

A person with blonde hair, wearing a denim jacket, is hula hooping in a field at sunset. The background shows a festival scene with tents and other people. The sky is a mix of orange, pink, and purple. There are some decorative elements: a green wavy line in the top left and a yellow bar at the bottom right.

Quick Reserve – Phase 1

Consultation webinar

8 July 2024

ESO speakers

- Steve Dugmore - Market Change Delivery
- Josh Howsego - Future Design & Development
- Mike Coldwell - Future Design & Development
- Sherry Li - Balancing Services Optimisation

Contents

- EBR Article 18 Timeline
- Phased Implementation
- Service and Procurement Design
- Transition to Quick Reserve
- Design Updates
- Auction Co-optimisation
- Contract Transfers
- Q&A
- Next Steps

Timeline

- The Article 18 industry consultation commenced on **Thursday 27 June 2024**.
- Industry consultation closes at **09:00 on Monday 29 July 2024**.
- Ofgem have 2 calendar months to publish their decision which we expect to be around **1 November 2024**.
- Onboarding from **October 2024**.
- Auction opens mid **November** with Service go live towards the end of **November**.

Phased implementation

- Due to IT system constraints, we are unable to launch the full Quick Reserve service to both BM and Non-BM markets until Summer 2025.
- Phase 1
 - Accelerated version for existing BM parties in 2024.
 - Other market providers can participate by going through the BM registration process (including the Wider Access route) & following BM operational requirements to be able to access these systems.
 - Balanced approach to maximise value given that there is currently no firm market for a similar product and the expected value it will provide.
- Phase 2
 - We intend to introduce the Quick Reserve service for both BM and Non-BM markets in Summer 2025 with updated OBP functionality.
 - Updates to the QR service design, i.e. performance monitoring.

Service Design – Phase 1

Technical Design Element	Quick Reserve Proposal
Direction	Positive and Negative
Minimum Contract Size	1 MW
Time to full delivery	1 minute from instruction
Minimum Activation Period	Up to 5 minutes
Maximum Recovery Period	Up to 3 minutes
Energy Requirement	Unit must be able to deliver the full contracted capacity per Service Window
Operational Metering	1 Hz
Dispatch mechanism	BOAs via EDL/EDT or wider access equivalent and control/system telephony as alternative dispatch solution during contracted windows
Notice to Start Ramping	0 minutes
Ramp rates	No maximum ramp up or ramp down rates. Minimum ramp-up and ramp-down rate to be in line with Time to Full Delivery.
Performance Metering	30-minute avg. settlement operational data
Performance Monitoring	Time to Full Delivery, Availability and Utilisation - Penalties for over (>120%) & under (95%) delivery
Baselining	As per BM – Physical Notifications 24 hours in advance, final at 60 mins ahead of Settlement Period. Both zero and non-zero baselines allowed
Aggregation	Yes, per GSP group
Passing through zero	Yes

Procurement Design Element	Quick Reserve Proposal
Service Window	30-minute (Settlement Period) blocks Option to link blocks
Maximum Bid Size	300 MW
Frequency of Procurement	Daily – Firm procurement
Locationality	National
Auction Platform	EAC
Auction Timing	Results by D-1 14:30
Stacking & Splitting	Same MW cannot be sold twice Splitting allowed between Positive & Negative QR Stacking with CM, BM, stability and voltage services
Bid Sizing	Above or equal 1MW
Linking of bids	Yes, by Service Window and Product (Positive QR and Negative QR only)
Bid Curtailment Rules	User defined
Payment Structure	Firm: Availability + Utilisation Optional: Utilisation only
Payment Mechanism	Availability: Pay-as-Clear Utilisation: Pay-as-Bid through BOAs

Transition to Quick Reserve

We intend to leave the Optional Fast Reserve (OFR) market open until Dec 2025:

- Avoids eliminating routes to market until QR has been fully implemented
- Ensures ESO have access to additional reserve capacity within the day
- Ensures the OFR market remains operational should Quick Reserve registration and participation prove slower than expected from day 1
- Provides additional competition for the Quick Reserve market

Providers will be able to participate in both markets while they overlap.

Providers may declare themselves optionally available for any OFR period where a day-ahead Quick Reserve contract has not already been awarded.

Competition Across Markets

- If the requirement for additional Reserve occurs frequently, we would assess whether the requirement for Quick Reserve needs increasing.
- We will include the prices of OFR units to guide the price of alternative action to derive the buy-order for Quick Reserve.
- If there is reliable volume in the OFR market routinely pricing for availability at a lower price than Quick Reserve, then the ESO may reduce the Quick Reserve buy-order and turn to cheaper OFR.

Procurement and Volume Management

- Minimum total requirement for contracted fast acting Quick Reserve, based on historical OFR and Pump Storage analysis:
 - The minimum **positive** Reserve volume expected to be required from the Quick Reserve market in a single settlement period is 500MW
 - The minimum **negative** Reserve volume expected to be required from the Quick Reserve market in a single settlement period is 300MW
- We expect to see sufficient volume of Quick Reserve in Phase 1 to meet this via the day ahead auction.
- We intend to procure 100% of this requirement through the Quick Reserve day-ahead auction.

Dispatch Management

- In Phase 1, QR will be dispatched through existing legacy BM systems and the new Open Balancing Platform (OBP).
- OFR will continue to be dispatched on the existing ASDP platform.
- Control Room will manage the two systems simultaneously, assessing actions to meet system needs in the most economic manner.
- If in real time Control Room identify that additional fast-acting reserve is required, then additional optional services (OFR / Spin Gen) would be used to create that reserve at the lowest overall cost.

Key Design Retained - Maximum Recovery Period

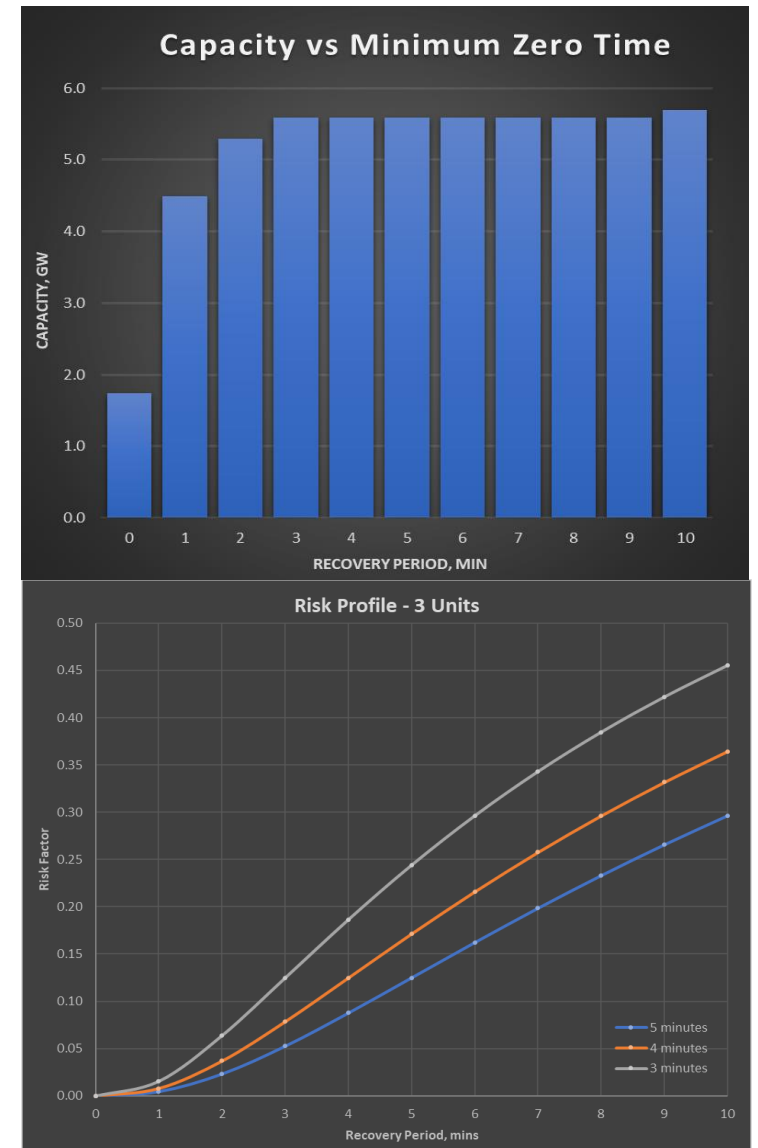
The ESO has published further justification of its 3-minute Recovery Period requirement. Paper can be found [here](#) or on our website.

Key findings from this analysis show that increasing the Recovery Period:

- Gives no significant additional benefit to total MW capacity, even when significantly relaxed to ≥ 10 minutes.
- Reduces effectiveness of the service by reducing flexibility.
- On tighter days, reduces likelihood that requirement will be filled.
- Increases risk and lowers availability, therefore lowering confidence in its use.
- Procurement volumes would need to increase, which would increase costs for the service while giving it a lower technical capability and therefore lower value to the ESO.

We also find that returning to our original 1-minute requirement would exclude significant market volume and impact market diversity.

It is therefore our recommendation, given evidence shown in this and previous justification material, that the Recovery Period remains at a maximum of 3 minutes.



Key Design Changes

We have made some new design changes based on learning from other services, and want to highlight the following changes:

- **Running out of energy has increased penalties.**
- **Prevent pricing units out of the market during contracted periods.**
- **Include an option to create longer service windows by joining contract periods together.**

State of Energy Management

- Units in Balancing Reserve have been observed to run out of energy in contracted period, so withholding the availability payment has not been sufficient penalty.
- Regardless of technology type, we expect all QR units to be able to deliver on each and every contract.
- In line with other Balancing Services, we have provisions within the QR Service Terms to penalise units that pursue other commercial use of their assets and therefore cannot fulfil their QR Contract as a consequence.
 - We are clarifying that instances of unavailability for a QR Contract, due to insufficient state of charge, including where this is as a consequence utilisation by the ESO of Quick Reserve in any earlier Contracted Service Period are included within this provision.

Uneconomic Pricing

- We are introducing new terms that deal with instances where assets with insufficient energy have increased their Bid-Offer prices during contracted periods such that they are unlikely to be selected (i.e. economically out of merit) in order to protect their Availability Payments.
 - This gives NGENSO the power to refer such activity to Ofgem, remove availability payments, deregister the unit and/or also deregister the service provider, if necessary.

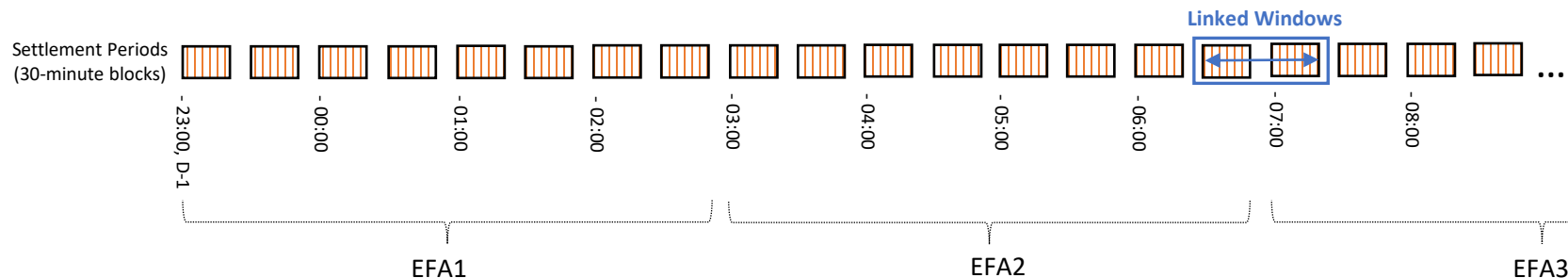
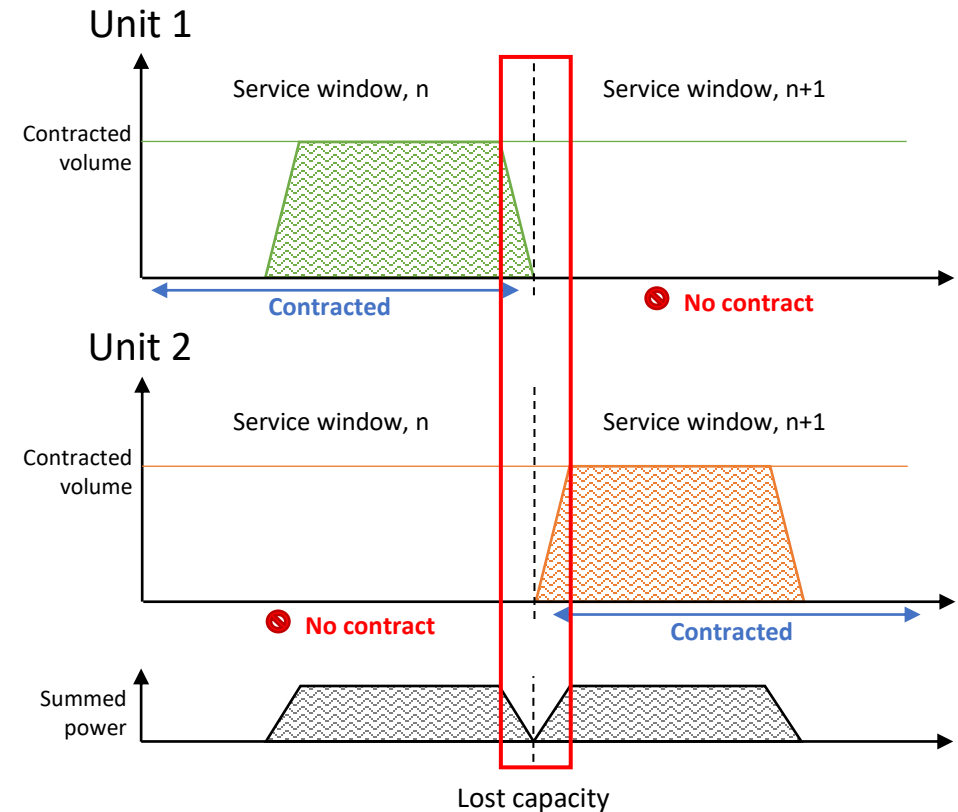
Linked Buy-Orders – a new procurement option

Linked Buy-Orders:

- ESO issue requirement for linked Buy-Orders for multiple adjacent windows for key crossover period(s).
- Providers must link together multiple windows, as specified in the buy-order.
- Offered MWs must be consistent across linked windows.

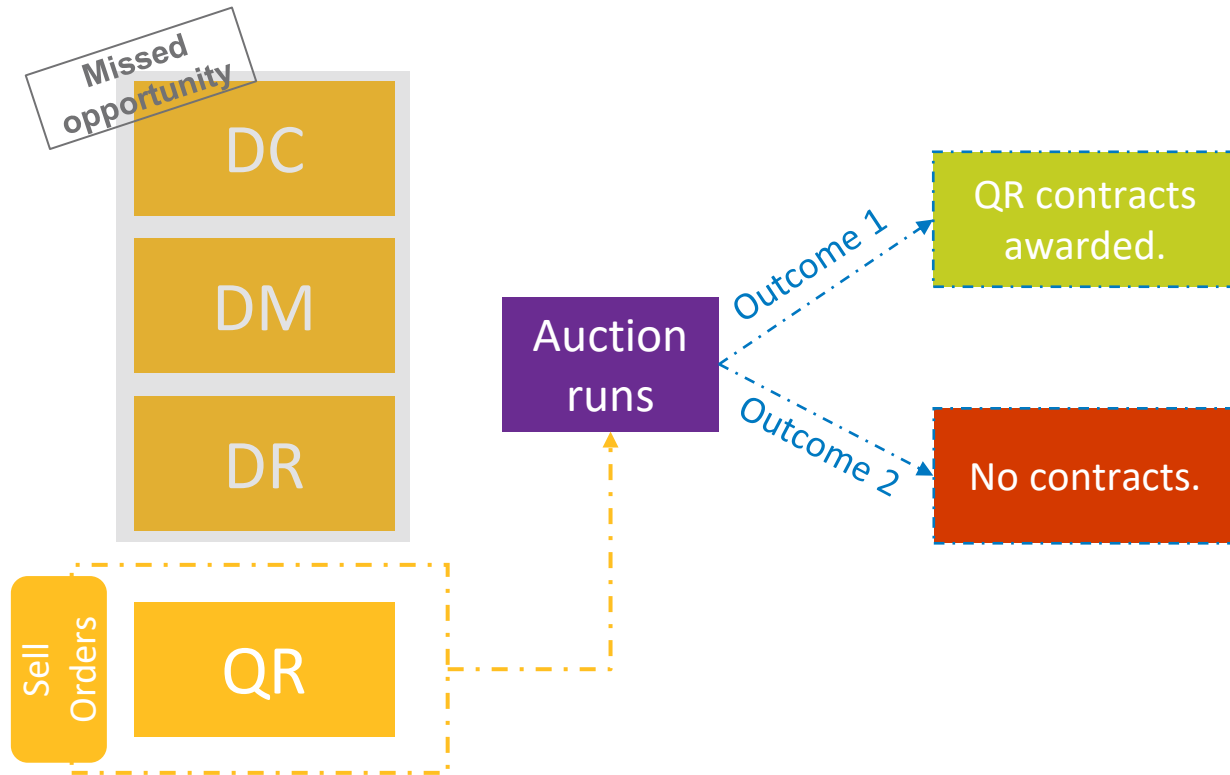
In the example below, the ESO has created QR buy-orders for half hour SPs, except 06:30-07:30, where there is a linked buy-order. This is to manage a key crossover period, EFA2 - EFA3, a known risk ahead of time.

All other requirements are as defined in the service terms, including state of energy which applies to each Service Window, even if they are linked.



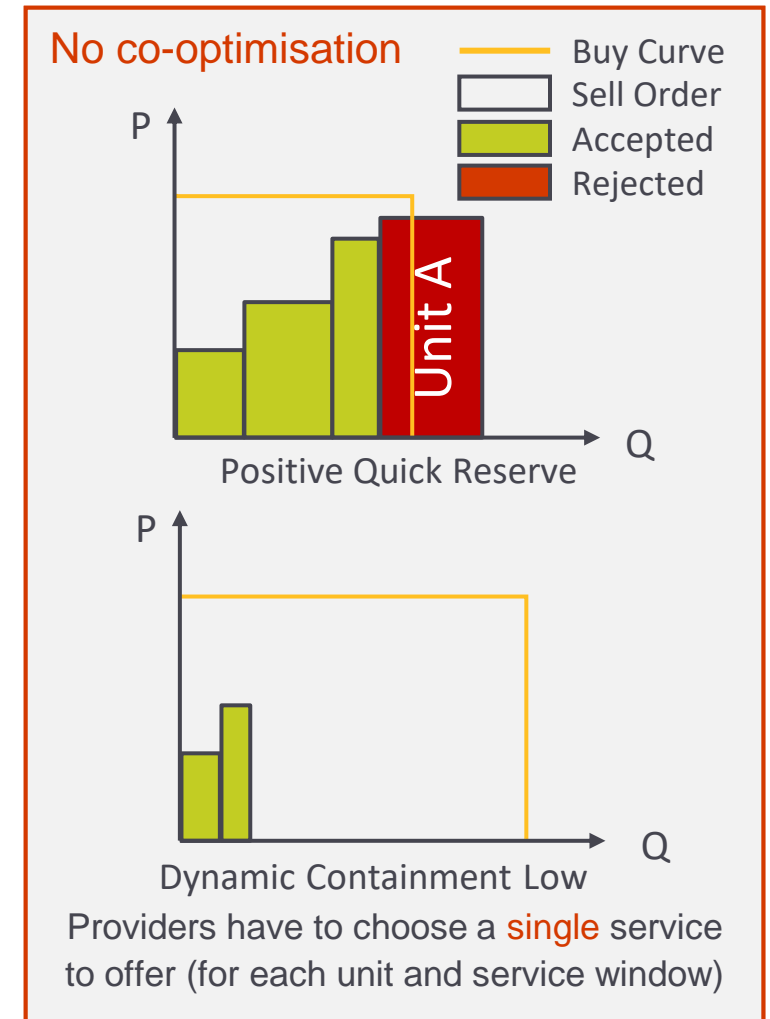
Co-optimisation of Response and Reserve Auctions

The auction clearing algorithm will be able to select between alternative provider offers and alternate ESO requirements to better optimise the overall market clearing.



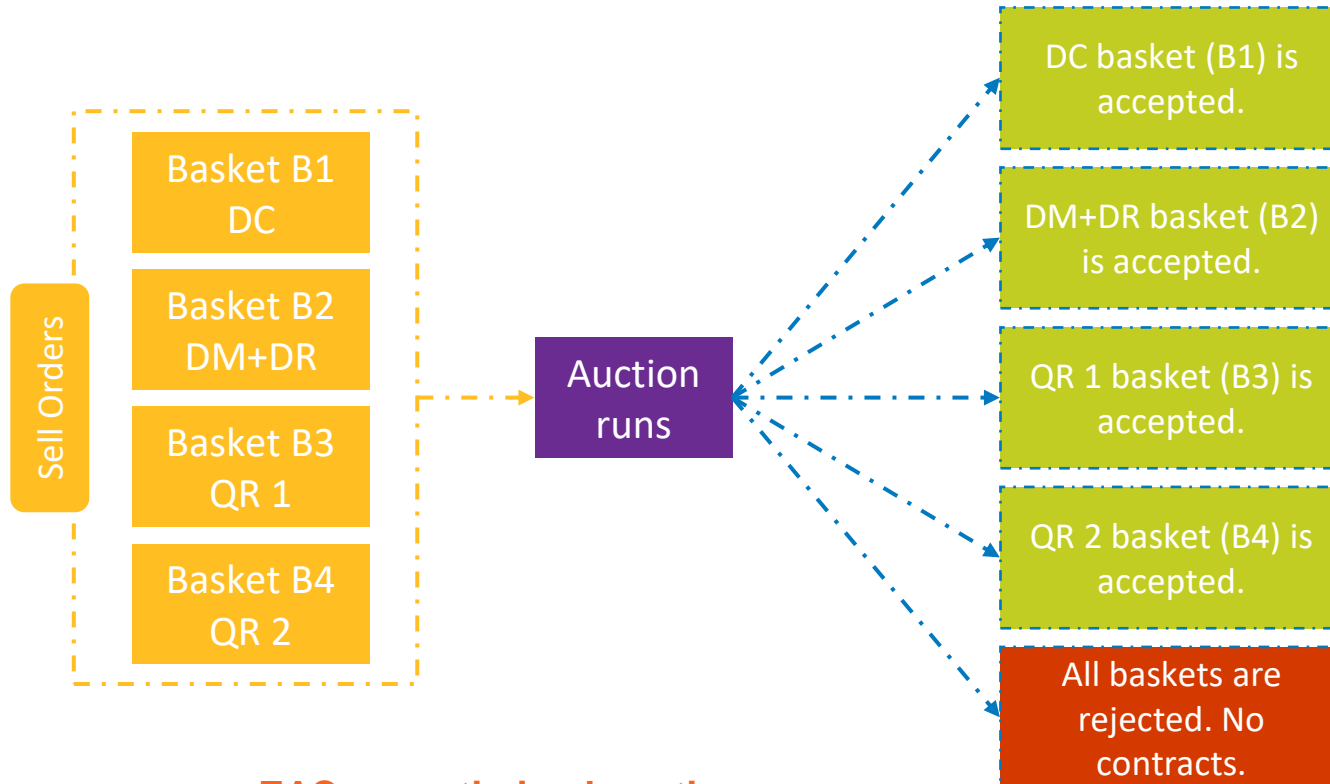
If co-optimisation is not allowed...

Only one service (i.e., either DC, DM, DR, or QR) can be offered into the auction.



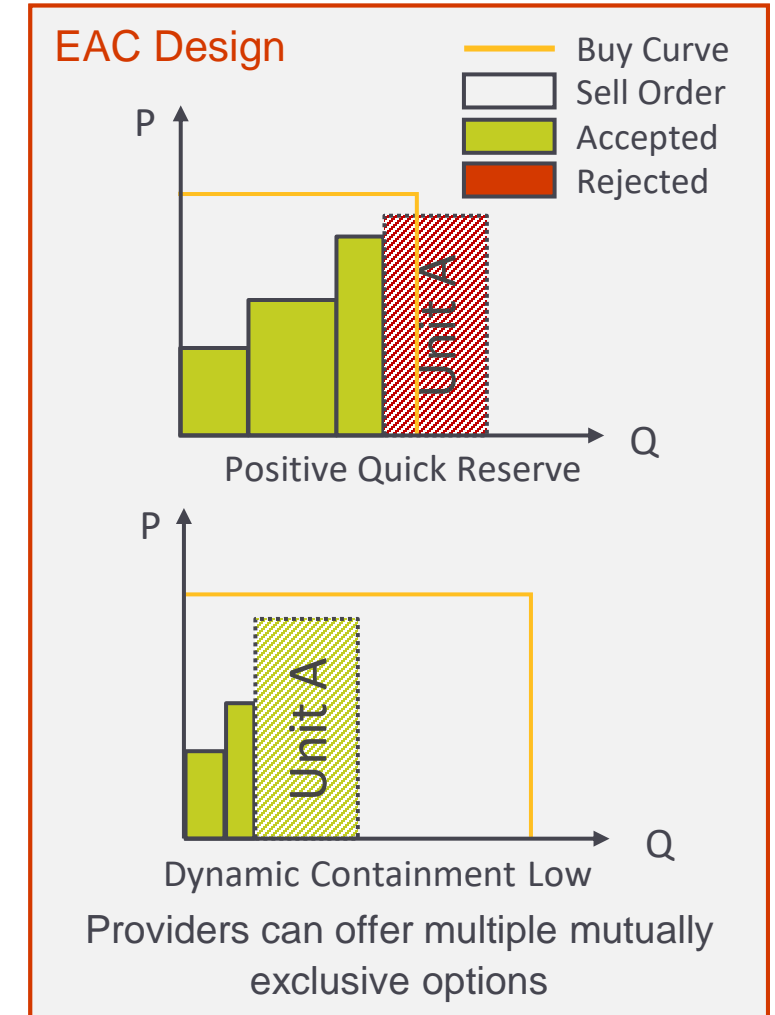
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EAC co-optimised auctions

When a unit has the capability of providing more than one of the services, the provider can offer each service in a different basket.



Transfer of Contracts

- In line with other Balancing Service contracts, QR Service Terms allow a 'Primary' Service Provider to transfer their QR contract to another unit prequalified for QR (either their own or that of another 'Secondary' Service Provider).
- Historically, where a transfer took place our Settlements team made all associated payments direct to the Primary Service Provider.
- We are now introducing a change for QR that allows for all applicable payments to be made direct to the Secondary Service Provider.
- As a consequence, when the Primary Service Provider assigns a Quick Reserve Contract to the Secondary Service Provider this effectively now means that a transfer is a full assignment, transferring all rights and obligations under the Service Terms for the Contracted Window.
- This is covered in section 22 of the Quick Reserve Service Terms and is something we expect to roll out across our other balancing Services.

Q&A



Closing comments / Next Steps

Thanks for your time.

The Article 18 consultation is open until **9:00 am on Monday 29th July 2024** and we would welcome all feedback on the service design and contract terms.

<https://www.nationalgrideso.com/industry-information/balancing-services/reserve-services/quick-reserve#EBR-article-18-consultation-documents>

We are very happy to arrange for 1-2-1 sessions during the consultation period to cover any further questions or clarifications you might have. Please reach out to us via the normal email box.futureofbalancingservices@nationalgrideso.com

