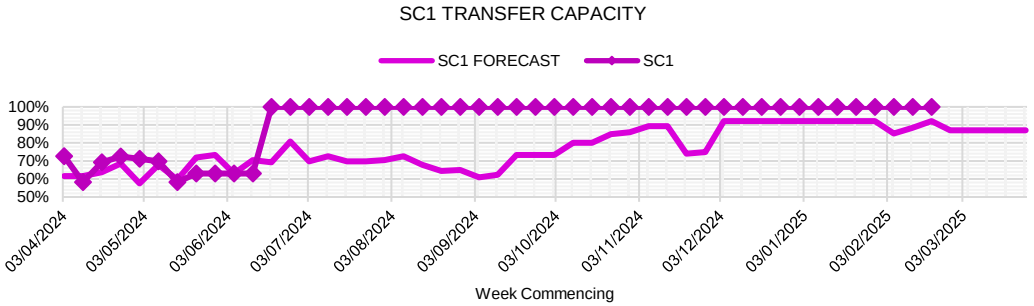

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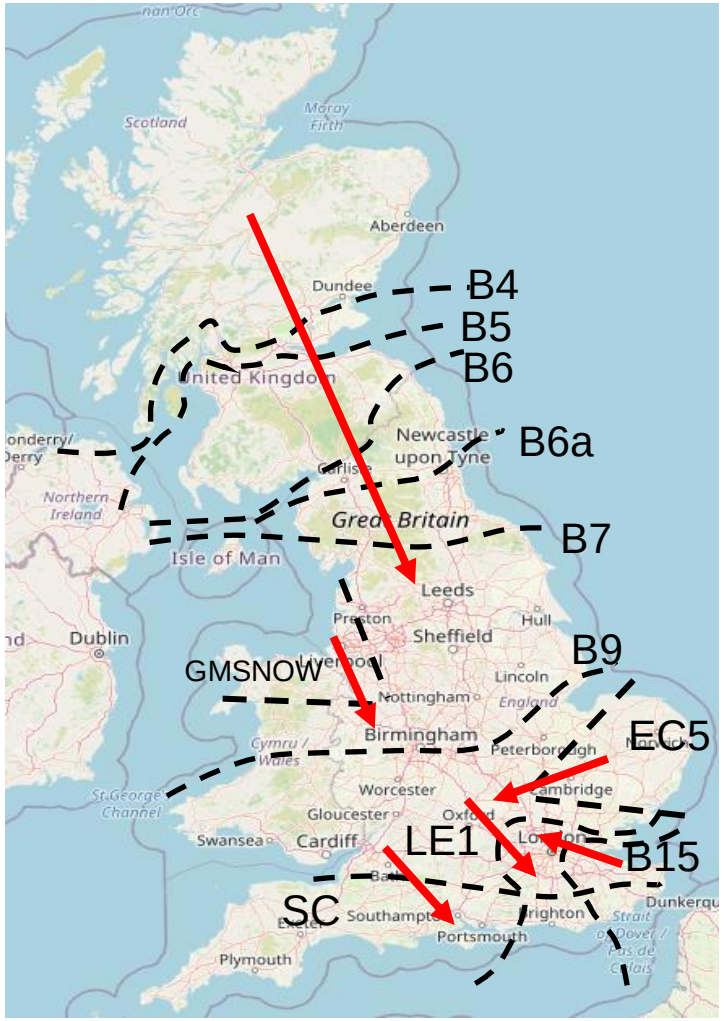

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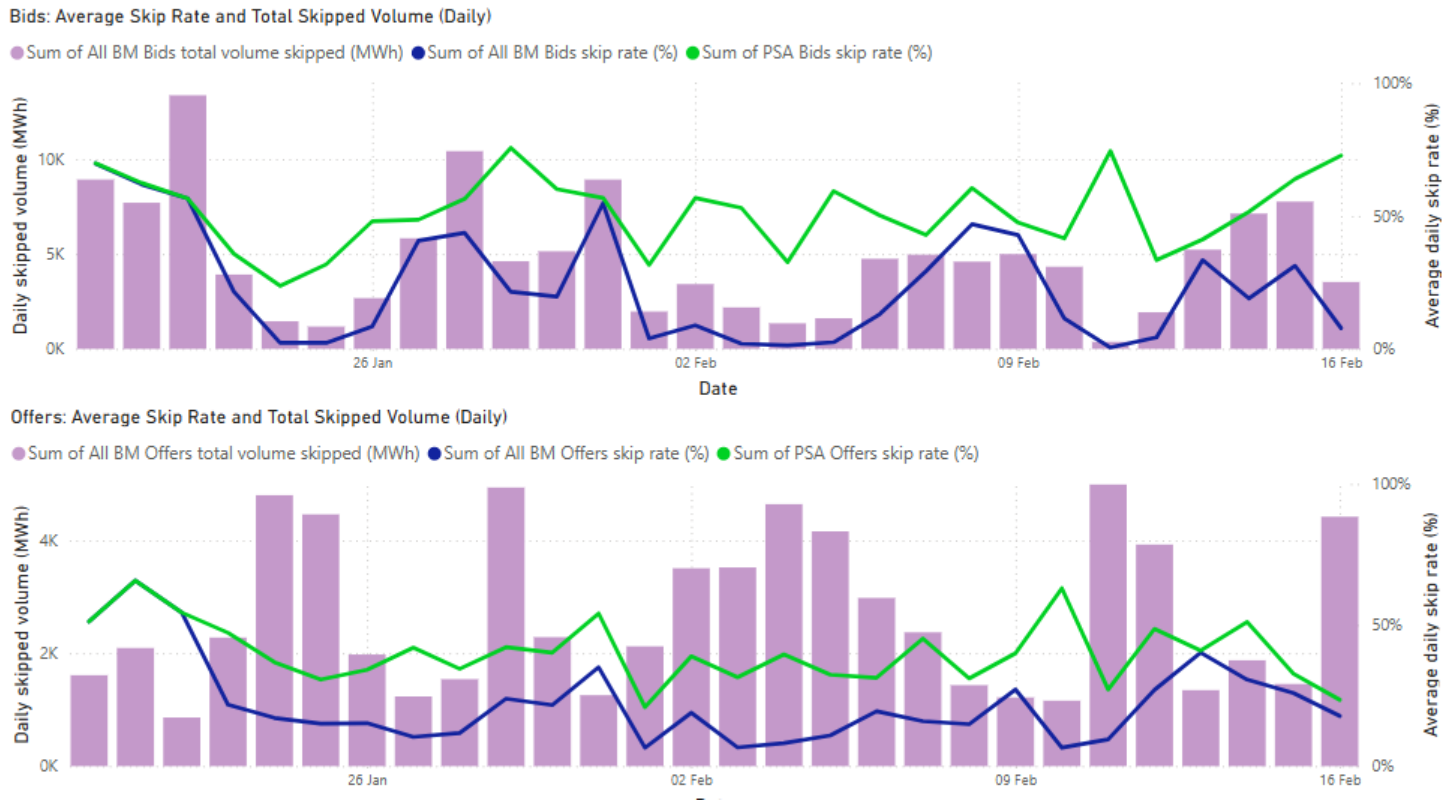
NESO National Energy System Operator

Skip Rates

Slido code #OTF

Following feedback in last week's OTF, we will be sharing the summary skip rate data on a rolling 4-week basis. We welcome your comments on if you find this valuable and feedback on how we present this data.

Weekly average Skip Rate	Offers - All BM	Offers - PSA	Bids - All BM	Bids - PSA
26/01	20%	39%	18%	52%
02/02	15%	36%	21%	55%
09/02	11%	35%	7%	49%
16/02	15%	33%	11%	50%



Skip rate data is available here.

Previous webinar recordings about the skip rate methodology can be found on the skip rate and battery storage pages on our website.

NESO National Energy System Operator

Previously Asked Questions

Q: Use of Stage 5 skip rate removes actions taken to synchronise CCGTs ahead of gate due to uncertainty. Is there a stage in the calculation that includes these decisions, which could be published alongside the Stage 5 result?

A: CCGTs with a long notice period (MNZT, MZT or NDZ >= 31 mins) are excluded at Stage 5 so the stage 4 skip rate includes these units. The skip rate for all stages is published in the summary dataset on the data portal: Skip Rate - Summary | National Energy System Operator

Q: Quite an oversight to not include IC Balancing Actions in the skip rate analysis. As we are frequently told in the forum decisions to take IC's are based on lowest cost of actions on IC's or BM, and so need to be treated equally.

A: The skip methodology has been designed to assess skips within the Balancing Mechanism and was developed by LCP Delta with input from industry. Interconnector actions have not been included in the methodology to this point, however we have taken your feedback on board and will consider whether they can be included in future developments.

Our roadmap will be shared in the webinar on 27th February so we would encourage you to join if you are interested in future developments.

Previously Asked Questions

Q: Great to see skip rates! Could you please explain how the skip rate is calculated in this case? Is it the sum of 'volume skipped' over the sum of 'volume in merit' from the dataset?

A: The skip rate calculation is described in detail in this document: [Defining, Measuring and Addressing Skip Rates]

This is the relevant diagram from the document:

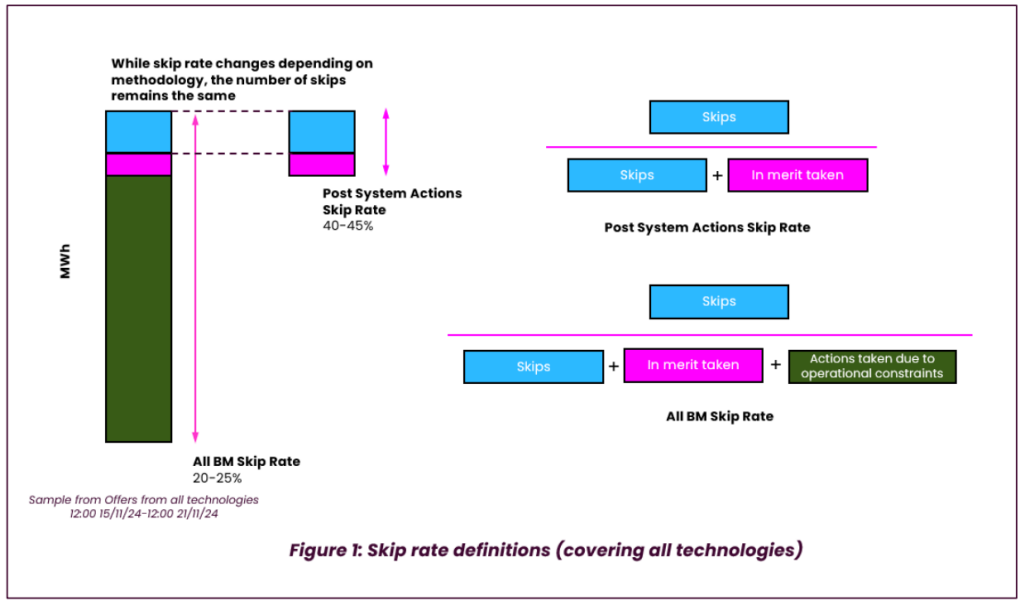


Figure 1: Skip rate definitions (covering all technologies)

The webinar on 27th February will cover the methodology and how to interpret the data.

Previously Asked Questions

Slido code #OTF

Q: Why is NESO being unusually untransparent about the REMA work? What is there to hide? Surely if we have an issue with the transparency of NESO's operations, this is the forum to discuss that?

A: REMA communications are coordinated by DESNZ, and we support them in these various comms and events.

We have been leading on the dispatch and balancing workstream within REMA. However, the final decision to proceed with any reforms remains with DESNZ. We have published our Case for Change, and we have inputted stakeholder feedback on the methodology and key assumptions for our modelling work. The modelling results will feed into DESNZ's wider analysis.

Please send any specific questions you have to box.market.strategy@nationalenergyso.com.

Advance Questions – Viking Link

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.
A: Please see following slide for response.

Q: (15/01/2025) Why were arbitrage tagged BSAD with VKL (£0) for SPs 36 & 38 last Wednesday included but not for surrounding SPs when VKL was emergency instructed?
A: Please see following slide for response.

Q: (05/02/25) Hi. Is there any update on when the price of the Viking Link SO-SO trades on the 8th Jan will be published?
It was previously advised they would be visible to the market from the 30th Jan when the Elexon settlement run was updated - but they do not appear to have been published still.
A: Please see following slide for response.

*N.B - Balancing Services Adjustment Data (**BSAD**) is used to submit balancing actions to the Balancing & Settlement Code (BSC), which defines the rules and governance for the balancing mechanism and imbalance settlement processes of electricity in Great Britain. BSAD covers actions taken outside of the balancing mechanism.*
The BSAD methodology statement can be found here: BSAD Methodology

NESO National Energy System Operator

Advance Questions – Viking Link

Slido code #OTF

A. Thank you for your advanced questions raised regarding the Viking Link trade on 8th January 2025. The control room usually obtain indicative costs from the Transmission System Operator (TSO) prior to confirming the trades. This allows us to assess the value of the trades against other options available to us and this indicative price would usually feed through to BSAD. In this case these indicative costs were not picked up via the process hence it was reported as £0 initially in BSAD.
We had been estimating 4 out of 7 of the periods with a value of £250 but as of last night (18th Feb) we now have final prices which will be resubmitted today or tomorrow. The final prices are now as follows.

Settlement Period	Volume (MWh)	Price (£ per MWh)
15:30 – 16:00	6.5	132.17
16:00 – 16:30	102	179.41
16:30 – 17:00	102	179.41
17:00 – 17:30	350	146.48
17:30 – 18:00	350	146.38
18:00 – 18:30	350	141.86
18:30 – 19:00	350	141.86

NESO National Energy System Operator

Advance Questions

Slido code #OTF

Q: (05/02/2025) Thank you for responding to my question from 18/12/2024 but you didn't answer it. I've read the latest Operability Strategy Report (I note that an update is overdue; the last edition was published in December 2023, and in the Foreword Julian Leslie states that the OSR is "annual". Furthermore your answer in the 5 Feb slide pack links to the Jan 2024 webinar Q&A document, not the report). Have the actions outlined in 2023 been taken? Or what further changes (engineering or control room protocols) still need to be made to enable periods of zero-carbon running?

A: Thank you for your follow up question. With regards to your queries on the actions taken since the 2024 report, at this current time we would direct you to the OSR 2025 when published later this year. If after reviewing the report, you have any further questions please contact us directly through our mailbox: box.short.term.operability@nationalenergyso.com where we will aim to assist in any further your queries.

Please find the link to the OSR report once published https://www.neso.energy/document/299926/download

Outstanding Questions

Slido code #OTF

NESO teams are still working to answer these questions

Q: NESO only send IPs to the BMU – this is a limitation of EDL - was this not meant to be resolved in the EBS1 2010 system refresh parties paid for?

Q: The previously asked questions say that there are sometimes indicative prices given for SO-SO trades to the control room. Can these be published real-time, or at least reasonably quickly? They would be a significant improvement on the current £0 value.

Q: If the system boundaries change week to week, can we have the ones used in the OTF publsihed with the same frequency and transparency as the boundaries on the portal?

Q: Re. poor/ missing FPNs from Interconnectors like the Moyle example - what are the impacts of this on both control room system balancing and Balancing costs? Also is NESO investigating this as they are for Wind FPN inaccuracies? thanks

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
- **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

NESO National Energy System Operator

slido

Audience Q&A

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

Appendix

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

NESO National Energy System Operator

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

- **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 National Energy System Operator

Skip Rates – 'In Merit' datasets

We recognise that these datasets aren't as intuitive as they could be – specifically the column headings. Please be reassured that we are looking at ways to improve this - we will update the documentation to include this information and will also discuss the datasets in more detail at the webinar on 27th February.

We will use 'accepted' and 'instructed' differently in this context, even though they are normally the same.

These datasets show the units that should have been instructed if decisions were solely based on price, rather than all units that were instructed. Therefore this dataset does not match the total accepted volume datasets in Elexon.

In Merit Volume = Accepted Volume + Skipped Volume

In Merit Volume
- This is the recreated in merit stack showing the lowest cost units that were available to meet the requirement, where the requirement is based on the volume of units that were actually instructed
- Therefore this is the volume that should have been accepted if decisions were solely based on price
- The sum of this column is the total instructed volume in the 5 minute period (subject to the relevant exclusions)

Accepted Volume
- This is the volume that was accepted in merit, as a subset of the 'In Merit Volume' column – i.e. how much volume was accepted in merit
- The sum of this column will be less than the sum of the 'In Merit Volume' column, unless there is no skipped volume
- Note: this column does not list all instructed units

Skipped Volume
- This is the volume that was skipped, as a subset of the 'In Merit Volume' column – i.e. of the volume that we should have instructed, how much was skipped

It's possible that the list of units increases, decreases, or stays the same between stages, but the total 'In Merit Volume' will always remain the same (or no volume is excluded) or decrease (due to exclusions).