

Introduction | Sli.do code #OTF

To ask questions live and provide us with post event feedback go to Sli.do and join 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 given on the slide.
- 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.
- 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.

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

Future deep dive / focus topics

Today

Enduring Auction Capability - Auction Design

Future (dates to be confirmed)

Managing Storm Conditions

Demand Flexibility Service

If you have suggestions for future deep dives or focus topics please send them to us at: box.NC.customer@nationalgrideso.com and we will consider including them in a future forum

You can ask questions in advance (before 12:00 on Monday) at: https://forms.office.com/r/k0AEfKnai3

You can ask questions at anytime, whether for inclusion in the forum or individual response at: box.NC.customer@nationalgrideso.com

Introduction to the Future System Operator – webinars

Take part in one of our Introduction to the Future System Operator webinars on either 11 or 13 December to learn more about the FSO and explore how we can work together to achieve a cleaner, more affordable and secure energy system for Great Britain.

Join our webinars 11 December 13 December

ESO



11 December 13:30-14:30

13 <u>December 10:30-11:30</u>

ESO has launched an RFI for industry feedback on the creation of an Interconnector Framework, open until 7th December

Activity 2C (Ref 270 Role in Europe) within BP2 (Business Plan 2) seeks to create an Interconnector Framework. The aim of this being to not only ensure administration of retained European legislation, but to enable consistency for interconnectors operating in GB markets and aid transparency of the ways in which the interconnectors operate and work with the ESO.

We are keen to work with industry on the creation of an Interconnector Framework and welcome industry to respond to our first Request for Information (RFI).

The RFI has been shared and uploaded to the ESO ENC website.

The RFI has been extended for responses until the 7th December 2023.

Request for Input Document

Proforma

To remain up to date with comms and updates regarding this you can sign up to our JESG newsletter <u>here</u>.

Enhancing Energy Storage in the Balancing Mechanism – follow up webinar

On 16 October, we welcomed over 75 stakeholders from across the energy industry to our 'Enhancing Energy Storage in the Balancing Mechanism' event where we outlined our plan to enhance the use of storage assets in our balancing activities and the timelines to achieve this.

A key focus of the event was to explore, in strong collaboration with industry, how to co-create and develop the capabilities and future market design solutions that will enable efficient dispatch of all assets in the Balancing Mechanism, in line with our net-zero ambitions.

To view the full timeline of or balancing activities, and view the event slides and Q&A, visit:

Enhancing Energy Storage in the Balancing Mechanism | ESO (nationalgrideso.com)

Follow up webinar – 14 December 2023

At the October event, we committed to sharing with you the outputs of the independent LCP Delta analysis, as well as a progress update on our plans.

The webinar will be held on the 14 December, 10.00 – 11.30am. Please register your attendance at the below registration form and the calendar invite will be sent to you shortly. Further details regarding the agenda will be shared in due course.

Registration form - Follow-up Webinar (office.com)

Guidance on declarations sent to Control Room systems

We will be issuing guidance for the submissions of Maximum Export Limit (MEL) and Maximum Import Limit (MIL) that come through EDL/EDT. We need your support in this area.

Guidance falls into the following areas:

For providers with a portfolio of assets reduce instances of bulk declarations from systematic submissions at set times by spreading the time across assets.

Remove declarations with no changes to data already submitted (duplicate declarations, redundant declarations).

Focus on the window closer to real time (e.g. 30 mins ahead) for assets with flexible dynamics and the windows covering minimum scheduling/run requirements aligned with Minimum Non Zero Time.

Removal of records associated with price infeasibility for response services (DM/DR/DC) (i.e. unattractive bid and offer prices).

We are also making/investigating improvements to our systems to improve performance in tandem.

Any questions from todays webinar we will incorporate answers into the guidance we publish.

Improvements in Performance of existing IT systems / infrastructure

Continue to meet existing obligations

No compromise of the flexibility of existing / future assets

No impact to revenues of providers



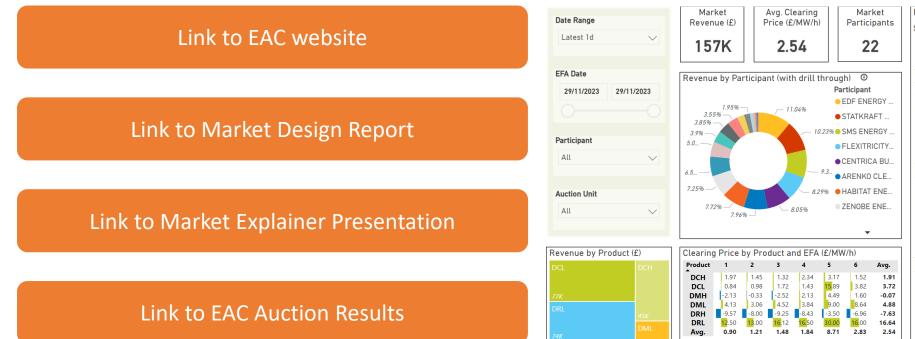
Deep Dive

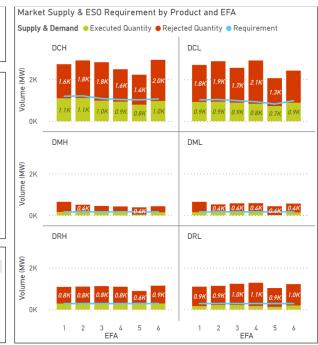
EAC Auction Design: Surplus Sharing

EAC Market Design Documentation: Market Design Report (published in June 2023), Market Design Explainer (published in April 2023)

What is EAC?

The **Enduring Auction Capability** (EAC) is being designed to deliver co-optimised procurement for our day-ahead Frequency Response and Reserve products. It is envisioned that this method of procurement will allow us to meet our needs in the most efficient way, while enabling providers to participate in multiple markets.





Calculation of Surplus for a Sell Order

The surplus of a sell order can be calculated as:

For example, suppose we have the following sell order:

| U | Jnit | Loop | EFA | Basket | Order | Order | | Q | uantit | y (MV | V) | | Price |
|---|------|--------|-----|--------|-------|--------|-----|-----|--------|-------|-----|-----|-------|
| | ID | Family | EFA | ID | ID | Type | DCL | DCH | DML | DMH | DRL | DRH | (£) |
| U | J-01 | | 2 | 55 | 1027 | Parent | | | | | 5 | | 2.00 |

Suppose further that the market clearing price of **DRL** in this period is £10.00.

Then the surplus of this sell order is:

$$f(10.00 - 2.00) \times 5 = f(40.00)$$

Definition of Sell Order Surplus

The surplus of a sell order is the difference between:

- (i) the minimum payment the seller requires for acceptance of the sell order, as implied by the offer price, and
- (ii) the actual settlement the seller will receive, based on the market clearing prices.

This definition of surplus is the same for Parent, Child, and Substitutable Child Orders

Calculation of Surplus for a Sell Order

The surplus of a sell order can be calculated as:

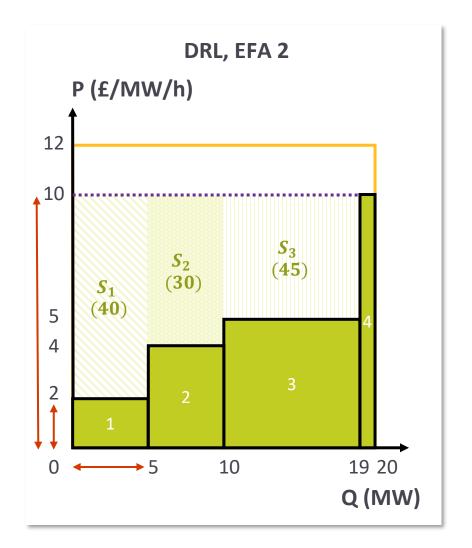
For example, suppose we have the following sell order:

| Į | Unit | Loop | EFA | Basket | Order | Order | | Q | uantit | y (MV | V) | | Price |
|---|------|--------|-----|--------|-------|--------|-----|-----|--------|-------|-----|-----|-------|
| | ID | Family | EFA | ID | ID | Type | DCL | DCH | DML | DMH | DRL | DRH | (£) |
| | U-01 | | 2 | 55 | 1027 | Parent | | - | | | 5 | | 2.00 |

Suppose further that the market clearing price of **DRL** in this period is £10.00.

Then the surplus of this sell order is:

$$£(10.00 - 2.00) \times 5 = £40.00 (/h)$$



Calculation of Surplus for a Sell Order With Multiple Products

The surplus of a sell order can be calculated as:

Clearing Price Offer Price of Sell Order

A sell order can be defined on more than one product.

Each product can have a unique quantity. The order has a single price.

The surplus of the order is the sum of the surplus for all the products in the order.

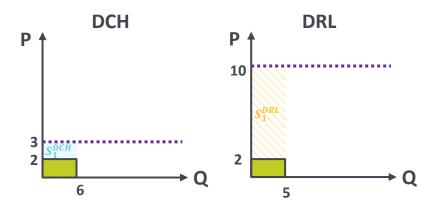
For example, suppose we have the following sell order:

| Unit | Loop | ГГЛ | Basket | Order | Order | | Q | uantit | y (MV | V) | | Price |
|------|--------|-----|--------|-------|--------|-----|-----|--------|-------|-----|-----|-------|
| ID | Family | EFA | ID | ID | Type | DCL | DCH | DML | DMH | DRL | DRH | (£) |
| U-01 | | 2 | 55 | 1027 | Parent | | 6 | | | 5 | | 2.00 |

Suppose further that the market clearing price of **DRL** in this period is £10.00, and the market clearing price of **DCH** is £3.00.

Then the surplus of this sell order is:

$$f(3.00 - 2.00) \times 6! + f(10.00 - 2.00) \times 5 = f(46.00)$$
 Surplus for DCH Surplus for DRL





What is Surplus Sharing?

Surplus Sharing

Sell orders cannot be Paradoxically Accepted.

- A sell order can be accepted only if its surplus is greater than or equal to zero.
- A sell order must make at least as much revenue as required by its offer price.

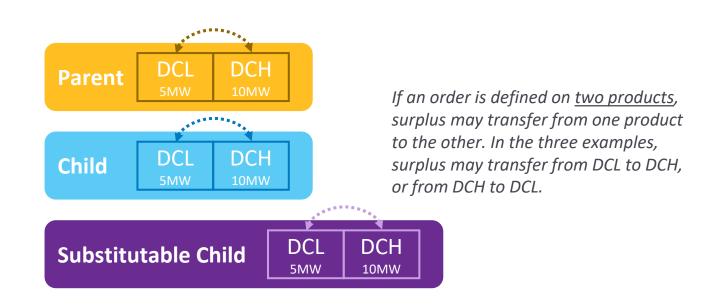
Surplus can be shared between within and between sell orders. A sell order with surplus greater than zero can donate its "excess" surplus to another sell order to compensate for negative surplus.

Transfers of surplus can happen in either of the following scenarios:

- A. Surplus can transfer within any sell order that is defined on multiple products
- B. Surplus can transfer within a family of looped baskets
- C. Surplus can also transfer from Child or Substitutable Child Orders the Parent Order

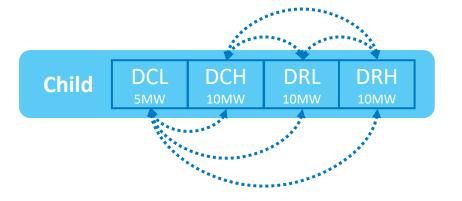
Note: The feature of surplus sharing is not new in EAC. In the Daily Dx Frequency Response Auctions, the market design allowed surplus sharing from a Child Order to a Parent Order, within periods of a Multi-Period Block, and between Looped (C88) Orders.

A. Surplus Sharing within a Sell Order which is Defined on Multiple Products



Parent
Child
Substitutable child
Transfer of surplus

If an order is defined on more than two products, surplus may transfer between any two products. For example, surplus may transfer from DCH to DCL, from DRL to DCL, and from DRH to DCL.



Acceptance of a Child or Substitutable Child Order

Market Clearing Rules

For a Child Order or Substitutable Child Order to be accepted, the total surplus of the order must be greater than or equal to zero.

The individual surplus of each product does not need to be non-negative.

A Child Order or a Substitutable Child Order defined on multiple products can be accepted, even if some products in the order have negative surplus.

For example, suppose we have the following sell order shown below.

Suppose further that the market clearing price of **DRL** in this period is £10.00, and the market clearing price of **DCH** is £3.00.

Then the surplus with respect to DCH is:

$$£(3.00 - 4.00) \times 6 = -£6.00$$

And the surplus with respect to DCH is:

$$£(10.00 - 4.00) \times 5 = £30.00$$

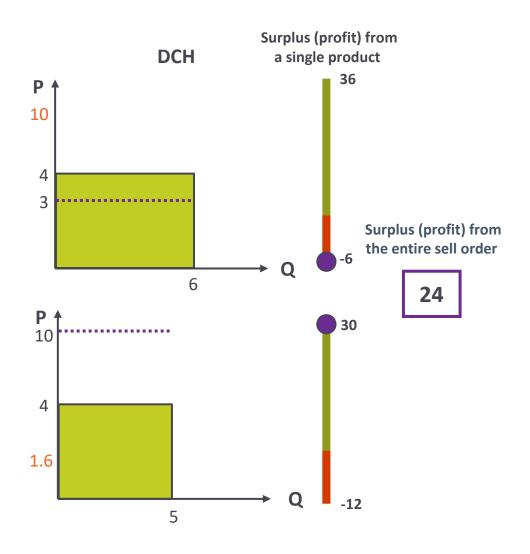
The total surplus of the sell order is:

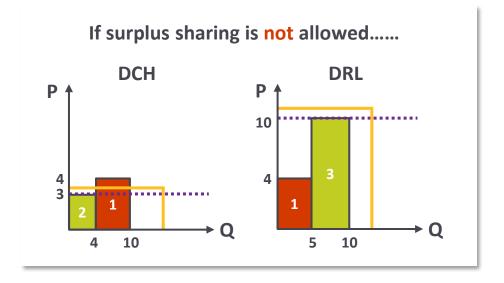
$$-£6.00 + £30.00 = £24.00$$

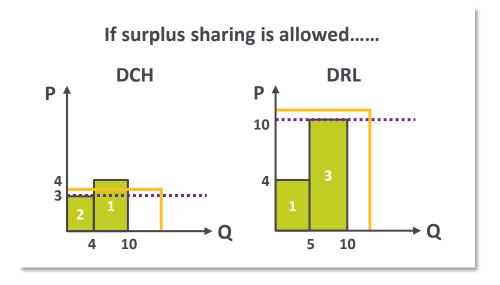
The sell order can be accepted.

| Unit | Loop | EFA | Basket | Order | Order | | Q | uantit | y (MV | V) | | Price |
|------|--------|-----|--------|-------|-------|-----|-----|--------|-------|-----|-----|-------|
| ID | Family | EFA | ID | ID | Type | DCL | DCH | DML | DMH | DRL | DRH | (£) |
| U-01 | | 2 | 55 | 1027 | Child | | 6 | | · | 5 | | 4.00 |

Acceptance of a Child or Substitutable Child Order







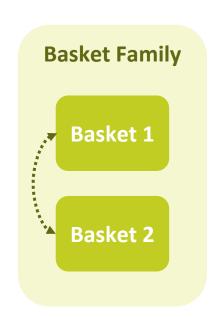
B. Surplus Sharing within a Family of Looped Baskets

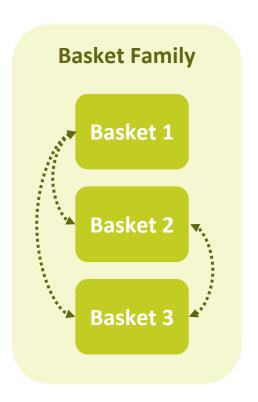
Market Clearing Rules

A Parent Order with negative surplus can be accepted when it is in a Basket that is part of a Looped Family, and the total surplus of all accepted orders in all Baskets in the Looped Family is greater than or equal to zero.

A Basket which is part of a Looped Family cannot be accepted unless all the Baskets in the Looped Family are accepted.

A Basket can share surplus with other Baskets in its Looped Family





Acceptance of a Looped Family of Baskets

For example, suppose we have the Looped Family of Baskets shown below.

As before, the market clearing price of **DRL** in this period is £10.00, and the market clearing price of **DCH** is £3.00.

Then the surplus of the Parent Order in Basket 55 is:

$$£(3.00 - 4.00) \times 6 = -£6.00$$

And the surplus of the Parent Order in Basket 56 is:

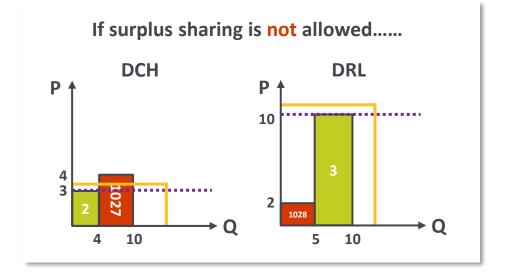
$$£(10.00 - 2.00) \times 5 = £40.00$$

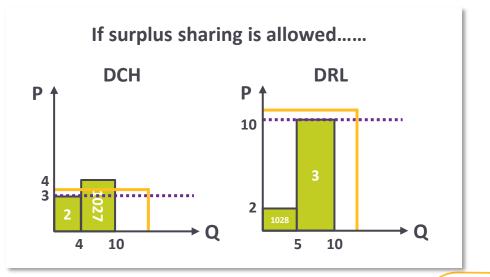
The total surplus of both Baskets in the Looped Family is:

$$-£6.00 + £40.00 = £34.00$$

So the Parent Orders in Basket 55 and Basket 56 can both be accepted together.

| Unit | Loop | EFA | Basket | Order | Order | | Q | uantit | y (MV | V) | | Price |
|------|--------|-----|--------|-------|--------|-----|-----|--------|-------|-----|-----|-------|
| ID | Family | EFA | ID | ID | Type | DCL | DCH | DML | DMH | DRL | DRH | (£) |
| U-01 | 16 | 2 | 55 | 1027 | Parent | | 6 | | | | | 4.00 |
| U-01 | 16 | 3 | 56 | 1028 | Parent | | | | · | 5 | · | 2.00 |





C. Surplus Sharing from a Child or Substitutable Child Order to its Parent Order

Market Clearing Rules

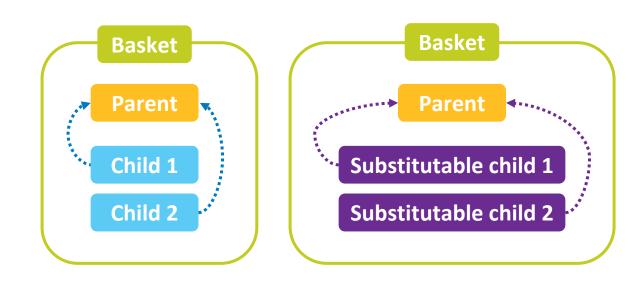
For a Parent Order to be accepted, the surplus of the Basket must be greater than or equal to zero.

The surplus of Basket is the total of the surplus of the Parent Order plus the surplus of all accepted Child Orders and Substitutable Child Orders in the Basket.

A Child Order or Substitutable Child Order can transfer surplus to its Parent.

The Parent Order may have negative surplus on its own, yet still be accepted, if it receives surplus.

A Child Order or Substitutable Child Order cannot be accepted unless the Parent Order in the Basket is accepted.



Acceptance of a Parent Order

For example, suppose we have the sell order shown below.

As before, the market clearing price of **DRL** in this period is £10.00, and the market clearing price of **DCH** is £3.00.

Then the surplus of the Parent Order is:

$$£(3.00 - 4.00) \times 6 = -£6.00$$

So this Parent Order cannot be accepted by itself. But the surplus of the Child Order is:

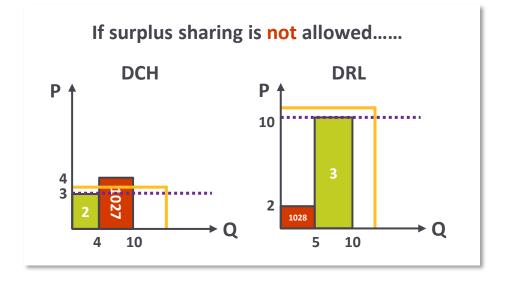
$$£(10.00 - 2.00) \times 5 = £40.00$$

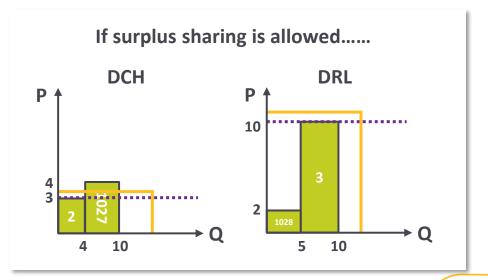
The total surplus of the Basket is:

$$-$$
 £6.00 + £40.00 = £34.00

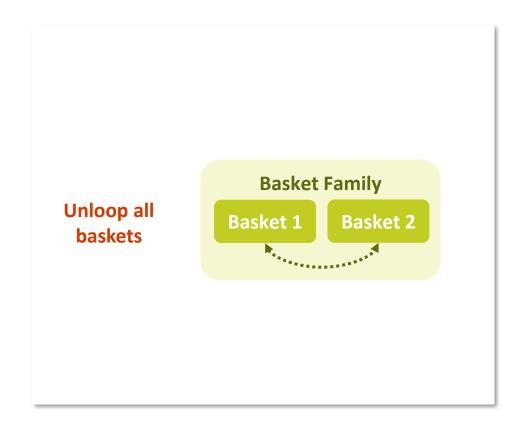
The Parent Order and the Child Order can both be accepted together.

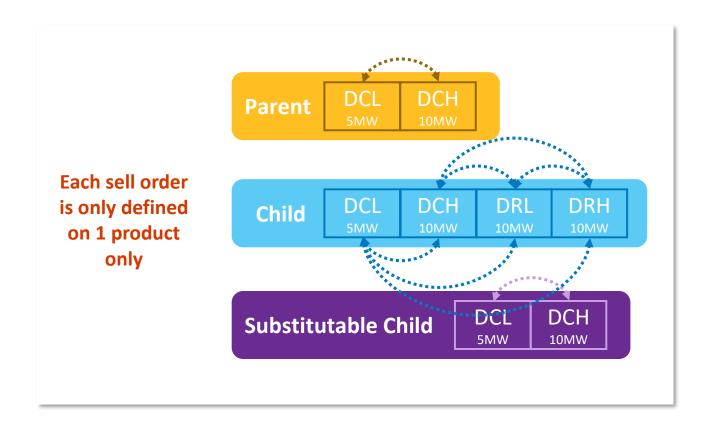
| Unit | Loop | EFA | Basket | Order | Order | | Q | uantit | y (MV | V) | | Price |
|------|--------|-----|--------|-------|--------|-----|-----|--------|-------|-----|-----|-------|
| ID | Family | EFA | ID | ID | Type | DCL | DCH | DML | DMH | DRL | DRH | (£) |
| U-01 | | 2 | 55 | 1027 | Parent | | 6 | | | | | 4.00 |
| U-01 | | 2 | 55 | 1028 | Child | | | | | 5 | | 2.00 |





Preventing Sell Orders from Sharing Surplus [1/3]





Preventing Sell Orders from Sharing Surplus [2/3]

Child Orders and Substitutable Child Orders cannot receive surplus from another sell order.

But the different products within each order can share surplus.

If a Child Order or Substitutable Child Order is defined on a single product only, then there will be no surplus sharing.

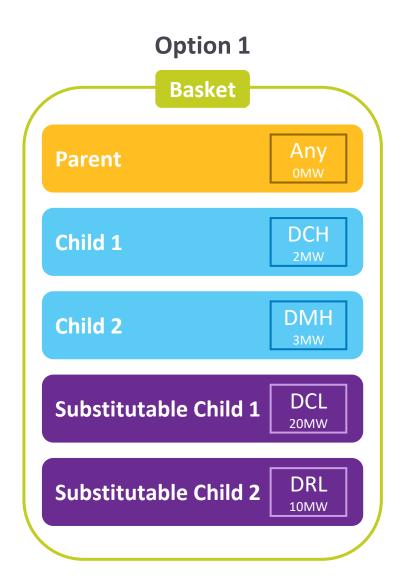
Sell Order Strategy

Offer a Basket containing:

- A 0 MW Parent Order; and
- One or more Child or Substitutable Child Orders, each defined on only a single product.

Note: the entire Basket will be fully curtailable.

If an order is accepted, the market clearing price will never be below the offer price of the order.



Preventing Sell Orders from Sharing Surplus [3/3]

A Parent Order is always non-curtailable. It must be accepted for the full offered quantity, or rejected.

A Parent Order can receive surplus from a Child Order or a Substitutable Child Order.

Child Orders cannot receive surplus from another sell order.

Sell Order Strategy

Offer a Basket defined on only one product. The Basket will contain orders (one Parent Order, and zero or more Child Orders) each defined on the same product.

Note: there can be no stacking (not even between HF and LF products of the same service)

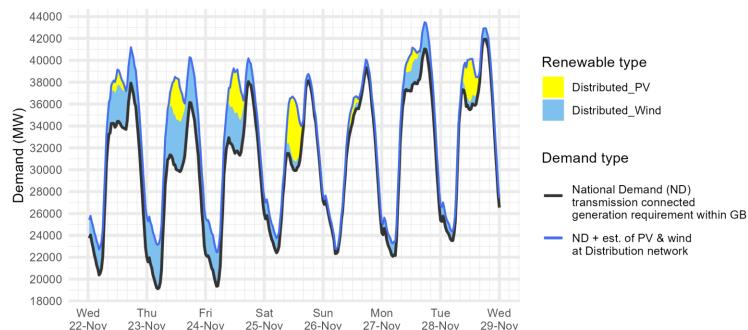
The provider can control the curtailability of the offer.

The market clearing price will never be below the offer price of the cheapest accepted sell order.



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

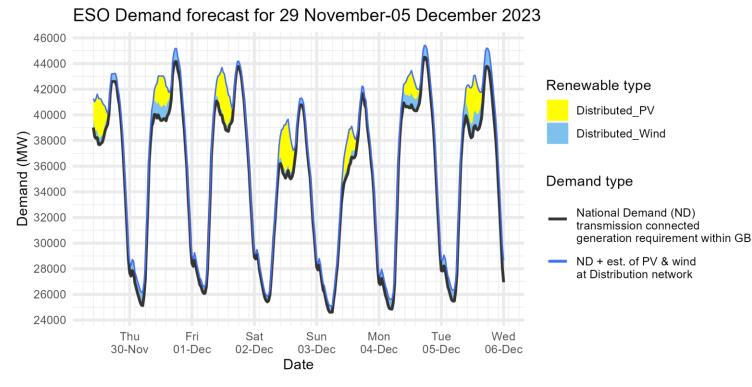
Date

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 ESO has no real time data.

| | | FORECAST (\ | Wed 22 Nov) | | OUTT | JRN | |
|--------|----------------------|----------------------------|--------------------|----------------------------|---------------------------------|--------------------------------------|-----------------------|
| 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) |
| 22 Nov | Evening Peak | 37.5 | 3.3 | 37.9 | 0.0 | 37.9 | 3.3 |
| 23 Nov | Overnight Min | 18.3 | 4.0 | 19.1 | n/a | n/a | 4.0 |
| 23 Nov | Evening Peak | 36.2 | 4.1 | 36.1 | 0.0 | 36.1 | 4.1 |
| 24 Nov | Overnight Min | 19.4 | 3.3 | 19.3 | n/a | n/a | 3.1 |
| 24 Nov | Evening Peak | 38.8 | 2.3 | 38.1 | 0.0 | 38.1 | 2.1 |
| 25 Nov | Overnight Min | 21.8 | 1.1 | 22.4 | n/a | n/a | 1.4 |
| 25 Nov | Evening Peak | 38.1 | 0.9 | 38.1 | 0.0 | 38.1 | 0.6 |
| 26 Nov | Overnight Min | 21.3 | 1.2 | 22.3 | n/a | n/a | 0.4 |
| 26 Nov | Evening Peak | 38.7 | 1.3 | 39.3 | 0.0 | 39.3 | 0.7 |
| 27 Nov | Overnight Min | 22.4 | 0.9 | 22.1 | n/a | n/a | 1.2 |
| 27 Nov | Evening Peak | 42.5 | 0.8 | 41.0 | 0.0 | 41.0 | 2.4 |
| 28 Nov | Overnight Min | 23.1 | 1.3 | 23.5 | n/a | n/a | 0.8 |
| 28 Nov | Evening Peak | 41.6 | 1.8 | 41.9 | 0.0 | 41.9 | 1.0 |

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

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

| | | FORECAST (\ | Ned 29 Nov) |
|-------------|----------------------|----------------------------|--------------------|
| Date | Forecasting Point | National Demand (GW) | Dist. wind (GW) |
| 29 Nov 2023 | Evening Peak | 42.6 | 0.6 |
| 30 Nov 2023 | Overnight Min | 25.1 | 1.0 |
| 30 Nov 2023 | Evening Peak | 44.2 | 1.0 |
| 01 Dec 2023 | Overnight Min | 26.1 | 0.5 |
| 01 Dec 2023 | Evening Peak | 43.8 | 0.4 |
| 02 Dec 2023 | Overnight Min | 25.4 | 0.4 |
| 02 Dec 2023 | Evening Peak | 40.8 | 0.5 |
| 03 Dec 2023 | Overnight Min | 24.6 | 0.5 |
| 03 Dec 2023 | Evening Peak | 41.7 | 0.6 |
| 04 Dec 2023 | Overnight Min | 24.9 | 0.8 |
| 04 Dec 2023 | Evening Peak | 44.5 | 0.9 |
| 05 Dec 2023 | Overnight Min | 25.5 | 0.9 |
| 05 Dec 2023 | Evening Peak | 43.8 | 1.4 |

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 29 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.

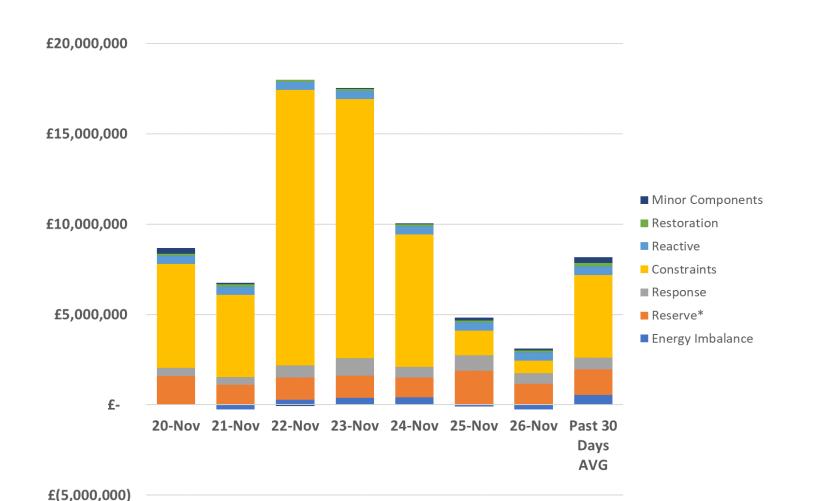
For lower (and potentially negative) surplus values, then this indicates operational margins could be tight and that there is a higher likelihood of the ESO needing to use its tools, such as issuing margins notices. We expect there to be sufficient supply available to respond to these signals to meet 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 | 30/11/2023 | 43620 | 3950 | 3370 | 44370 | 2340 |
| Fri | 01/12/2023 | 43867 | 2320 | 3370 | 43990 | 1330 |
| Sat | 02/12/2023 | 42955 | 2630 | 3370 | 41130 | 3620 |
| Sun | 03/12/2023 | 43585 | 2610 | 3370 | 42110 | 3250 |
| Mon | 04/12/2023 | 43110 | 4140 | 3370 | 44320 | 2130 |
| Tue | 05/12/2023 | 43420 | 6600 | 3370 | 44000 | 5150 |
| Wed | 06/12/2023 | 44352 | 10640 | 3370 | 44000 | 9880 |

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

ESO Actions | Category costs breakdown for the last week



| Date | Total (£m) |
|---------------|------------|
| 20/11/2023 | 8.7 |
| 21/11/2023 | 6.5 |
| 22/11/2023 | 17.9 |
| 23/11/2023 | 17.5 |
| 24/11/2023 | 10.0 |
| 25/11/2023 | 4.8 |
| 26/11/2023 | 2.9 |
| Weekly Total | 68.3 |
| Previous Week | 52.9 |

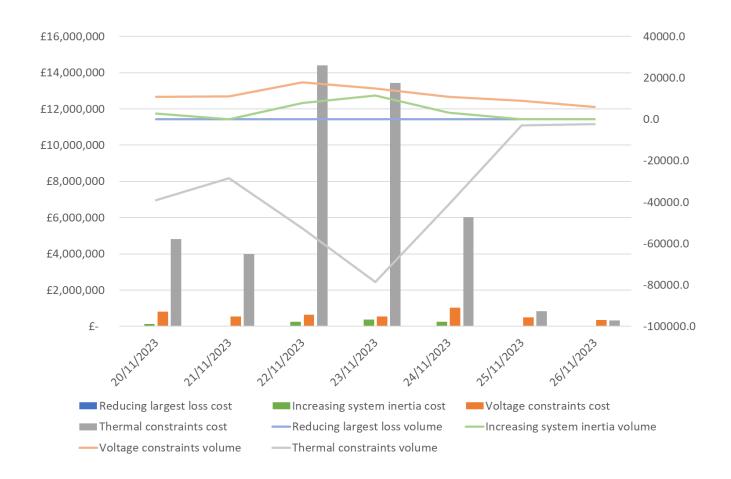
Constraints and Reserve costs were the key cost component for the week.

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

Data issue: Please note that due to a data issue on a few days over the last few months, the Minor Components line in Non-Constraint Costs is capturing some costs on those days which should be attributed to different categories. It has been identified that a significant portion of these costs should be allocated to the Operating Reserve Category. Although the categorisation of costs is not correct, we are confident that the total costs are correct in all months. We continue to investigate and will advise when we have a resolution.

ESO

ESO Actions | Constraint Cost Breakdown



Thermal – network congestion

Actions were required to manage thermal constraints throughout the week with the most significant cost on Wednesday and Thursday.

Voltage

Intervention was required to manage voltage levels throughout the week.

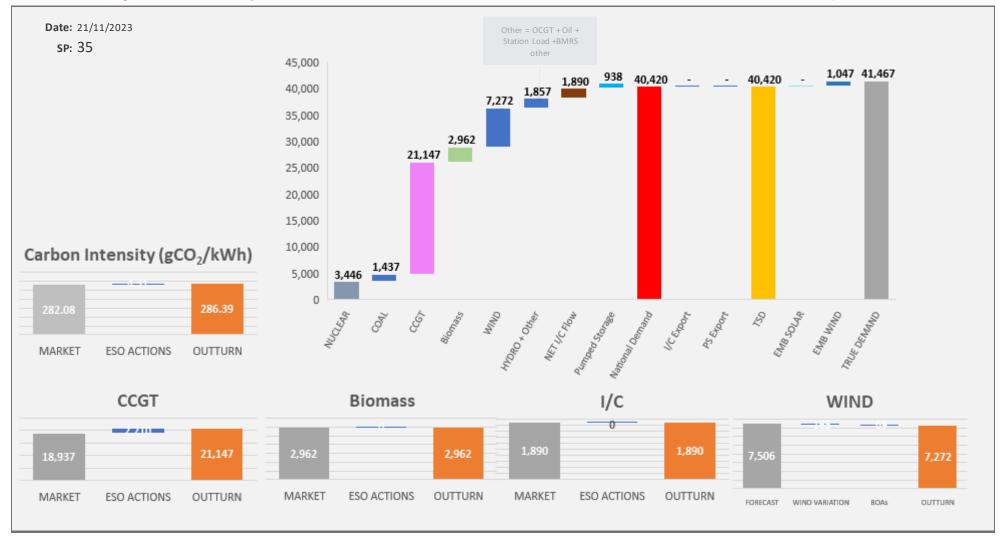
Managing largest loss for RoCoF

No intervention was required to manage largest loss.

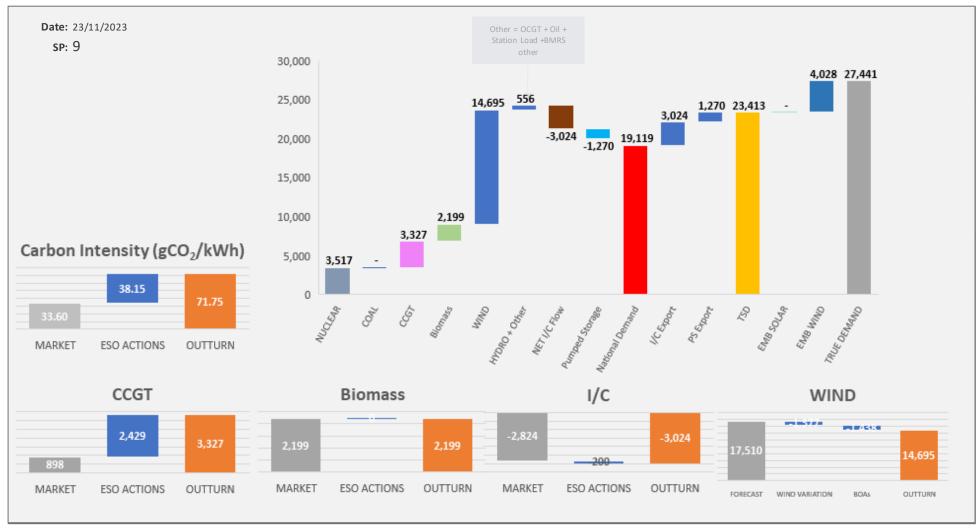
Increasing inertia

Intervention was required to manage System Inertia Monday, Wednesday, Thursday and Friday.

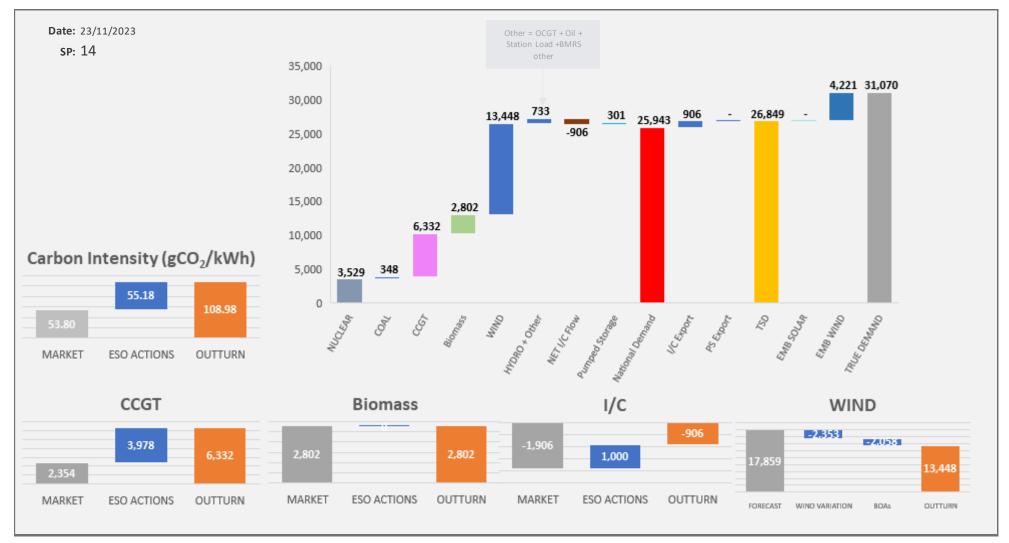
ESO Actions | Tuesday 21 November – Peak Demand – SP spend ~£138k



ESO Actions | Thursday 23 November – Minimum Demand – SP Spend ~£353k



ESO Actions | Thursday 23 November – Highest SP Spend ~£603k

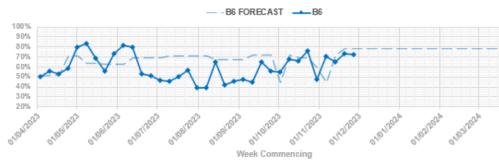


Transparency | Network Congestion

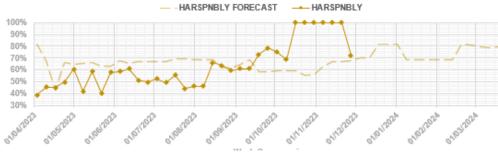




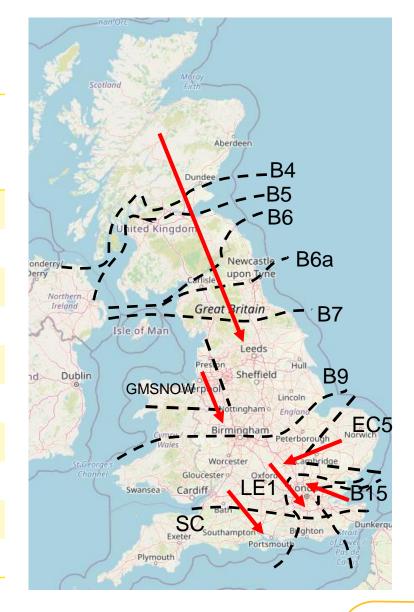
B6 TRANSFER CAPACITY



B6a (HARSPNBLY) TRANSFER CAPACITY



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

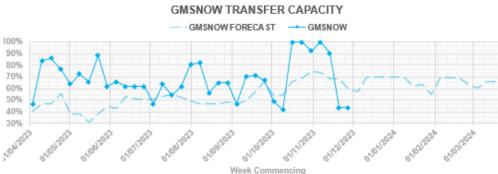


Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal: $\underline{ \text{https://data.nationalgrideso.com/data-groups/constraint-management} }$

Transparency | Network Congestion



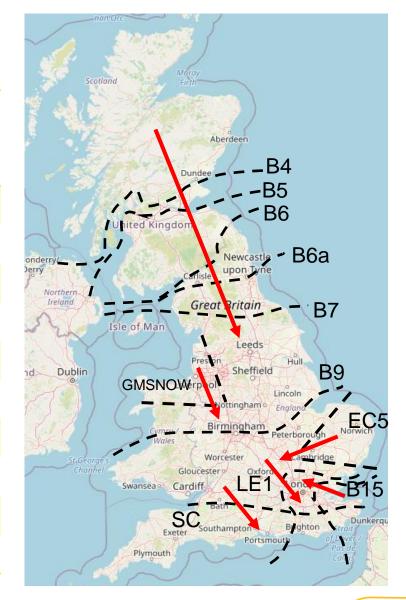




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EC5 TRANSFER CAPACITY

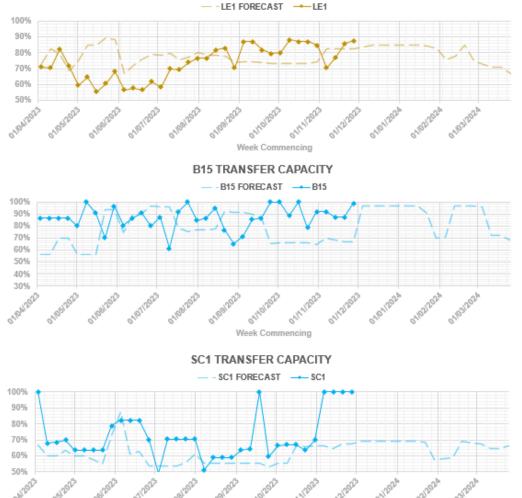
| Boundary | Max. Capacity (MW) |
|----------|--------------------------|
| B4/B5 | 3400 |
| B6 | 6800 |
| B6a | 8000 |
| B7 | 8325 |
| GMSNOW | 4700 |
| B9 | 10600 |
| EC5 | 5000 |
| LE1 | 8500 |
| B15 | 7500 |
| SC | 7300 |



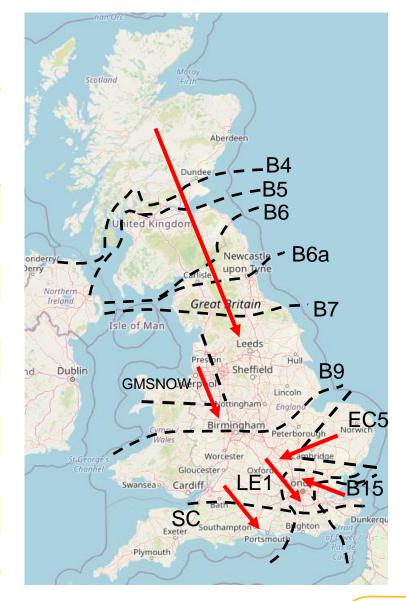
Day ahead flows and limits, and the 24-month constraint limit forecast are published on the ESO Data Portal: https://data.nationalgrideso.com/data-groups/constraint-management

Transparency | Network Congestion





| Boundary | Max. Capacity (MW) |
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| B9 | 10600 |
| EC5 | 5000 |
| LE1 | 8500 |
| B15 | 7500 |
| SC | 7300 |



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

Advance Questions

Q: Can NGESO provide an estimate of the percentage of payments that are clawed back across Dynamic Containment, Dynamic Moderation and Dynamic Regulation?

A: Data on Dynamic Containment, Dynamic Moderation and Dynamic Regulation can be found in this report.

Q: Does NGESO have an easy to interrogate list of expanded BMU short names? e.g. T_SCCL-2 being Saltend South.

A: ESO do not publish this information on our data portal page, but BMU Names are part of the Elexon downloadable data set called 'Registered BM Units', to access this you can either use their API or download the CSV file. This contains both BMU ID and BMU Name. However, this is not complete as it depends upon the data submitted as part of the registration process and is not done consistently, ie. Some units such as SCCL-2 appear as 'Unit 2', whereas others may appear as their BM Unit ID. In this event you can often identify the full name through either the party name or the trading unit name columns.

Outstanding questions

Q: With changes to connection queue management, will ESO provide historical connection registers on the data portal so changes can be identified?

Q: On 13/11/2023 at approximately 21:50, the ElecLink changed their profile post their deadline (via: https://data.eleclink.co.uk/) for 22:00 to 23:00 from 0MW to 1000MW. How is it possible that they went against their FPNs post the deadline, giving such little warning before importing 1000MW into GB?

Q: Can the ESO provide examples of the different types of system conditions that result in different combinations of interconnectors being prequalified for NGESO interconnector auctions. In the notes column of the Interconnector Requirement and Auction Summary Data on the ESO Data Portal there is often the description "Due to French electricity system conditions, NGESO is unable to trade on the interconnectors joining GB and France" but in some of these auctions volumes are then shown as cleared on GB-Fr interconnectors. Can you explain how this happens please?

Reminder about answering questions at the ESO 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.
- 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.
- 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.nationalgrideso.com/what-we-do/electricity-national-control-centre/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 ESO expert or team for a direct response. We may ask
 you to contact us by email to ensure we have the correct contact details for the response. These questions will not be
 managed through the OTF, and we are unable to forward questions without correct contact details. Information about
 the OTF purpose and scope can be found in the appendix of this slide pack

slido

Audience Q&A Session

(i) 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



Purpose and scope of the ESO 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 ESO 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

ESO operational approach & challenges

ESO 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 ESO Control Room actions & decision making

Activities & operations of particular market participants

ESO policy & strategic decision making

Formal consultations e.g.: Code Changes, Business

Planning, Market development

Managing questions at the ESO Operational Transparency Forum

- OTF participants can ask questions in the following ways:
 - Live via Sli.do code #OTF
 - In advance (before 12:00 on Monday) at https://forms.office.com/r/k0AEfKnai3
 - At any time to box.NC.Customer@nationalgrideso.com
- 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 | ESO (nationalgrideso.com)</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 ESO 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