

Demand for Constraints Webinar: Progress to Implementation

20th October 2026

Introduction

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DfC



<u>Agenda</u>	<u>Timings</u>	<u>Speaker</u>
Introduction and housekeeping	3 mins	Yuting Dai
Overview of Demand for Constraints	5 mins	Alifa Starlika
Detailed Service Design: Eligibility Technical Design Commercial Design	10 mins 10 mins 10 mins	Alifa Starlika Vrinda Vats Alifa Starlika
Procurement Update , including contract award conditions	15 mins	Steve Kelly
Next Steps	5 mins	Yuting Dai
Q&A	30 mins	Jeremy Taylor
Closing	2 mins	Alifa Starlika

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Housekeeping

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Key asks for the session



Today's webinar focuses on the update to Demand for Constraint service design and next step. Please submit questions through Slido (code: #DfC). The QR code has been shared in the chat and is on each page of the presentation.



For questions on any other topics, please submit via box.demandforconstraints@neso.energy



Please be mindful that we may not have all the answers but will take things away if needed and publish Q&A along with the slides and recording.



Please ensure cameras & microphones are disabled to protect the bandwidth quality.

Webinar Norms

*Listen to
each other*

*Engage in
the
process*

*Forward
focus*

*Every
question is
welcome*

*Defer
judgement*

*Seek
clarity*

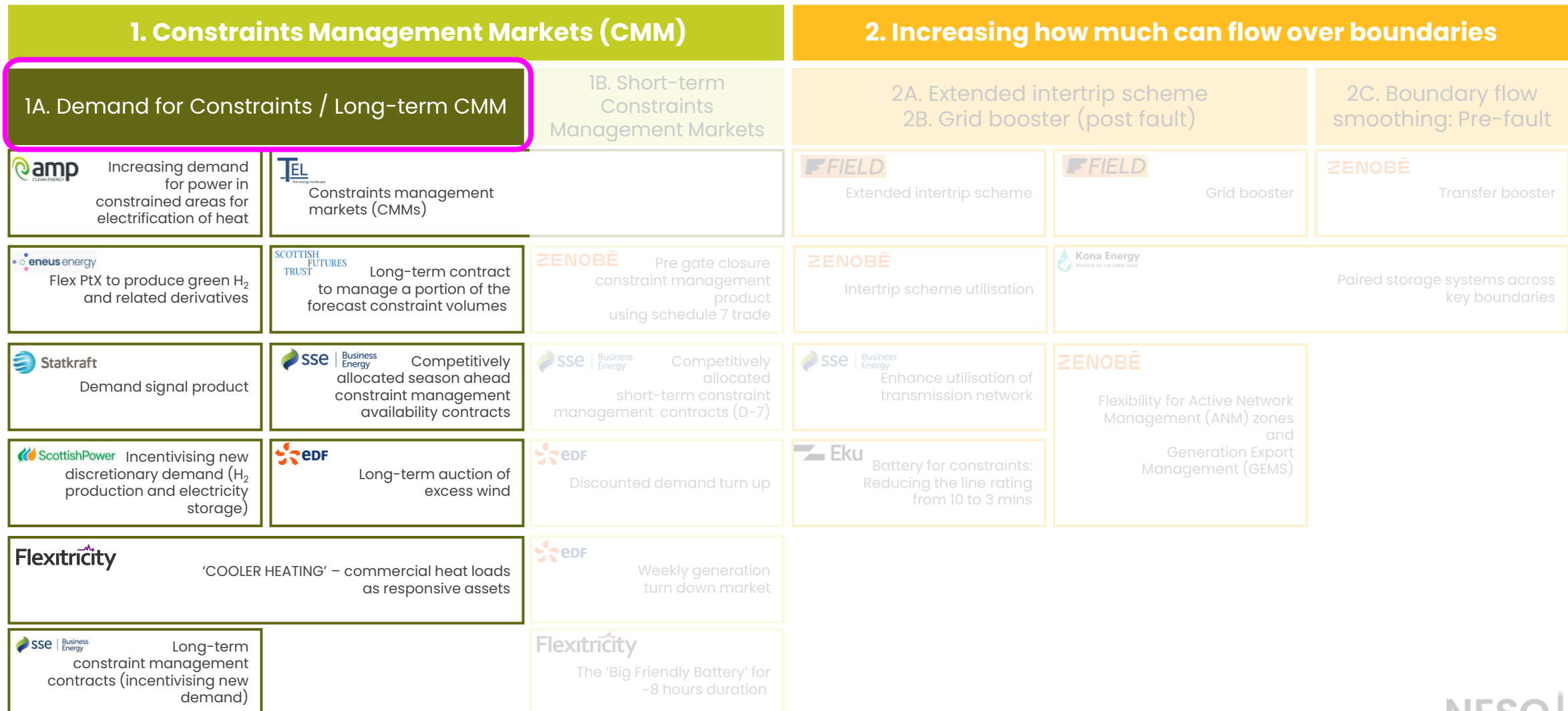


Overview of Demand for Constraints

Alifa Starlika

Overview of Constraints Collaboration Project

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High level design of Demand for Constraints

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Definition	A contract to procure additional, flexible, final demand located in areas with network constraints (Scotland), enabling increased electricity consumption during periods of thermal constraint in response to NESO instructions.
Purpose	To incentivise additional, flexible demand capacity in constrained areas to soak up excess renewable generation, avoiding curtailment
Payment Mechanism	Availability payment + Utilisation payment (in BM). The utilisation payment is subject to a cap proposed by providers during tender stage. Revenue stacking is allowed, where technically feasible.
Delivery window	Tender process starts in 2026 for delivery between 2028 and 2037.
Location	Scotland, focusing on constrained boundaries (B2, B4, B5 and B6).
Service Retirement	This is a novel approach, intended for an interim period and contracts for DfC are not to be extended. Assets will remain in BM at contract end.
Eligibility	To be eligible, assets need to meet each of the following criterion: Additional ; Flexible ; Final Demand ; Meaningful, Beneficial Demand



Innovative



Reduce
BSUOS



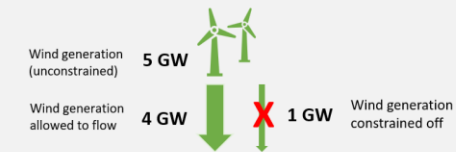
↑ Flexible
demand



Investment
levers

As-Is:

Behind the constraints

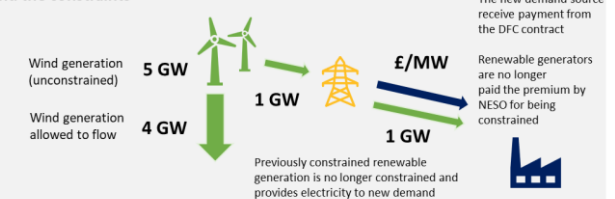


In front of the constraints



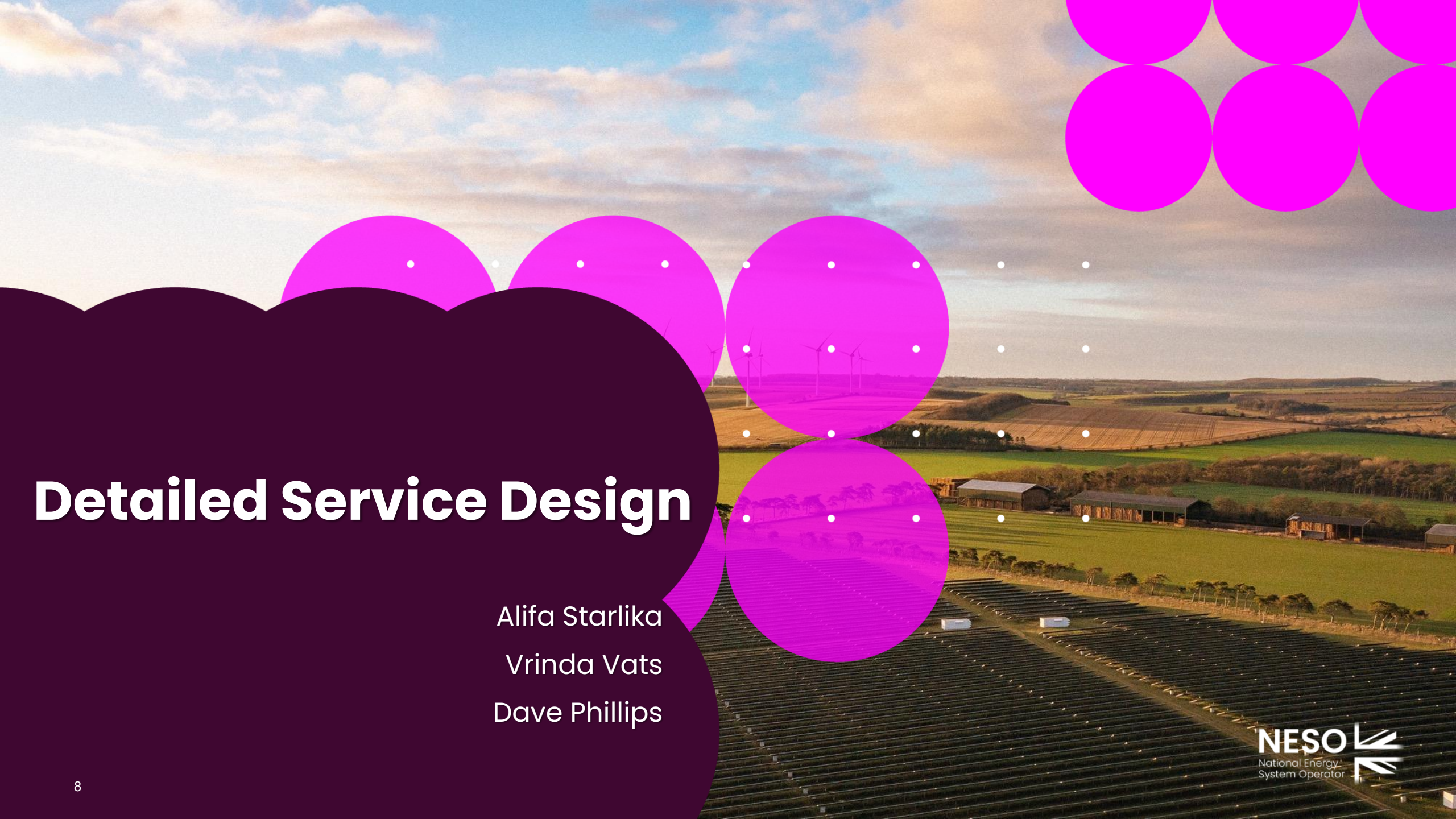
To be:

Behind the constraints



In front of the constraints





Detailed Service Design

Alifa Starlika
Vrinda Vats
Dave Phillips

Key updates since the last webinar

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Previous webinar

Today's update



Eligibility

- January 2027 was stated as a cut-off point that determines asset status as existing or new

- Connection status determines whether an asset is new or existing
- The tender in 2027 will focus on assets with known connection dates and capable to provide additional flexibility



Technical Design

- Time to full delivery was too short (10 minutes)

- Time to full delivery relaxed to 30 minutes
- Notice to Deviate from Zero (NDZ) set to 15 minutes



Commercial Design

- To procure up to 10 years, providing a flexible service delivery window from 2028 to the end of 2037

- Sensitivity analyses undertaken, exploring a break clause in 2032 to account for changes in system requirement
- Improved our wider consumer cost and risk assessments



Procurement Requirements

- Initial estimates indicate up to 1.4 GW peak system need

- Wider effects considered on wholesale market, consumer bills and CMIS Scotland progression
- Refined forecast shows up to 300 MW procured can help to mitigate diluting % of hours utilised.

The key design updates were made to strike a balance between delivering value for money for consumers and creating an attractive, liquid market for flexible demand

Eligibility

Alifa Starlika

Eligibility criteria for Demand for Constraints

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	Description
Additional and Flexible	• Additional means assets must have an investment hurdle that DfC can help address and demonstrate their new flexible capacity would not otherwise be operational without the DfC contract. • The 2027/28 tender will target demand assets that are already connected by the time of the tender and have the potential to provide additional flexibility without triggering a new connection application or requiring a connection modification.
	• Flexible: Capable of turning up their consumption of electricity in real time.
Final demand	• Final Demand means electricity which is consumed other than for the purposes of generation or export onto the electricity network.
Meaningful and beneficial demand	• Electricity is consumed for the purpose of delivering a constraint management service; consumption does not directly result in wasting energy (accepting that there may be some unavoidable losses); and the associated activity supports decarbonisation.

To be eligible, assets will have one year of lead time to prepare their investment case, secure a connection, evidence their final demand points, and demonstrate how their facility delivers wider benefits to the system



Three examples of eligibility are outlined below

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Example	Eligibility & rationale
Example A: - A demand asset has a maximum import capacity of 10 MW and a typical peak import of only 6 MW, leaving 4 MW of spare capacity. - The asset is not currently flexible but intends to install a 4 MW behind the meter storage to support its electric boiler to run flexibly.	Eligible because it has grid connection / known connection date in place by the time of tender. The additional 4 MW flexibility is eligible for the DfC tender in 2027 because the asset is coupled with productive end-use proposition and located behind the meter.
Example B: - A demand asset with a maximum import capacity of 10 MW has fully utilised its capacity and wishes to install an additional 5 MW electric boiler. - However, this would exceed its connection capacity and the project does not currently have the grid connection required to apply for the DfC tender.	Not eligible if the asset does not have a confirmed connection date for the additional 5 MW of capacity in place by the time of the tender in 2027.
Example C: A standalone 100 MW LDES or BESS	Not eligible. LDES or BESS is not final demand.



Three options for flexibility to meet their contracted capacity over real time

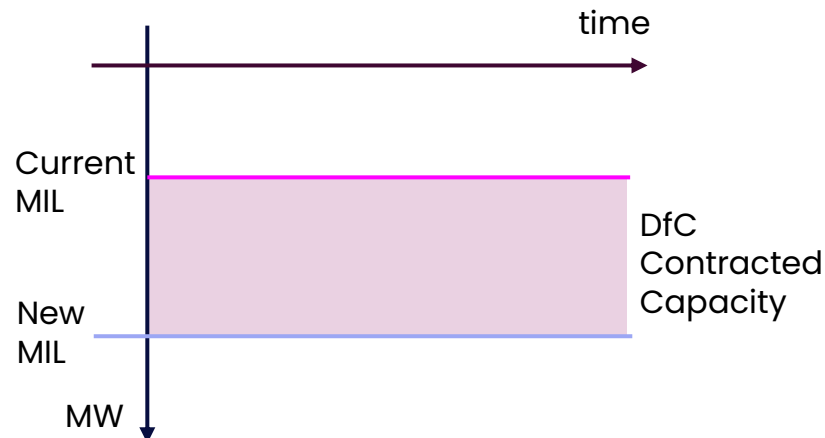
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Different assets are able to meet their contracted additional DfC capacity in different ways and we expect to assess proposals using one of three methods.

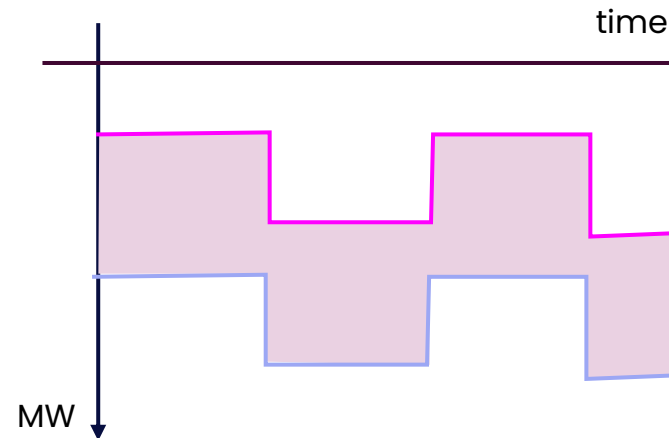
Method 1

This would apply to units that are always able to provide the capacity with no seasonal, daily or within-day variations



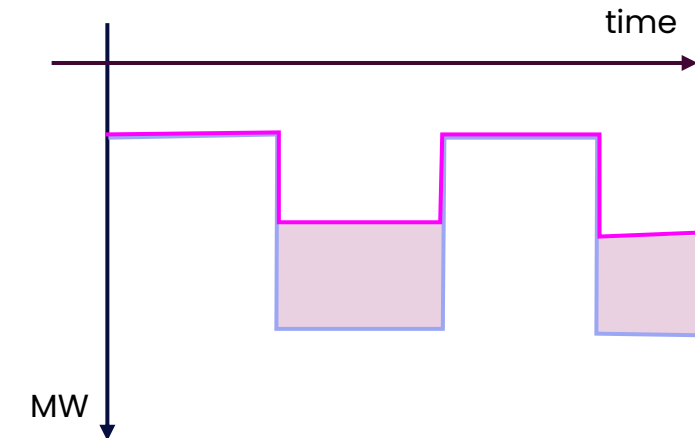
Method 2

This would apply to units that are always able to provide the capacity but with seasonal, daily or within-day variations



Method 3 – Units are to be assessed on a case-by case basis

This would apply to units that are not able to provide the additional capacity 24/7 all year round.



Technical Design

Vrinda Vats

Technical parameters for demand asset to meet

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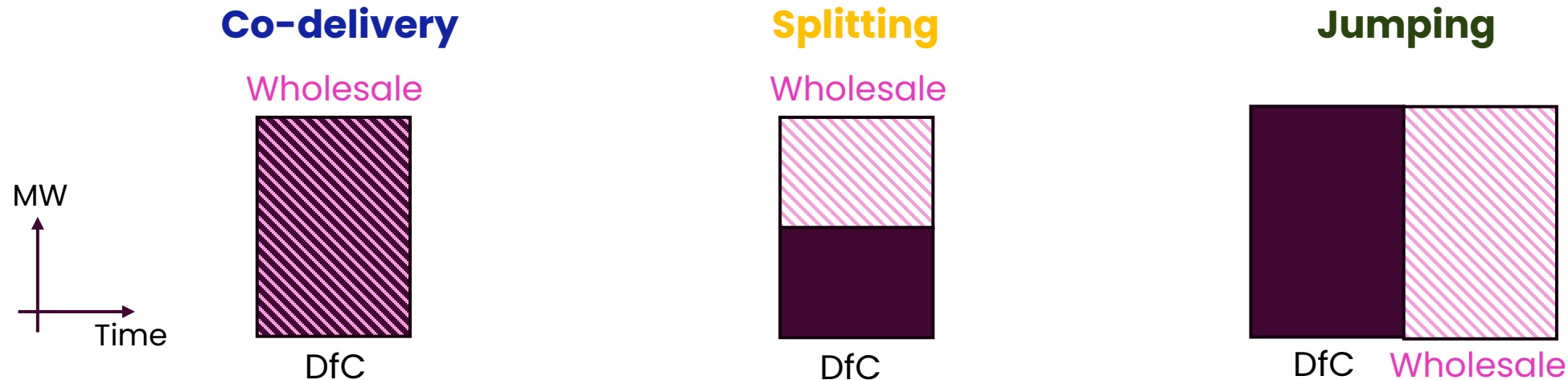
Design Element	Non-zero FPN	Zero FPN
Notice Period	(NTO/NTB) 2 minutes or less	NDZ 15 minutes or less
Time to full delivery	~~10 minutes or less~~	30 minutes or less
Activation Period	Minimum 1 minute	MNZN: 0 – 8 hours
Recovery Period	Maximum 1 minute	MZN: 0–4 hours
Minimum Contract Size	1 MW	SIL, which must be between –25 MW and 0 MW
Dispatch Mechanism	All units will be BM registered and dispatched via BOAs	

FPN – Final Physical Notification
NTO/NTB – Notice to Offer/Bid
NDZ – Notice to Deviate from Zero

MNZN – Minimum Non Zero Time
MZN – Minimum Zero Time
SIL – Stable Import Limit

Revenue stacking allows providers to optimise their revenue and reduce consumer costs

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Co-delivery

A DfC unit can co-deliver the service in the same direction, i.e. Demand Turn Up, via self-dispatch in the wholesale or DSO market. During co-delivery, DfC availability pay remains.

Splitting

Units participating in DfC may split with services dispatched via BOAs in the opposite direction as DfC i.e. Demand Turn Down, and in the wholesale market or DSO market in the same direction: Demand Turn Up. During splitting, DfC availability pay remains.

Jumping

When there is no constraints forecasted and the unit is released from its DfC contract, jumping would allow a unit to participate in other markets

DfC units can stack with many markets

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	Co-Delivery <i>A single asset receives multiple payments for using the same capacity, at the same time</i>	Splitting <i>A single asset receives multiple payments for using different capacity, at the same time</i>	Jumping <i>A single asset receives multiple payments for using different capacity, at different times</i>
Wholesale market			
Stability Markets (Mid term, Long term, Phases 1-3)	Due to the complexity of the services we will advise on a case-by-case basis		
CMIS Services (B6, EC5 interim and EC5 Enduring)			
Voltage Services (Mersey, Pennines, Voltage 26, Long term 29)			
Reactive Markets (Mid and Long term)	Due to the complexity of the services we will advise on a case-by-case basis		
Capacity Market			
Positive Reserve Services (Demand Turn down)			
Negative Reserve Services (Demand Turn up)			
Response Services			

Co-delivery and splitting with DNO services will only be allowed in the same direction (Demand Turn Up). Providers may jump between any services.

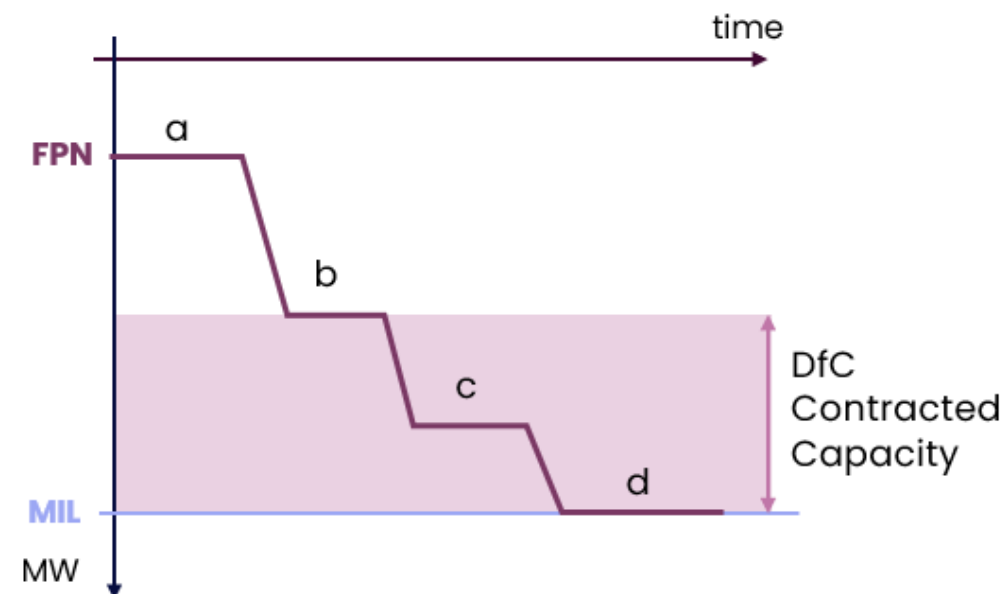


If no notice is issued, DfC units may self dispatch partially or fully

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- At any given time units may:
 - a) have more footroom than the contracted capacity
 - b) have exactly as much footroom as the contracted capacity
- No Notice is issued at Day Ahead (DA)** under default conditions of DfC and so units may additionally:
 - c) **self dispatch** part of the DfC capacity, co-delivering part of what is contracted with wholesale market
 - d) **fully self dispatch** the capacity, co-delivering all the DfC contracted capacity with the wholesale market
- The stacking rules outlined apply.
- Units would receive availability payments.
- Units will get paid utilisation per their bid prices if dispatched by NESO. Units should have their bid prices capped as per the commercial design.



FPN: Final Physical Notification
MIL: Maximum Import Limit
Footroom: MIL-FPN

If day ahead notice is issued, there are two scenarios of dispatch for DfC units

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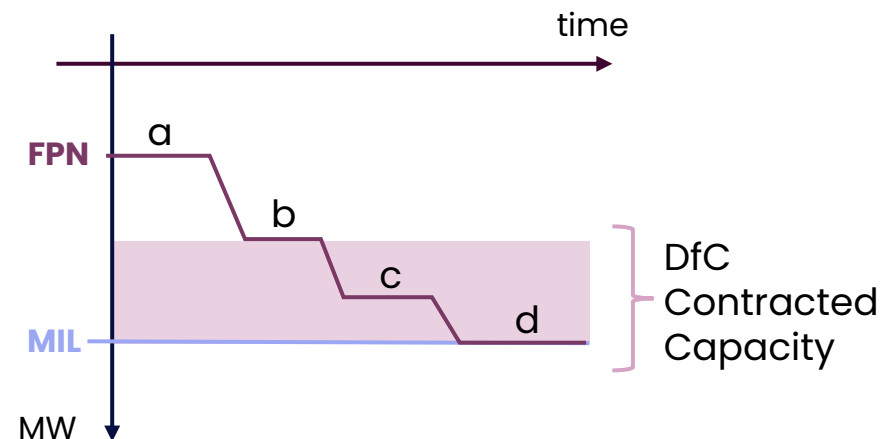
With Notice

There are two types of DA notices that NESO may send. When sent, these would apply for part, or all of, the next calendar day, from 00:00 to 23:59. The notice would apply for the whole contracted capacity of a unit.

Notice type 1:

The unit is released from its DfC contract.

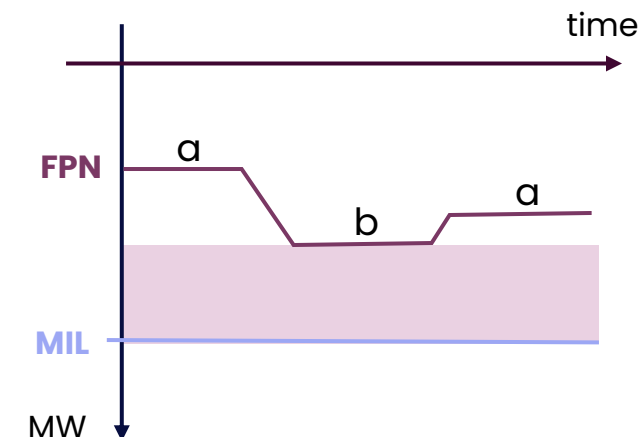
The unit may set its FPN and bid price freely, self dispatch freely (c, d) and will be paid for utilisation if instructed, for the instructed volume. DfC stacking rules no longer apply. The unit will receive the availability payment.



Notice type 2:

The unit is asked to hold DfC capacity and not self-dispatch.

The footprint must be at least the contracted capacity (a, b). The unit may not stack or co-deliver the DfC contracted capacity with wholesale market (i.e. self dispatch). The unit will receive the availability payment and, if dispatched, will be paid for the utilisation per the capped bid price.



Commercial Design

Principle in designing payment structure

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We design a payment mechanism that balances the build out of new flexible demand capacity and utilisation of the service to deliver system benefits. This means:

Availability Payment



Utilisation (in the Balancing Mechanism or other markets (if self dispatch))

- **Availability payment (£/MW/SP)** contributes towards new investment required to deliver additional flexible capacity for DfC.
- Units dispatched through Bid and Offer Acceptance (BOA) in merit order and are paid a **utilisation fee (£ per MWh)**.
- If a unit chooses to self dispatch, they will get utilisation payment from Wholesale market / DNO markets

NESO's Minded to Position

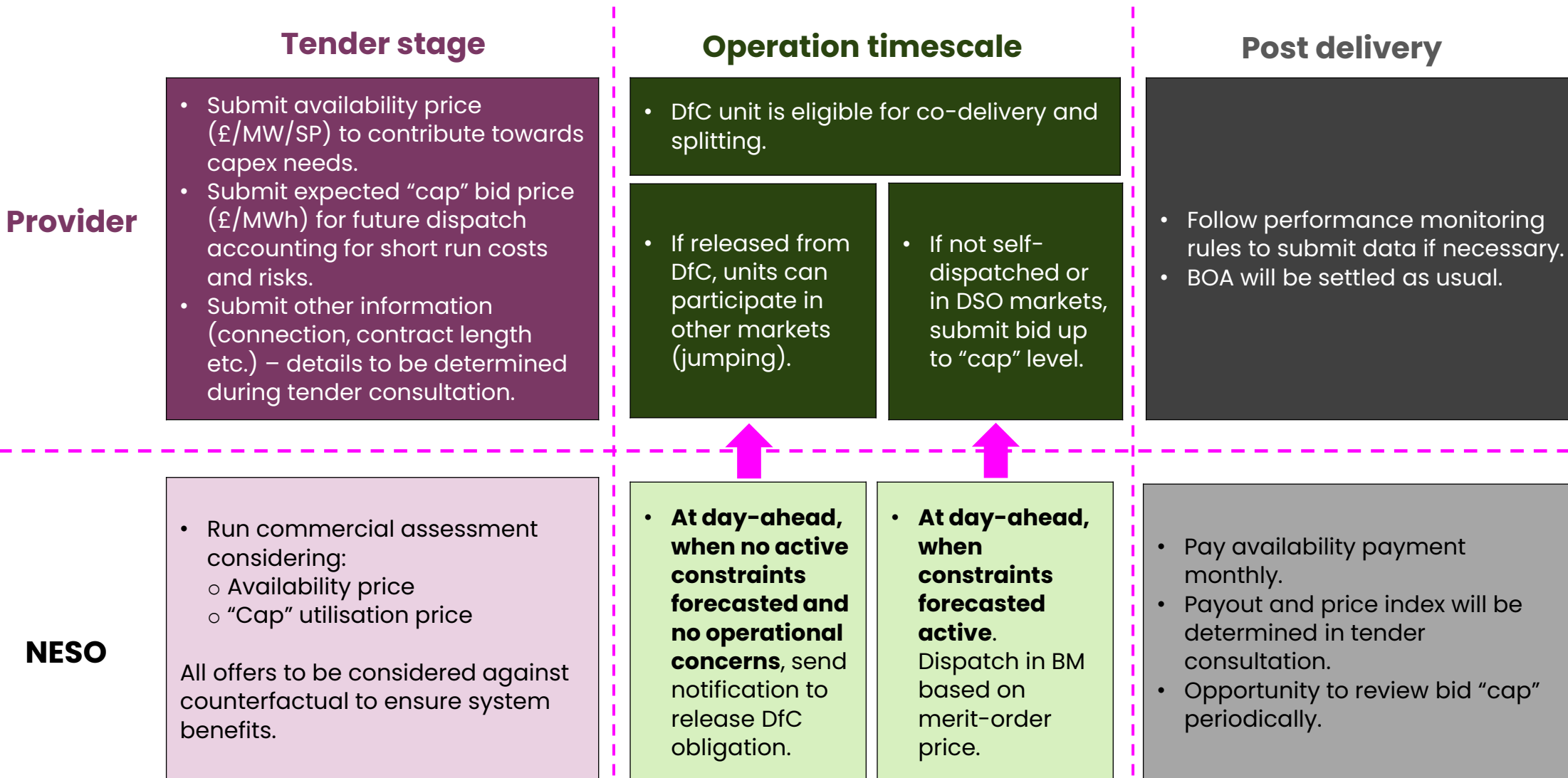
- Availability Payment + Utilisation via BOA. The BOA is subject to a cap proposed by providers during tender stage.
- This model delivers value for money by increasing revenue certainty for providers, reducing costs and price risk for NESO, and enabling flexible, straightforward participation.

The payment mechanism ensures total cost of Demand for Constraints (availability pay + utilisation via BM) is cost effective for end consumers

NESO's position on payment structure

Availability Payment + Utilisation via BOA, BOA subject to a cap that is set during tender

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Service window and contract length

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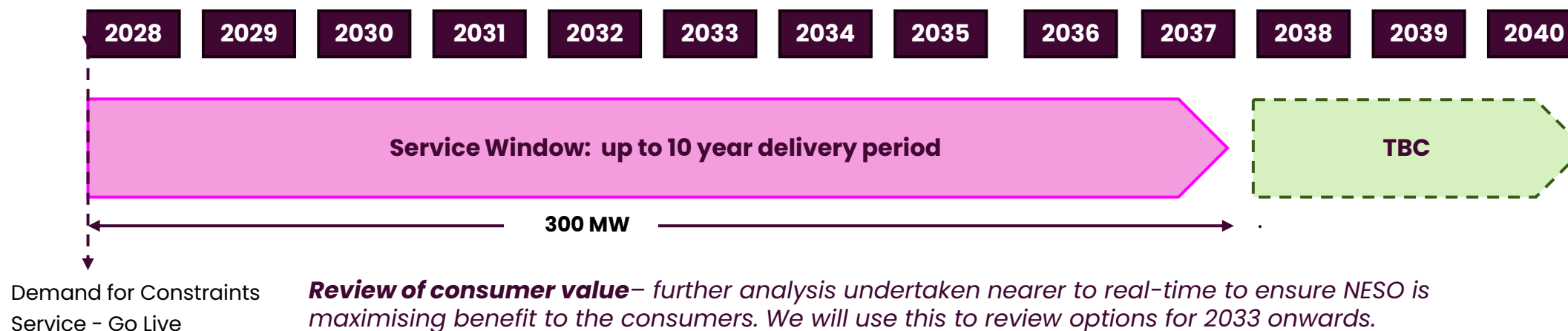


Service delivery can commence as early as 2028

- up to 150 MW during 2028, and thereafter up to 300 MW
- DfC Contracts can be up to 10 years and must end by Dec 2037.

Early analysis shows positive consumer benefit from DfC through to end of 2032

- We are proposing a break clause will apply from the end of 2032 to allow for reviews of further benefit post-2032
- If NESO determines DfC can deliver further consumer value post-2032, then the contract can continue up to agreed end date



A statement summarising all contract length options will be finalised and issued prior to the launch of Consultation.



Procurement Update



NESO will proceed with procuring up to 300 MW

300 MW right-sized NESO controlled trial volume
with up to 150 MW in 2028

WHY UP TO 300 MW IS THE RIGHT BALANCE

Cost-saving scale

Sufficient capacity to unlock meaningful transmission system thermal constraint savings while limiting over-procurement risk.

Forecasted Utilisation

Modelling estimates approximately 13% of total annual hours on average until 2032; higher MW volumes risk spreading use too thinly.

Location-led value

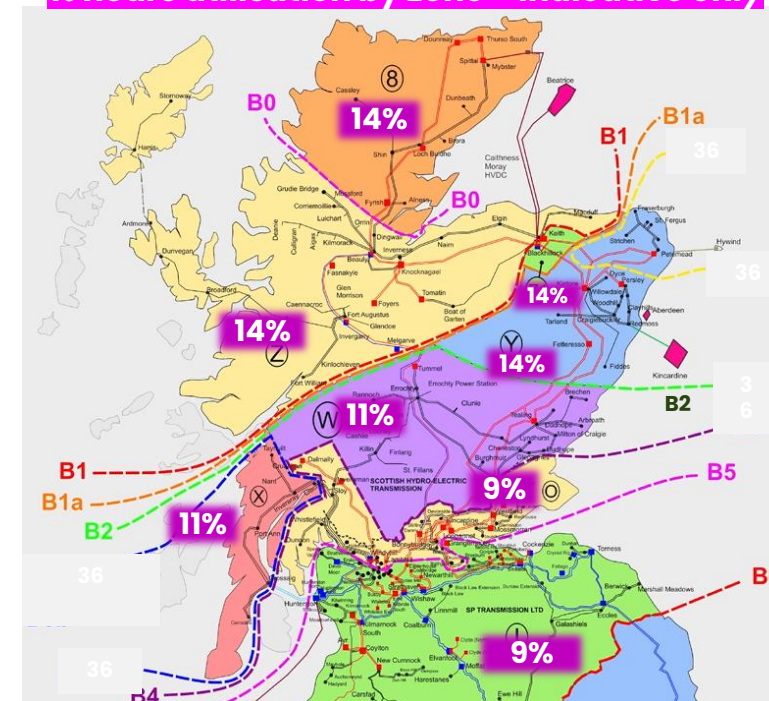
Capacity is targeted where NESO can deliver value for wider bill payers whilst easing B2, B4, B5 and B6 boundary constraints.

Network considerations

Connection point and upstream network operation able to effectively support flows of additional demand from the transmission system

Commercial discipline remains. Awards depend on system need and cost-effective bids. NESO may ultimately procure 0MW.

% hours utilisation by zone – indicative only



2028 – 2037 average; above projections based on 300 MW allowing for self-dispatch.

Procurement process has been initiated

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Consultation, Expression of Interest (EOI) and ITT will follow



Key Milestones	Planned Dates
1. Procurement process initiated	October 2026
2. Consultation Launch	March 2027
3. EOI / Technical Qualification Launch	June 2027
4. Invitation to Tender (ITT) Launch	October 2027
5. Tender Assessment	Jan – Feb 2028
6. Contract Award	April 2028

Consultation:

NESO publish draft documents to the market for review & feedback, including:

- Service Specification
- Service T&C's

EOI / Tech. Qualification:

Enables interested parties to formally Express an Interest, and also submit details about the asset with a view to passing the Technical Qualification for the service

Tender:

If an EOI / Technical Qualification submission is successful, the interested party will be invited to the Tender stage of the process.

Key considerations for contract awards

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MW is valuable where it can compete with wind curtailment to confidently relieve the relevant transmission constraint. Price, effectiveness, as well as overall cost effectiveness for consumers will determine the value NESO can unlock for demand.

Value for consumers



Useful, deliverable MW

- **Expected whole-system value using actual tender submissions and updated evidence to ensure value for consumers from availability and utilisation.**

- **Technical capability, connection, network and operational readiness determine if MW in that location can reliably provide incremental constraint relief.**

Location and portfolio fit

- NESO expects to select the combination of eligible bids that provides the strongest overall value across a combination of price, useful location, expected utilisation, MW volume, timing and delivery confidence. A lower-priced bid in a less useful location may therefore offer lower overall value.

Key Tender & Award information

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Condition	What NESO will confirm	What this means for providers
Final tender terms	Published tender documents will define eligibility, evaluation and contract terms.	The final tender documents will govern; current design details remain indicative.
Location and bid evidence	BM registration and technical readiness, connection point, useful location and a credible delivery plan ¹ are all required.	Providers should evidence how the proposed MW will be available, and never adding to network exports.
Award decision	If a bid is viable, provides consumer value, and has location & portfolio fit	Location is assessed alongside price — not as a standalone guarantee. “Up to 300 MW” remains a cap; less or no MW award is possible.
Contract delivery	Testing, availability, delivery and monitoring obligations.	Award does not guarantee dispatch; payment and performance terms apply throughout delivery.

¹ For capacity intended to deliver from 2028, all necessary connection approvals must be secured and the additional installation approved, capacity enabled, tested and operationally ready by the required service start date.

Next Steps

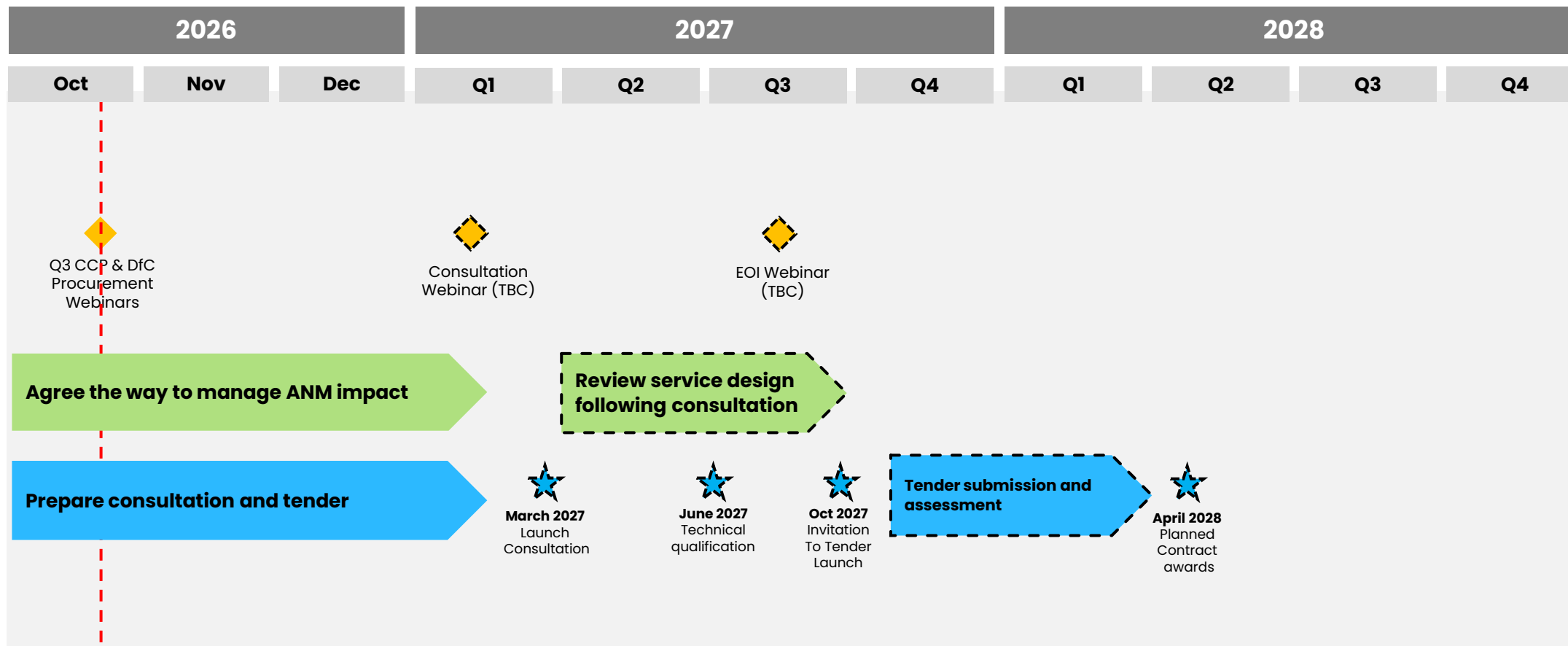
Yuting Dai

Next Steps

Note: dates are indicative and subject to change.

- Service design
- Procurement
- Stakeholder engagement

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Today, 20 October 2026

Three areas for providers to start preparing

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Technical

- Engage with the BM registration team to understand requirements – [BM Units registration guide](#)
- Ready to propose single GSP(s) for adding your DfC unit(s)
- Adding demand *via distribution networks*: Contact your DNO using the recommended DfC contacts*
- Support is also available from our Power Responsive team: power.responsive@neso.energy



Financial

- Prepare financial analysis (investment analysis): Proof that the project is not feasible without additional market mechanisms. This includes internal rate of return (IRR) calculations and cost-benefit analysis.



General

- Secure connection approval and connection date by Q3 2027
 - We strongly recommend contacting your area DNO if you want to offer demand via any part of distribution network
- Prepare a clear final demand use case
- Engage via our official channel: box.demandforconstraints@neso.energy

Note: This list is not exhaustive, does not form part of any formal procurement process, and does not constitute a formal or firm commitment by NESO to any future opportunities. An official and comprehensive list of required documents will be provided closer to the tender stage.

* NESO will send an email with the recommended contacts to registered webinar emails. You can also email box.demandforconstraints@neso.energy to request these.



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Q&A Session



Thank you!

Please reach out to
box.demandforconstraints@neso.energy
for further engagement.