



Demand Flexibility Service

Post-consultation launch webinar - 5th September 2022

Agenda

- Opening of the consultation
- Context and overview
- Service proposals and process
- Break
- Panel Q&A
- Next steps

Ask a question to our panel

www.slido.com
#DFS



Today's presenters and Q&A Panel

Ask questions at www.slido.com #DFS



Kyle Martin
Market Change Delivery Senior Manager



Amy Weltevreden
Market Requirements Senior Manager



Robert Westmancoat
Senior Strategy Analyst



James Kerr
Consumer Strategy Lead



Kashia Cullen-Anderson
Senior Balancing Markets Development Officer



Jean Hamman
Operational Manager



Francisco Sanchez
Senior Strategy Analyst



Yingyi Wang
Senior Strategy Analyst

Consultation



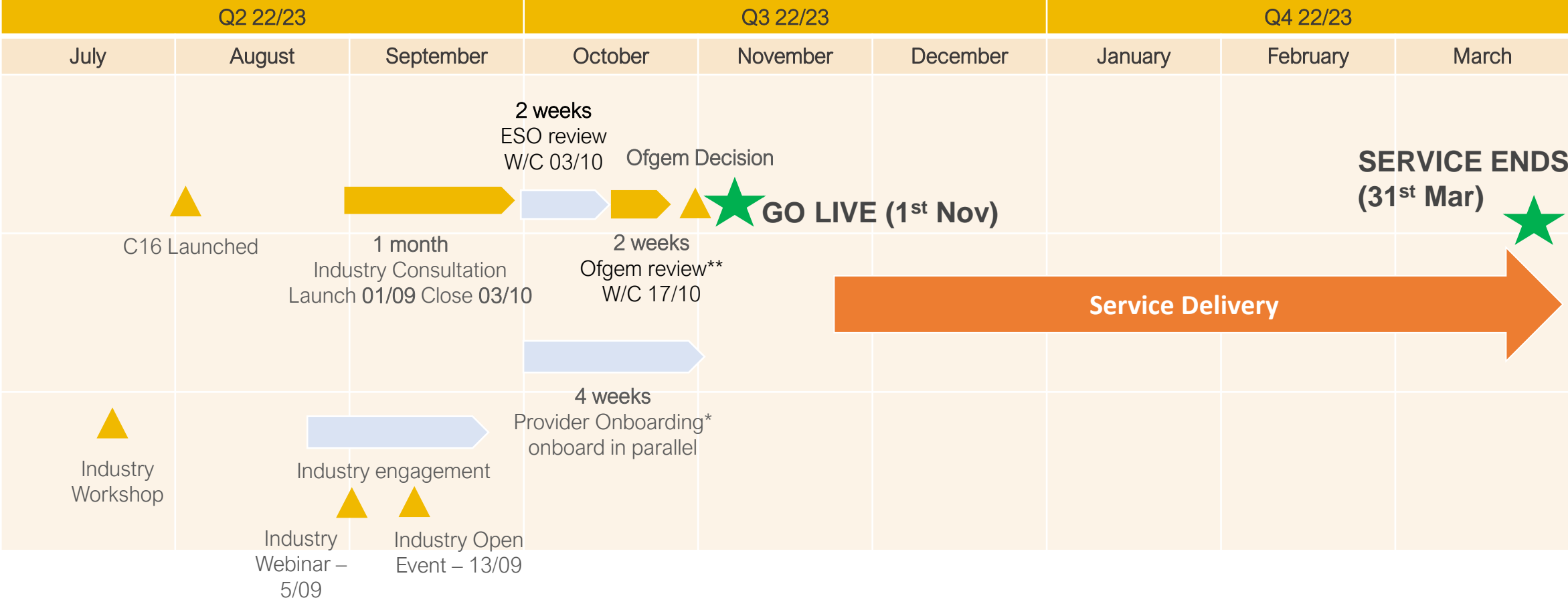
Demand Flexibility Service Consultation

- The purpose of this consultation is to seek feedback on our new Demand Flexibility Service proposal
- This feedback will help shape our flexibility workstreams and inform our decision making
- The consultation is open to all and we gratefully receive your views and feedback

Our consultation paper seeks feedback on the following:

- Proposals for the Demand Flexibility Service
- Mapping for the Demand Flexibility Service
- Onboarding and use of monthly tests
- Proposals to introduce a Guaranteed Acceptance Price for tests

Consultation timeframe



New provider and new volume can enter the market throughout the winter

Responding to the consultation

- The full consultation on terms and conditions for a new Demand Flexibility Service can be found on our website [EBR Article 18 Demand Flexibility Terms and Conditions | National Grid ESO](#)
- All formal responses must be submitted by emailing the proforma to DemandFlexibility@nationalgrideso.com by the **3rd October 2022** when the consultation formally closes
- The consultation will be reviewed by Ofgem and once approved all details will be published on the National Grid ESO website



Throughout the consultation we'll be offering opportunities for you to speak to our Demand Flexibility Service team. If you would like to be included on our mailing list, please email DemandFlexibility@nationalgrideso.com

Context

- When national demand is at its highest, during **peak winter days**, we would expect all available generation to be available and running, potentially with interconnectors imports and some demand-side response through price sensitivity and triad-avoidance.
- With this profile, there may be a requirement for **additional flexibility** to balance generation and demand, as well as to **achieve sufficient upwards reserve**.
- Our **early winter outlook** sets out our base case view that margins are expected to be within the Reliability Standard under normal market conditions.
- Our operational modelling shows that **there may be some tight periods** that we expect to be able to manage using our standard operational tools.
- The **demand flexibility service** is one of the **enhanced actions** we are creating as an **additional tool in our toolkit for this winter**.
- As an **enhanced action**, our new Demand Flexibility Service will allow the ESO to **access new flexibility** that is **not currently accessible through existing services and market incentives**, in the event that insufficient upwards flexibility is forecast at the day ahead stage.

How it fits in long-term

- Consumers are looking to engage in the energy market when incentives are offered as demonstrated by the recent [Octopus Energy turn down trials](#).
- Longer term, wholesale and retail markets will unleash the potential of demand side flexibility with the introduction of half-hourly (HH) settlement in 2025
- Meanwhile, there's an opportunity to accelerate the transition to a smart, flexible energy system this winter through a nationwide demonstration of a demand reduction service

Providers participating in demand side flexibility services can:

- ✓ Contribute to system security
- ✓ Reduce overall costs of managing the system
- ✓ Reduce carbon emissions
- ✓ Reduce the cost of their own bills
- ✓ Speed up the transition to a smart, flexible energy system

When could the service be required?

- We will assess and nominate the service when a requirement is identified at **day ahead**.
 - The DFS requirement, if it exists, will vary day-to-day dependent on the demand and the generation profile.
 - We will share further analysis on service requirements prior to the service going live.
 - We will also **guarantee a minimum of 12 dispatch instructions** of the service for units that are ready to participate from November - see slides on Tests
- The requirement for DFS is most likely during the **high demand periods of the day**,
 - Typically, high demand periods are during the **evening period between 16:00 - 21:00**, but could also be over the morning peak
 - They are more likely to occur on the **weekdays**.
 - We anticipate that where there is a requirement, it will be for 2-3 hours during peak demand periods.

Implementation for winter

Due to the speed we have developed this service, and the maturity of the concept, the service will not be used as an every day action for the following reasons:

- **Day ahead dispatch** This is less accurate than dispatch actions taken in real time. It could lead to inefficient volumes being procured due to changes in weather conditions may significantly change.
- **User fatigue** If we use the service as a commercial tool it would increase utilisation. It may impact volumes participating if the service was activated close to a test.
- **Non-firm service** Customers are only paid for what is delivered leading to significant uncertainty regarding how much volume will be reduced
- **Market distortion** The use of this tool for commercial purposes would reduce scarcity prices in the BM leading to peaking generators to lose revenue.
- **ABSVD** Imperfections related to settlement will be present with the DFS and will not be completely resolved until half hourly settlement is introduced in ~2025

Future role: We would like to continue to develop the benefits we will have created for passive users who have become active participants in the electricity market. Our ongoing plan will include support accessing our other ancillary services, the BM, and through suppliers.



Service proposal

Aims

- Maximise the volume participating
- Make the service a viable proposition for providers
- Make the service a viable proposition for end consumers
- Create confidence in forecasted volume
- Maintain confidence in forecasted volumes
- Confidence in pricing assumptions for volumes
- Incentivise early entry to market
- Incentivise continued participation in market
- Test end-to-end process
- Tests should not materially distort the market (wherever possible)

Service overview and eligibility

Overview

- The Demand Flexibility Service will be set up as a new Ancillary Service
- It will be procured when required at Day Ahead
- Nomination will be at the point of accepting bids
- Payment will be based on actual delivery and Pay As Bid (no penalty for over or under delivery)

Participation

- Assets require half-hourly metering
- Demand reduction must be for a minimum of 30 minutes
- Providers must provide relevant HH metering and baselining data to demonstrate delivery of demand reduction

Example:

- Provider forecasts they can deliver 100MW demand reduction
- ESO instruct them to target 100MW demand reduction
- Provider actually delivers 90MW demand reduction
- Utilisation payment only for the 90MW that was delivered
- If 110MW was delivered then utilisation payment will pay for the full 110MW

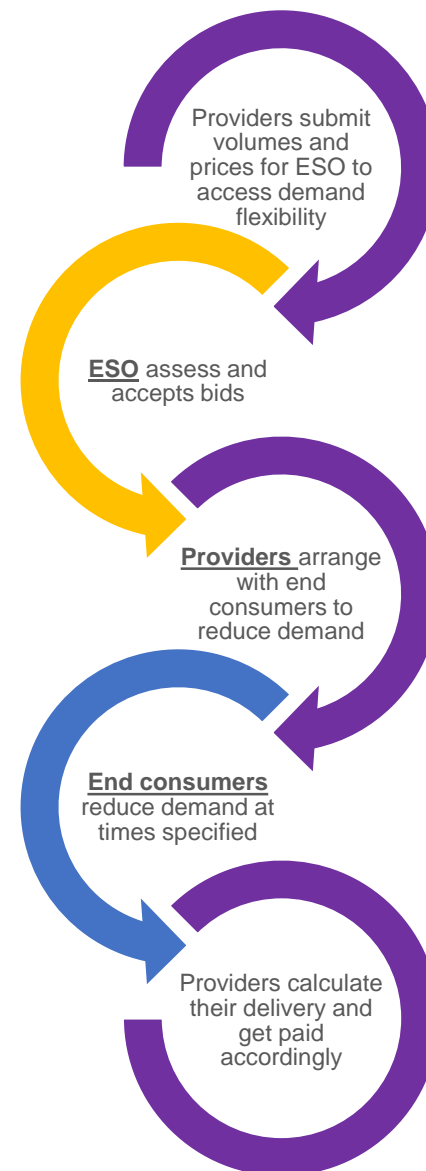
Service overview and eligibility

Target participants

- As much new demand flexibility as possible
- This includes parties/assets which we cannot currently access through BM or other ancillary services

Exclusions

- Assets with a Capacity Market (CM) contract
- Assets participating in Balancing Services for the ESO or similar services to other 3rd parties (except for ANMS)
- Stacking/splitting other services are not permitted



Commercial proposition

- We expect the service to run from **November 2022 to March 2023**
- It is **uncertain** how much we will need to use the service for real
- We want to **make the service viable** and to **build confidence** in its use
- Providers will be invited to **participate in a series of tests** while the service is live:
 - **two “regular tests” per month, plus**
 - **two “onboarding test” in their first full month of provision**
- This is up to a **total of twelve tests**
 - We have **increased from eight tests** in our pre-consultation webinar, to **enhance the commercial proposition**
- Each test for each provider will be for a **1-hour period**
- We may **spread providers over different hours or different days**, to manage to overall delivery and impact on the system and the market.

	Regular		Onboarding	
Nov	1	2	3	4
Dec	5	6		
Jan	7	8		
Feb	9	10		
Mar	11	12		

Example for a provider entering from Nov '22

NB: If an event is called on a scheduled test day, then a participant should bid in as normal and the test will be deemed cancelled, as a real event has been run and the same learning will be achieved. We will reschedule / roll over tests as necessary.



How the service will work

Process

Up-front

Registration & onboarding

Service steps

1. Weekly indicative forecasts
2. Service requirements
3. Submission of bids
4. Assessment of bids
5. Updated volume forecasts
6. Delivery of demand flexibility
7. Payment procedure, ABSVD and BSAD



Up-front: Registration and onboarding

Registration and onboarding

Ask questions at www.slido.com #DFS

During consultation Period

Onboarding Window (from October)

Providers

Step 2

Provider responds with company details and anticipated volumes.

Step 4

Provider registers as a provider on single markets platform

Step 5

Provider registers and submits DFS Units and accepts terms of service for DFS participation

ESO

Step 1

ESO issue email invite for participants to register interest in providing DFS.

Step 3

ESO issue communication notifying registration for Demand Flexibility Service is open

Step 6

ESO reviews application and confirms completion of prequalification process

Detailed user guides and tutorial videos will be available on our website, once the registration window opens

Registering DFS units

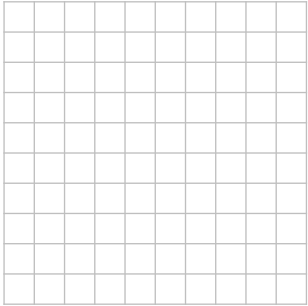
- Providers can register one or more DFS units for the service.
- Each unit will have a specific DFS unit type that defines the baseline methodology to be used for any meters (MPANs) which contribute to its delivery.
- Units will be registered with a capacity of between 1MW and 100MW.
- Registering a DFS unit allows a provider to bid into the assessment.
- In each submission, the provider specifies a single volume (MW) with a single price (£/ MWh) that a single DFS unit can deliver in a Settlement Period.
- There will be no allocation of specific meters to DFS units at the point of registration; providers can allocate and re-allocate these for different service windows and will keep their own records of this mapping.

Registering DFS units

- The unit registration starts with creating one or more “empty” DFS units
- How to allocate the volumes to fill them up can be decided in a later stage.
- A new DFS unit will be needed when:
 - 1) A new price band is needed, and/or
 - 2) The 100 MW capacity cap is reached
- Registered capacity of the unit can exceed the total aggregated quantity
i.e. submission volume is not obliged to match the registered capacity

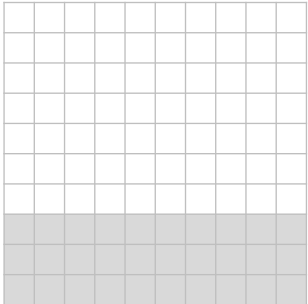
DFS units

Unit-01



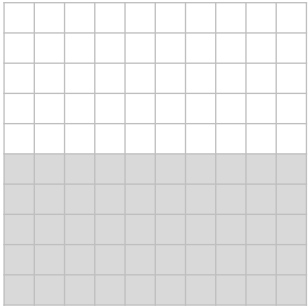
up to 100 MW

Unit-02



up to 70 MW

Unit-03

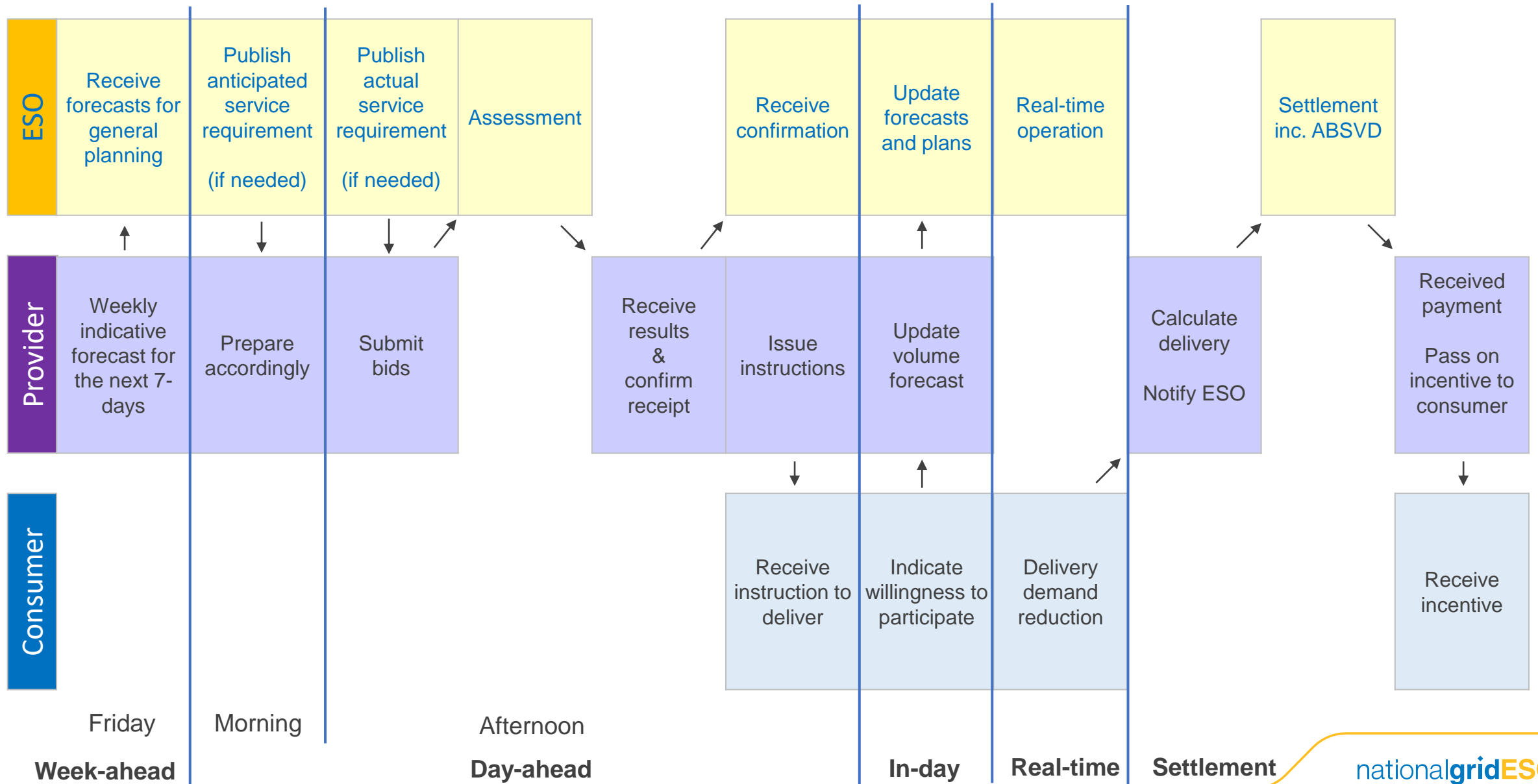


up to 50 MW



Service steps: overview

High-level process



Weekly indicative forecasts

- To allow us to **plan the system and identify any risks**, we need to have a good idea of what **volume of demand flexibility is available** for us for the coming week
- We are therefore asking for a **“Weekly Indicative Forecast”** from providers
 - Submitted **each Friday by 10am**
 - Covering **Saturday** to the **following Friday**
 - Indication for **each Settlement Period** in that week of:
 - what **volume can you deliver**, and
 - **at what price** you can deliver it*
- This will be in the same format as the submission of bids

Day	From	To	Volume	Price
Sat	00:00	00:30	100	£12
Sat	00:30	01:00	150	£10
...				
...				
Fri	23:00	23:30	120	£14
Fri	23:30	24:00	80	£16

* As this data is targeted at actual usage, prices should not reflect the **“Guaranteed Acceptance Price”** (see testing slides)

** Numbers and data format are purely illustrative for purposes of sharing an example and not indicative*

Service requirements

Indicative requirement

- At 10:00 we will publish if we think there will be a requirement for delivery the following calendar day

Actual requirement

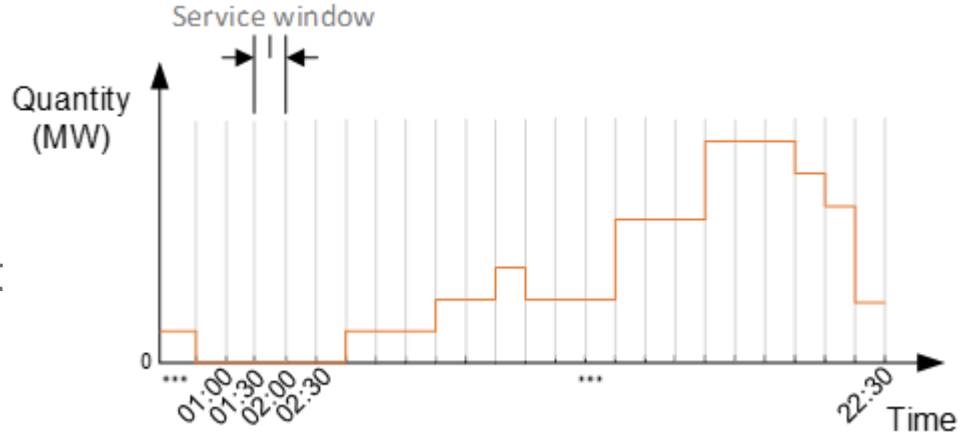
- At 14:30 we will confirm if there is an actual requirement
- This will indicate the times and volumes required

Service windows

- Procurement will be in Settlement Period blocks
- This allows finer granularity of requirement and shaping procurement (to manage effective ramp rates)

Aggregation

- Single national requirement



NB: for illustrative purposes only

NB: If an event is called on a scheduled test day, then a participant should bid in as normal and the test will be deemed cancelled, as a real event has been run and the same learning will be achieved. We will reschedule / roll over tests as necessary.

Submission of bids

- Bids should be submitted by 15:30
 - 1 hour after the actual service requirement is published
- Each individual bid will:
 - Be for a specific DFS unit
 - Be for a single settlement period
 - Have one volume (MW)
 - from 1MW to 100MW
 - which is expected to be deliverable if accepted
 - Have one price (£/MWh)
- Providers can:
 - Submit multiple bids for different DFS units for the same period
 - Submit multiple bids for the same DFS unit in different periods
- Providers cannot:
 - Submit multiple bids for a single DFS unit for the same period
 - Link bids between periods, or between DFS units

Provider A: SP34

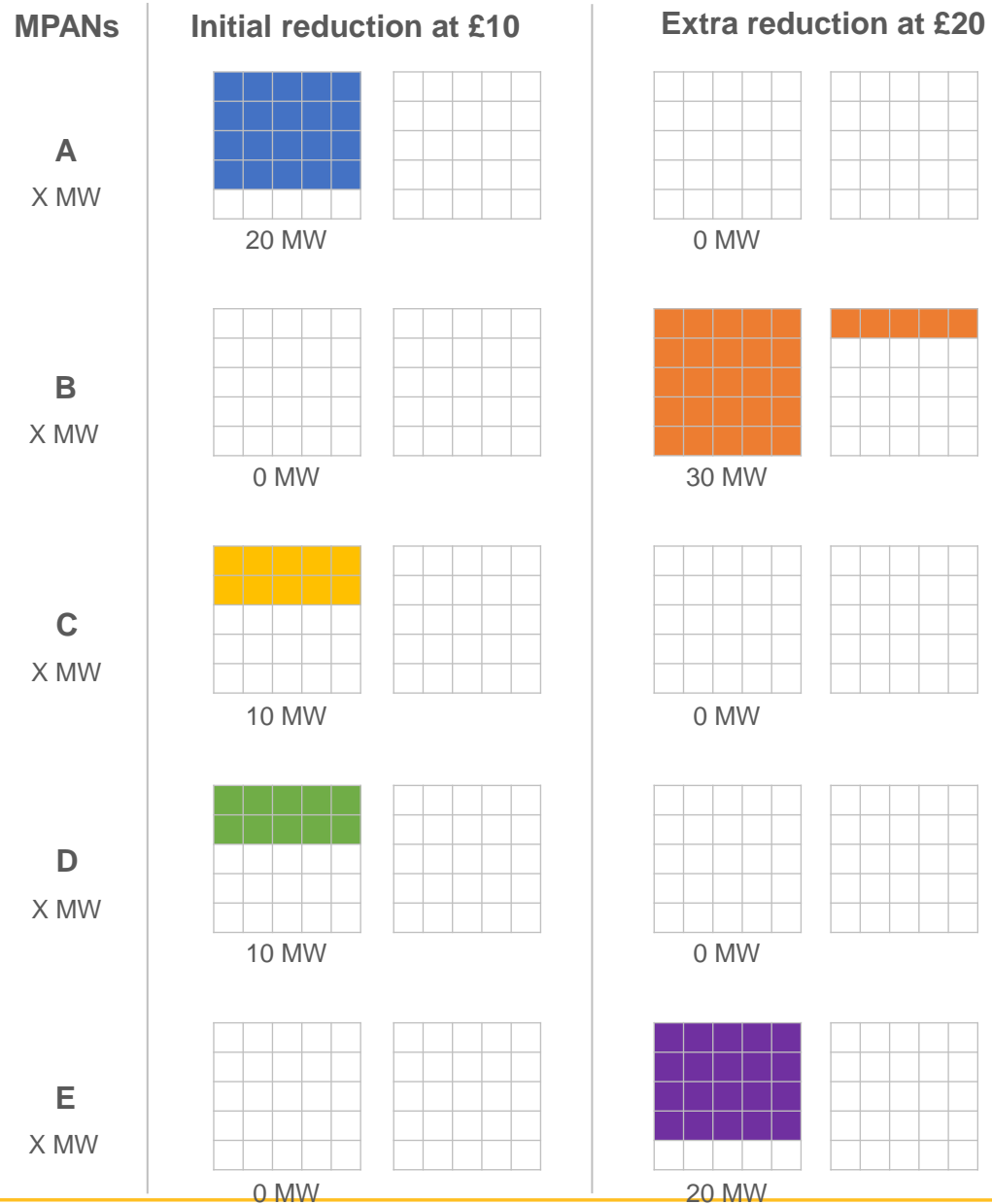
DFS Unit	MW	£/MWh
A1	100	3
A2	50	5
A3	80	10
A4	100	20

Provider B: SP34

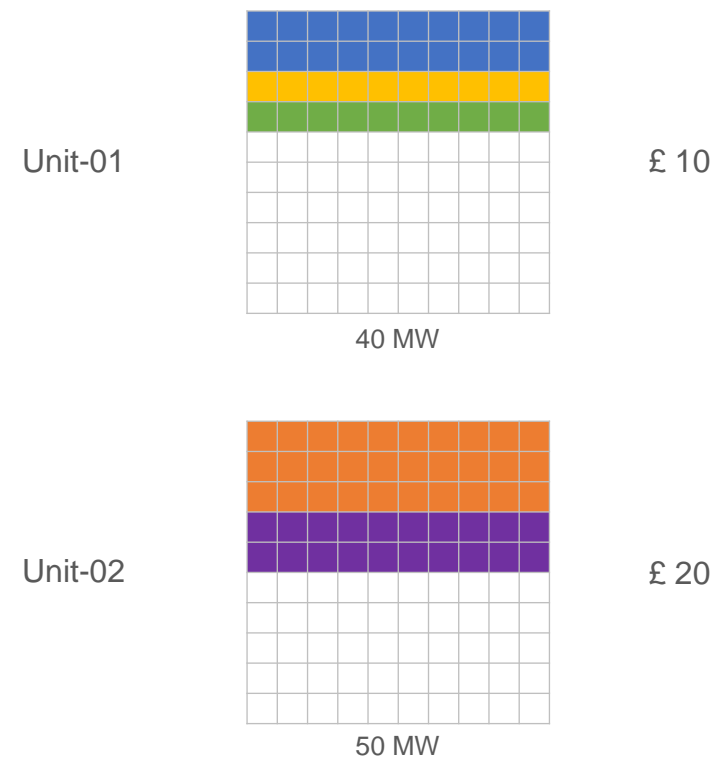
DFS Unit	MW	£/MWh
B1	75	4
B2	100	12

** Numbers and data format are purely illustrative for purposes of sharing an example and not indicative*

Allocate volume - example 1



DFS units



** Numbers and data format are purely illustrative for purposes of sharing an example and not indicative*

Allocate volume - example 2



- Providers can decide how to allocate volumes from different MPANs into DFS units
- A DFS Unit can be aggregated across one or more MPANs
- To create multiple price bands, a MPAN can be allocated in multiple DFS Units

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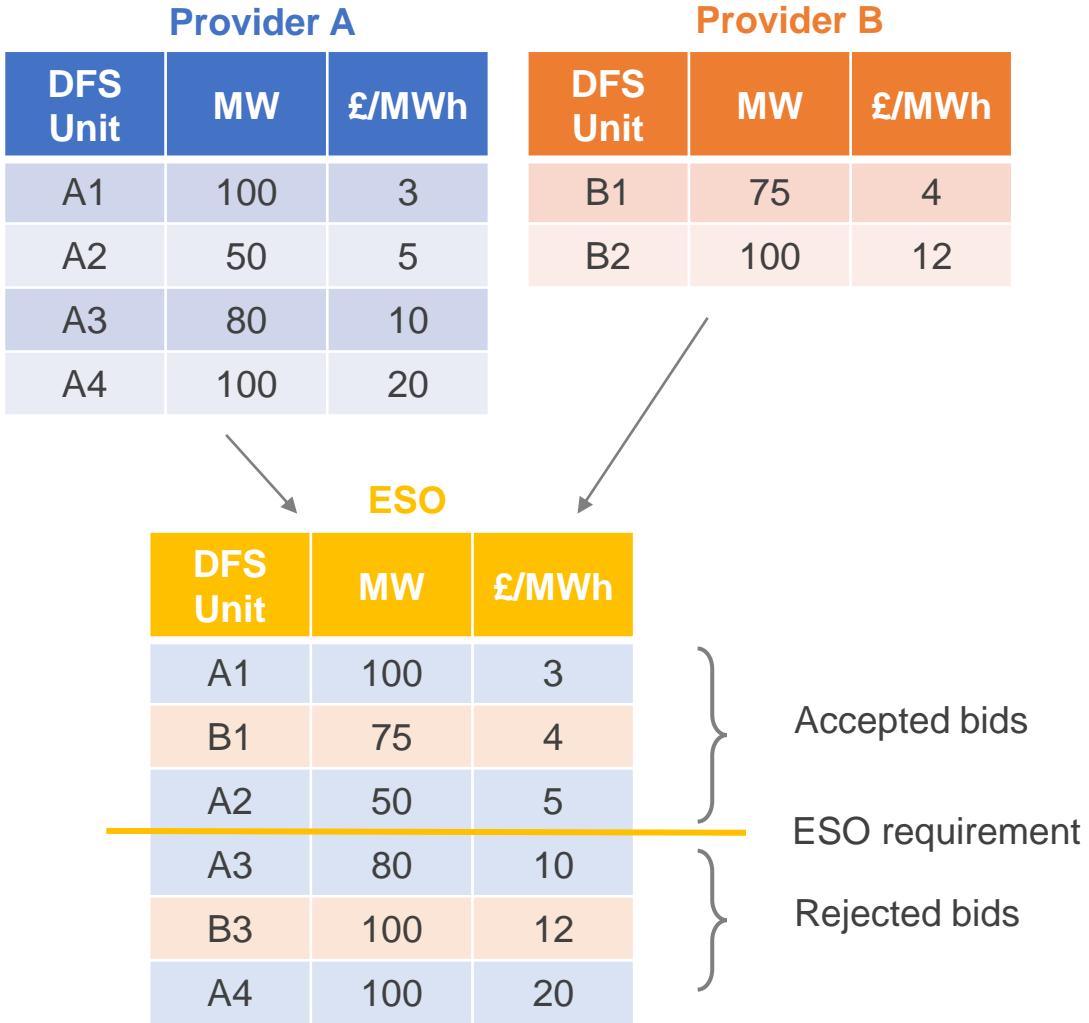
Assessment of bids

Assessment

- ESO receives bids from providers for each SP
- Bids are ranked in price and volume order
- Bids accepted in merit order until we meet our requirement
- The volume we accept may be different from our 14:30 requirement, due to:
 - changes in system conditions
 - bid prices being uneconomic

Results

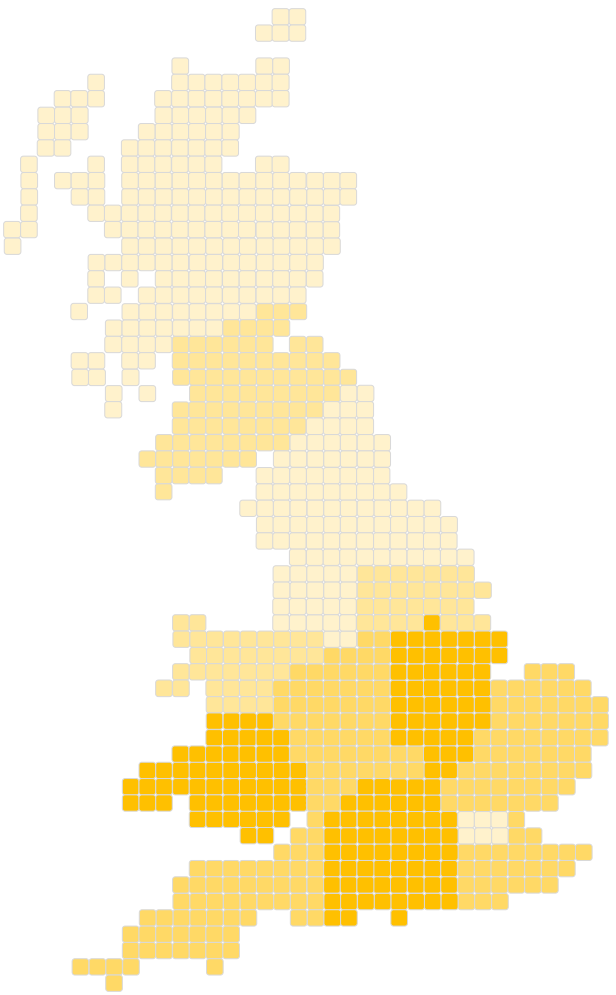
- We will publish the results at 16:30
- Acceptance will be final and binding, and will indicate nomination of delivery
- Providers should confirm receipt of their accepted bids



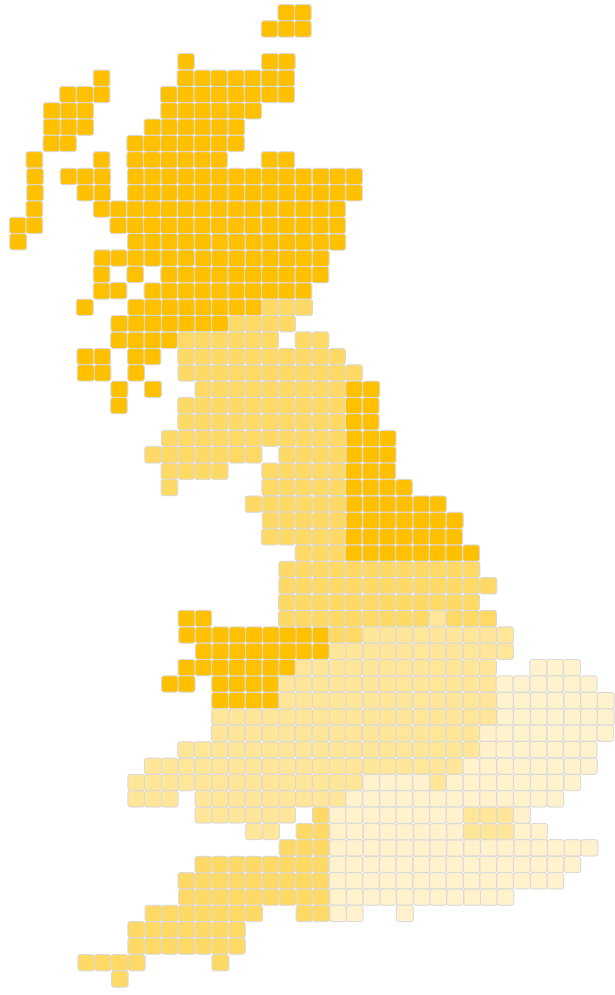
** Numbers and data format are purely illustrative for purposes of sharing an example and not indicative*

Updated volume forecasts

- Updated of expected delivery
- By 10:00 on the day of delivery (or 4 hrs before delivery, if earlier)
- Based on end consumers indicating they will participate
- Provides a more accurate MW total for overall margin assessment
- Split by GSP group:
 - locational information for ESO and DNOs planning
 - the relative proportion of demand reductions in different areas will affect flows and constraints on the network



e.g. more reduction in the south



e.g. more reduction in the north

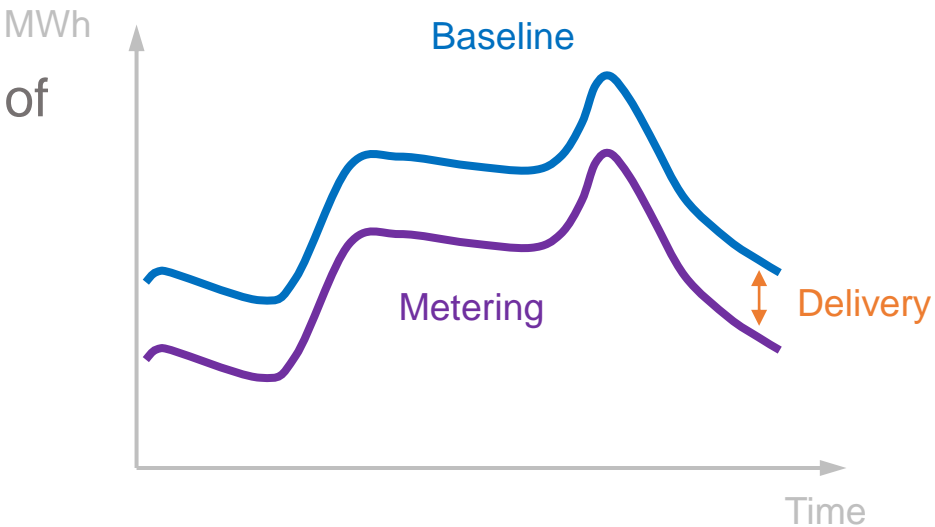
Delivery and payment

Baseline

- Providers must provide the ESO the total half-hour baseline of their participating consumers

Metering

- Providers must provide the ESO the total half-hour readings for the outturn demand of their participating consumers
NB: this requires half-hourly metering for participating consumers

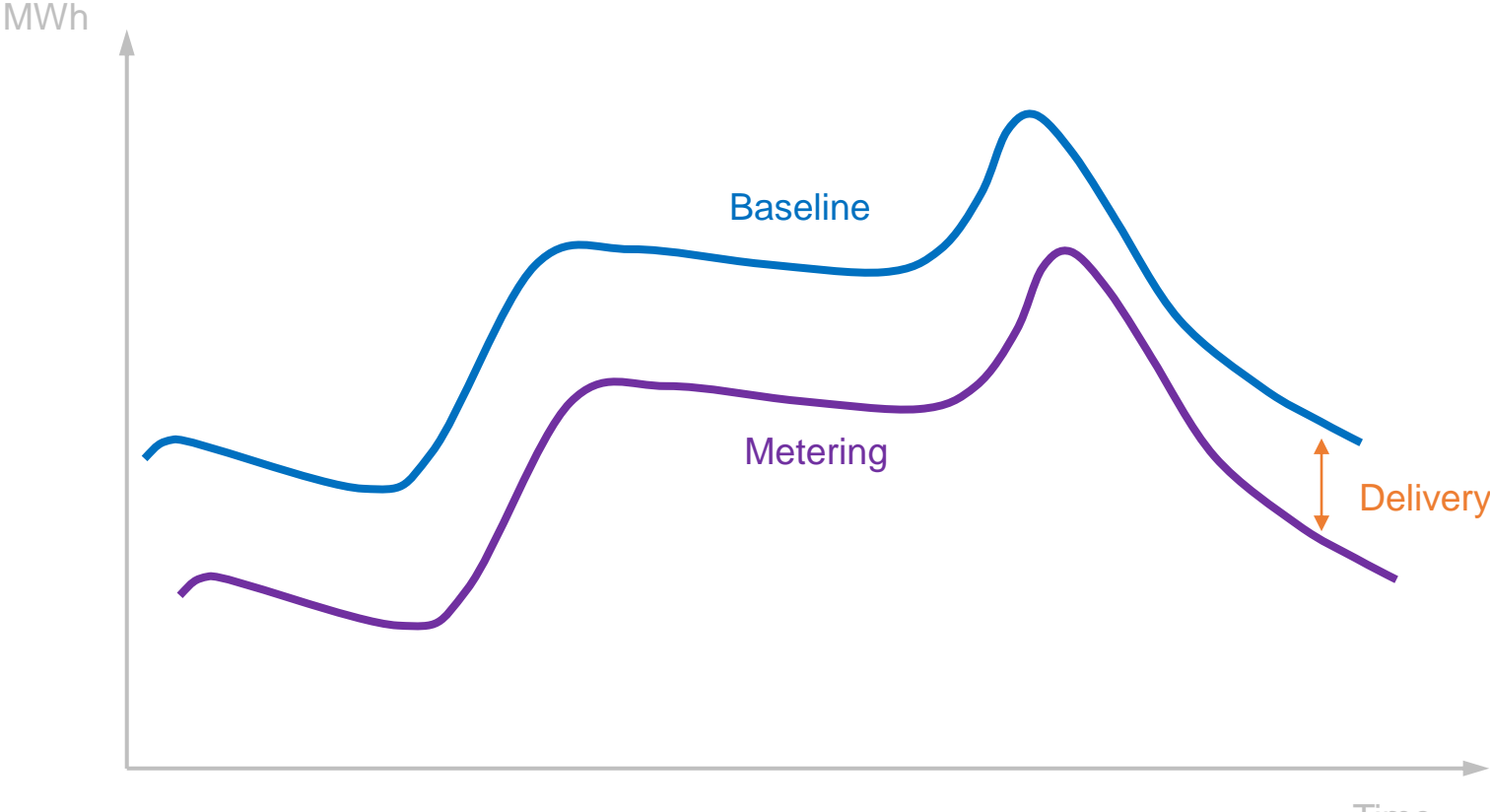


Delivery & Payment

- Providers must give the ESO their total half-hour calculation for the estimated delivery of their service by their participating consumers
 - No specific penalty for under or over-delivery versus the accepted bid
 - Payment will only be for the quantity delivered
 - This will be monitored for consistency and errors
 - Service providers may be removed to allow others to deliver within acceptable parameters
- This will be settled in-line with our usual timescales and processes

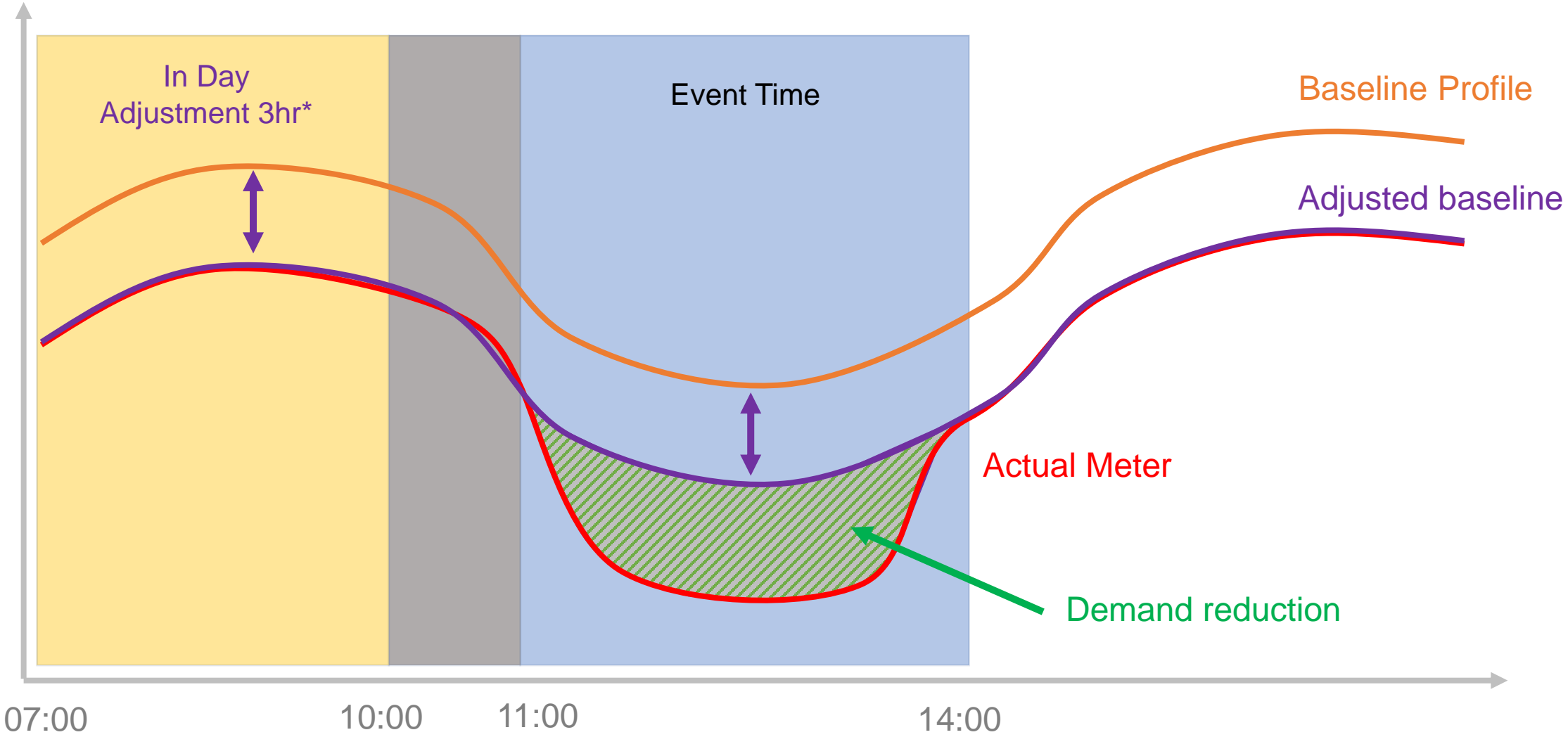
Baselines: overview

- We propose to use the methodology set out in [BSC P376 'Utilising a Baseline Methodology to set Physical Notifications'](#) with an in-day adjustment for domestic consumers
- This methodology has been previously approved by Ofgem in another context



Baselining is required to calculate the actual demand reduction delivered at a meter level

Baselines: example



NB: In-day adjustment only applies to domestic end consumers

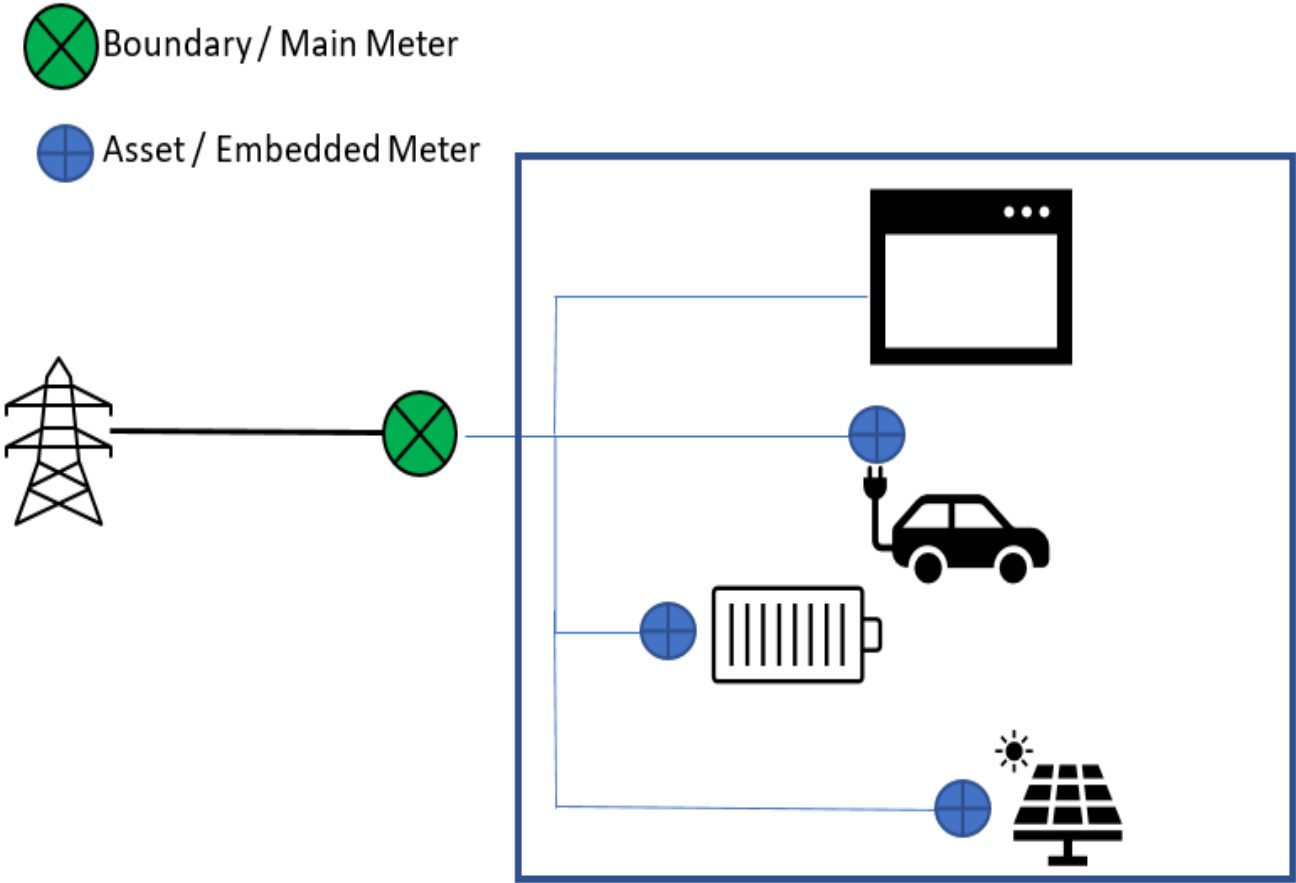
Baselines: further detail

- Based on the last 60 days of actual metered data for each Boundary Meter
- The 60 days are split into three groups:
 1. **Working Day** (Monday to Friday)
 2. **Non Working Day** (Sat, Sun & Bank Holiday)
 3. **Event Day** (any day the unit took part in the service and delivered a Demand Reduction)
- A selection of data is chose, excluding event days
 - Working days = the 10 most recent days
 - Non working days = the most recent 4 days
- For domestic consumers, and in-day adjustment allows for the effects of weather on demand
 - This will ensure the baseline profile best reflects the actual demand consumption running up to the delivery period

This process is done **post event** by the provider. The aggregated data is then sent to ESO for settlement and auditing

Baselines: sub-meters

- Domestic and I&C sites all have a Main / Boundary Meter
- Some sites have additional meters behind the Boundary meter known as Asset / Embedded Meters
- Only the Boundary/Main Meter can be used to calculate baseline profiles and actual delivery of DFS.
- Asset / Embedded / Sub Meters may not be used



ABSVD & BSAD

HH settled volume

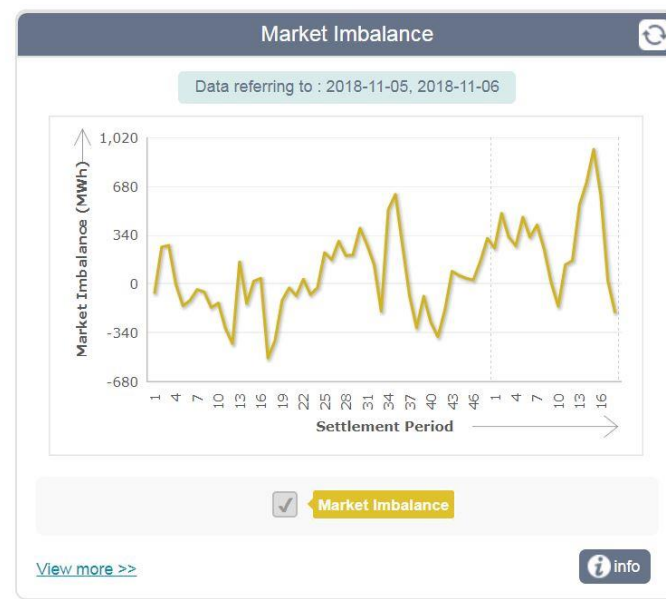
- We will apply *Applicable Balancing Services Volume Data (ABSVD)* to HH-settled volume

Non HH-settled volume

- We will not apply ABSVD to non-HH settled volume, due to the complexity of the data and processes, and the smaller proportional impact on load-profiled demand

BSAD

- Accepted bid volume and prices will energy flagged and fed in cash out through Balancing Service Adjustment Data (BSAD)





Tests

Tests

- To build confidence in this service and to encourage early participation we will test the end-to-end process via a number of dispatch tests.
- A minimum of 12 dispatch instructions for units that are ready to participate from November is guaranteed.

We will run **four initial tests** for each provider

- The requirement will be for one hour
- These will take place in the **first full month** you are signed up for

For each subsequent month a provider remains in the service, and that the service is active for, we will also run **two test per month**

Tests will run like the normal process, except for:

1. only a subset of providers will be invited to participate in each test
2. there will be a “guaranteed acceptance price” for each test

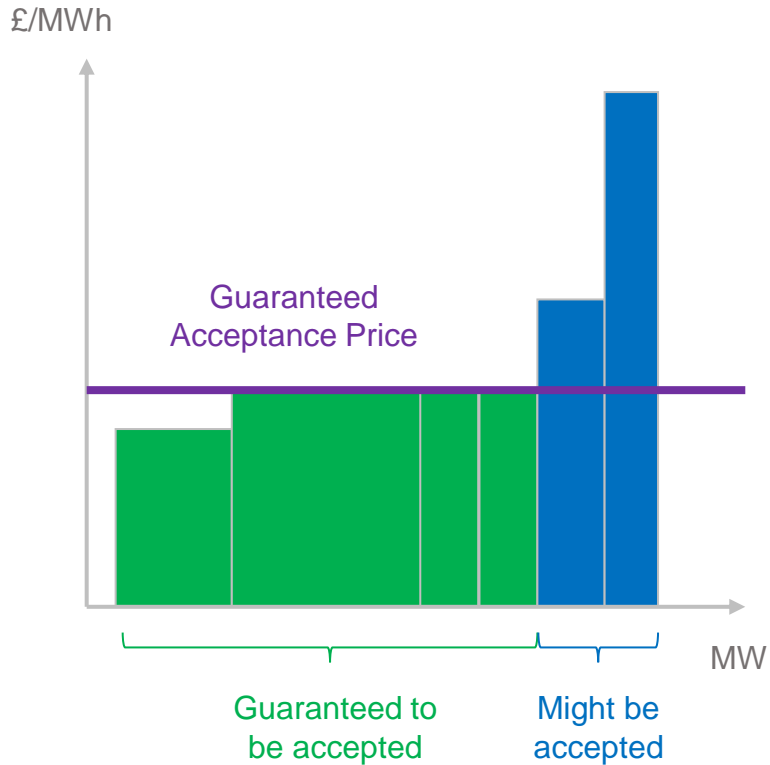
Example

- *If you sign up by 31st Oct, your first tests will be in November*
- *If you sign up by 30st Nov, your first tests will be in December*

- *If you sign up by 31st Oct, your first four initial tests will be in November = 4 test events*
- *You will then have two test each month (Dec, Jan, Feb, Mar) = 8 tests events*

Guaranteed Acceptance Price

- We need to balance between incentivising participation and managing the overall cost and impact of tests on the wider market
- Tests will have a “Guaranteed Acceptance Price” to provide revenue certainty for providers
 - if they bid *at or below* this price, they are **guaranteed to be accepted** at the price they submit
 - **higher priced** bids *may* be accepted, but are not guaranteed to be accepted
 - We will **publish this price** with the **test requirement** before they submit bids



The “guaranteed acceptance price” only applies to tests of the service; it is not applicable when we use the service in a non-test scenario

Guaranteed Acceptance Price

We plan to set the Guaranteed Acceptance Price at the same rate as the prevailing average Ofgem price cap for a unit of electricity

- For October 2022 to December 2022, this is £520/MWh
- For January 2023 to March 2023, this is predicted to be around £780/MWh

Period	Ofgem Price cap	Electricity unit rate (average)	Equivalent £/MWh
April 2022	£ 1,971	28 p/kWh	£ 283 / MWh
October 2022	£ 3,549	52 p/kWh	£ 520 / MWh
January 2023*	£ 5,341	78 p/kWh	£ 780 / MWh

* January 2023 numbers are based on predicted price cap from Cornwall Insights, and extrapolating the percentage increase on to the electricity unit rate

<https://www.cornwall-insight.com/cornwall-insight-release-final-predictions-for-octobers-price-cap/>



Summary

Key areas

- Service proposal
- Up-front
 - Registration & onboarding
- Service steps
 1. Weekly indicative forecasts
 2. Service requirements
 3. Submission of bids
 4. Assessment of bids
 5. Updated volume forecasts
 6. Delivery of demand flexibility
 7. Payment procedure, ABSVD and BSAD
- Testing
 - Overview and number of tests
 - Guaranteed Acceptance Pricing

Summary of key changes

In our last webinar we outlined our proposed position. Feedback from that webinar and in engagement since has allowed us to finalise our design and resulted in the following updates:

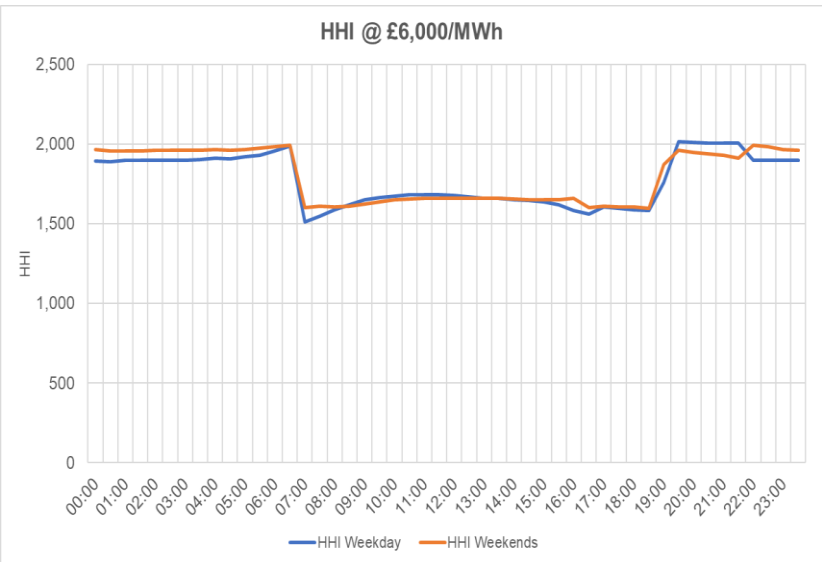
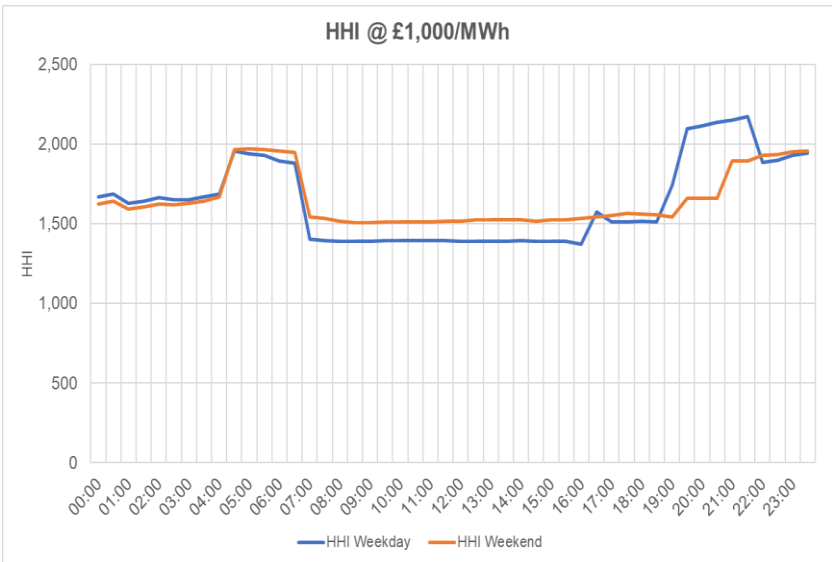
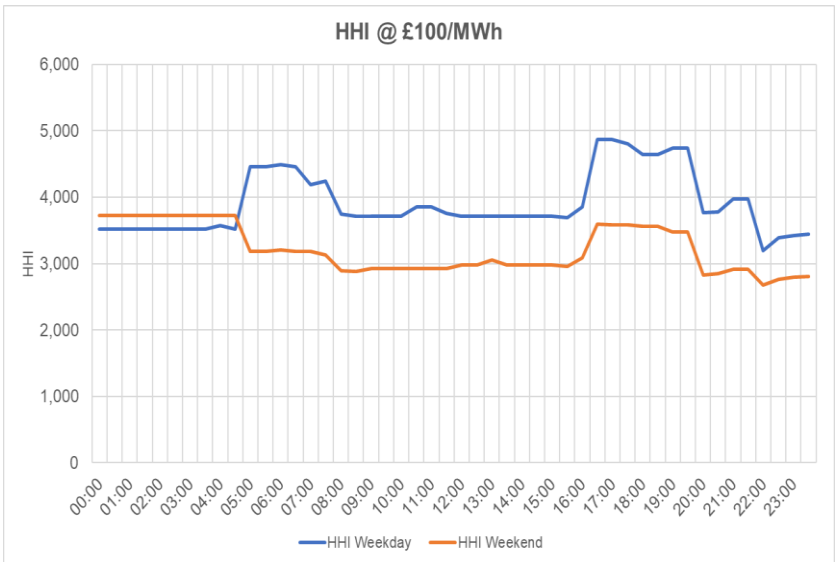
- Baseline methodology for I&C
- National aggregation
- Pay as Bid
- Number of tests: 12 tests

Summary of key changes - Payment mechanism

Pay As Bid (i.e. paid own submitted price)

- Based on the Herfindahl-Hirschman Index (HHI) analysis, the DFS market will be slightly too concentrated for Pay-as-clear mechanism
- Pay-as-bid allows providers to tailor their incentives based on their end consumers and overall strategy

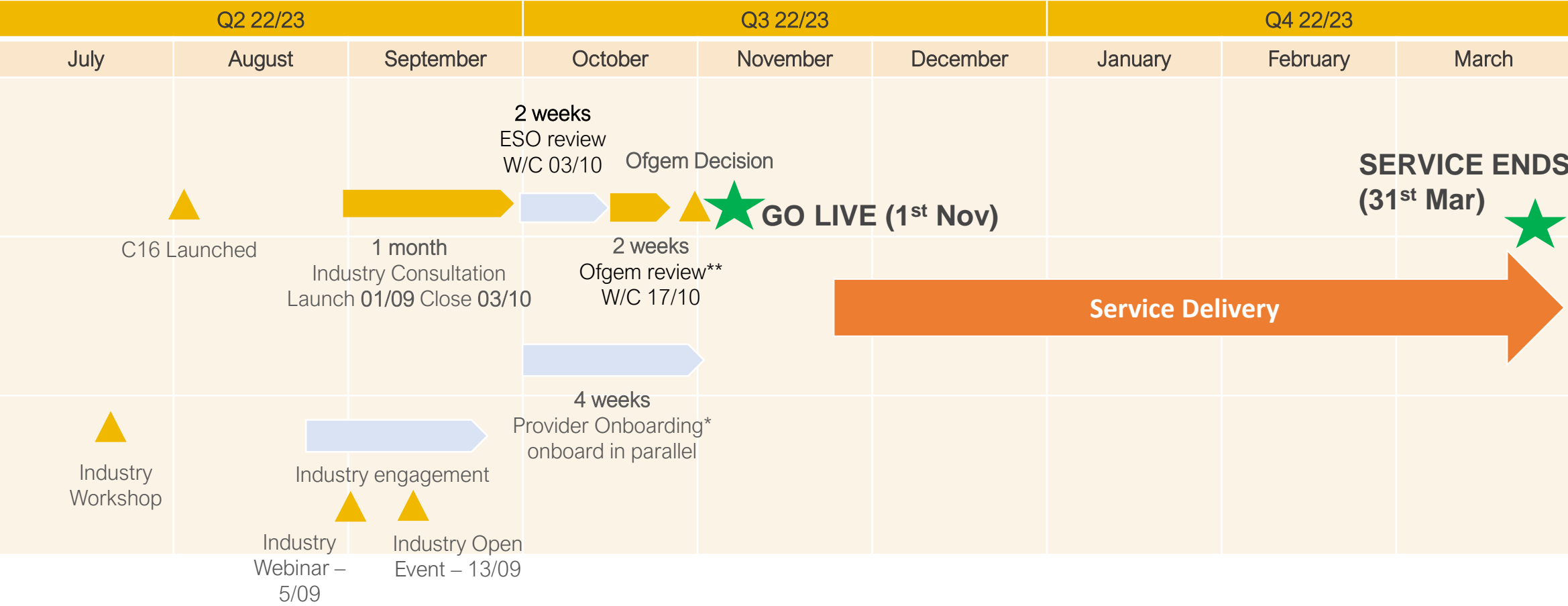
NB: this is an update from our initial thinking laid out in the C16 consultation



Timings and next steps



Consultation timeframe



For informal questions please come along to our industry open day on the **13th September in London**

We also invite you to email us with your feedback at DemandFlexibility@nationalgrideso.com

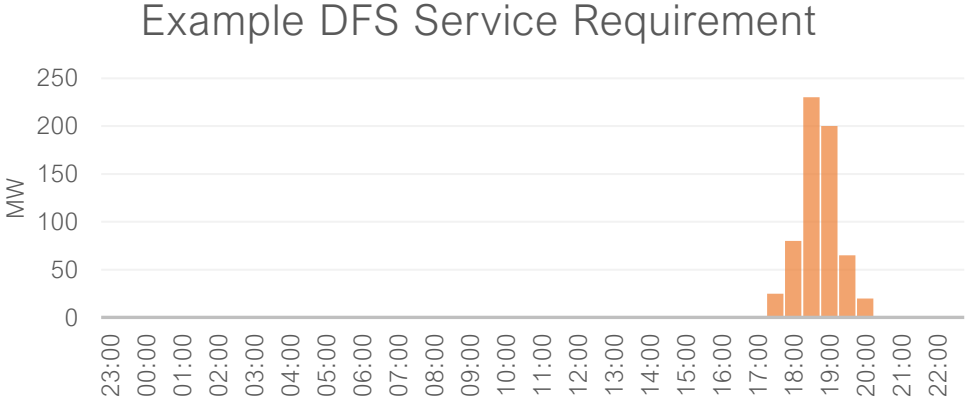
Break & opportunity to review
slides and worked examples

Worked example: Requirements, bids and assessments



Example

- As an example, let's assume an hypothetical DFS requirement for an evening in January, from 17:30 to 20:30.



ESO would publish DFS Service Requirements at or around 14:30 the preceding day.

- For simplicity, let's assume only two DFS providers participate: *Supplier 1* and *Supplier 2*.
- Each DFS provider represents a multitude of end consumers, each with different patterns and willingness to reduce demand at different price bands.



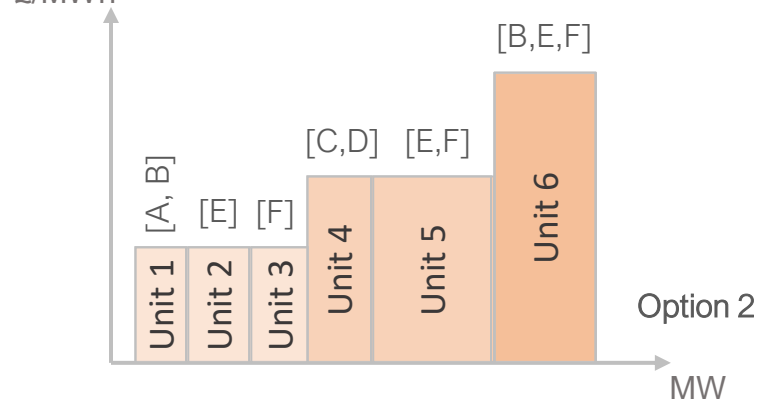
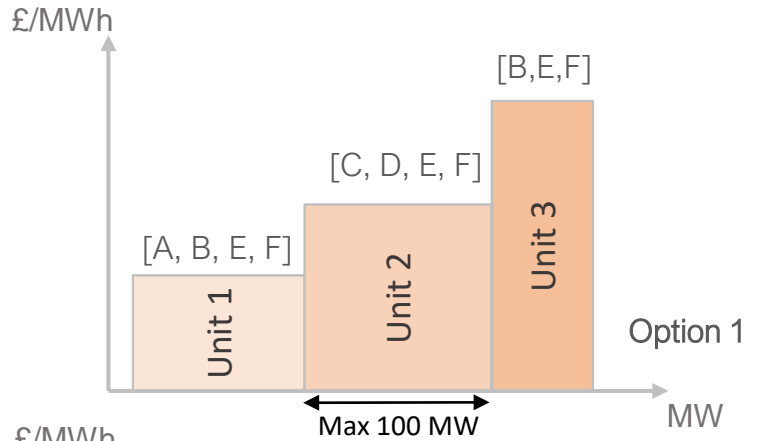
Example

- Assuming *Supplier 1* serves six end consumers, each with a different MPAN and different willingness to reduce demand at different prices.
- To reflect this, *Supplier 1* can allocate each individual consumer (MPAN) to **one or more** DFS units.

**similar table for each Service Window*

MPAN	MW reduction at £100/MWh	Additional MW reduction at £200/MWh	Additional MW reduction at £300/MWh	Total MPAN (MW)
A	20	0	0	20
B	20	0	5	25
C	0	10	0	10
D	0	10	0	10
E	20	30	10	60
F	30	50	10	90

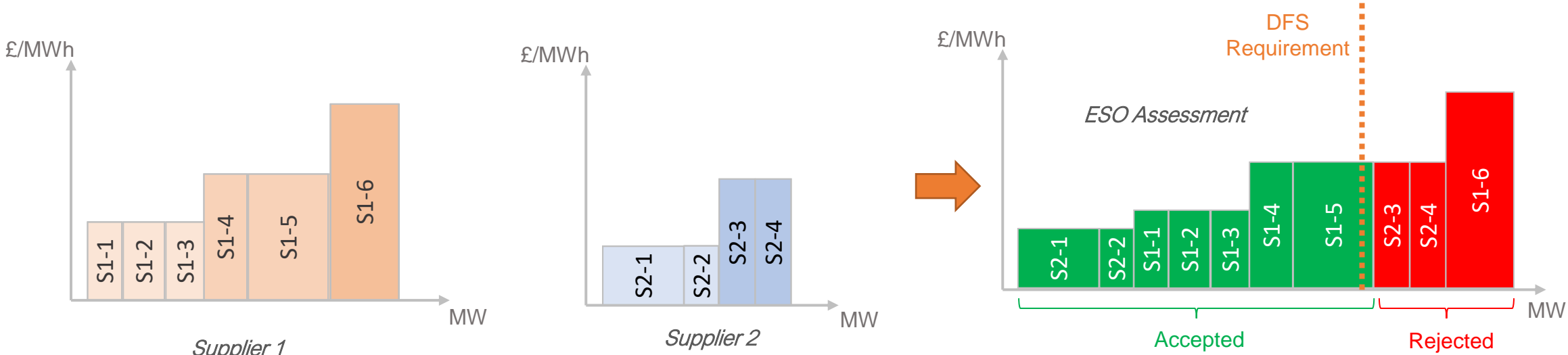
- Because there are three price bands in this example, **at least** three DFS units are required.
- Each DFS unit must be between 1 – 100 MW.



**For simplicity we are focusing only on the period from 18:30 to 19:00 which is peak DFS requirement in the example.*

Example

- For the example, let's assume *Supplier 1* groups its end consumers into six **DFS Units** and *Supplier 2* groups its end consumers into four **DFS Units***
- **By no later than 15:30**, ESO receives the **DFS Bids** from each registered **DFS Participant** and carries out the **DFS assessment**.



*For simplicity we are focusing only on the period from 18:30 to 19:00 which is peak DFS requirement in the example.

Example

- At or around 16:30, ESO notifies accepted and rejected bids to registered DFS Participants who submitted DFS Bids.

DFS Unit	MW	£/MWh	Status
S1-1	40	100	Accepted
S1-2	20	100	Accepted
S1-3	30	100	Accepted
S1-4	20	200	Accepted
S1-5	80	200	Accepted
S1-6	25	300	Rejected

Supplier 1

DFS Unit	MW	£/MWh	Status
S2-1	40	50	Accepted
S2-2	5	50	Accepted
S2-3	10	250	Rejected
S2-4	10	250	Rejected

Supplier 2

DFS Participants shall acknowledge receipt of each DFS Acceptance within **30 minutes** from receipt of such acceptance.

- ESO shall publish a DFS Utilisation Report with the results of all DFS Bids for each service window*.

DFS Unit	MW	£/MWh
S2-1	40	50
S2-2	5	50
S1-1	40	100
S1-2	20	100
S1-3	30	100
S1-4	20	200
S1-5	80	200

} Accepted

DFS Unit	MW	£/MWh
S2-3	10	250
S2-4	10	250
S1-6	25	300

} Rejected

*For simplicity we are focusing only on the period from 18:30 to 19:00 which is peak DFS requirement in the example.

Example

- Each DFS Participant with accepted DFS Bids shall provide ESO with an Updated Volume Forecast.

Submitted to the ESO at or around 10:00 on the day of delivery

- The Updated Volume Forecast includes best estimate of the aggregate volume capable of being delivered as DFS across all relevant meters in each GSP Group.
- In our example, each DFS Participant submits for each service window:*

GSP Group	Supplier 1	Supplier 2	Total
East England	11	2	13
East Midlands	12	3	15
London	36	5	41
North Wales, Merseyside and Cheshire	6	3	9
West Midlands	9	3	12
North East England	12	4	16
North West England	12	2	14
North Scotland	10	3	13
South and Central Scotland	25	1	26
South East England	12	1	13
Southern England	12	4	16
South Wales	6	6	12
South West England	5	1	6
Yorkshire	14	6	20
Other	8	1	9
Total	190	45	235



Geographical distribution of DFS*

*For simplicity we are focusing only on the period from 18:30 to 19:00 which is peak DFS requirement in the example.

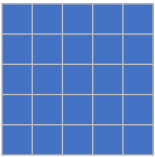
Worked examples: Allocating volume to units



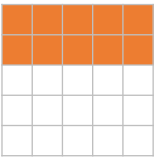
Example 1

MPANS Reduction at £10/MWh

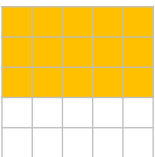
A
25 MW



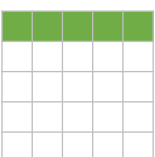
B
10 MW



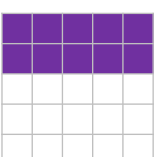
C
15 MW



D
5 MW

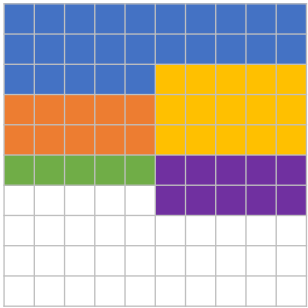


E
10 MW



DFS units

Unit-01



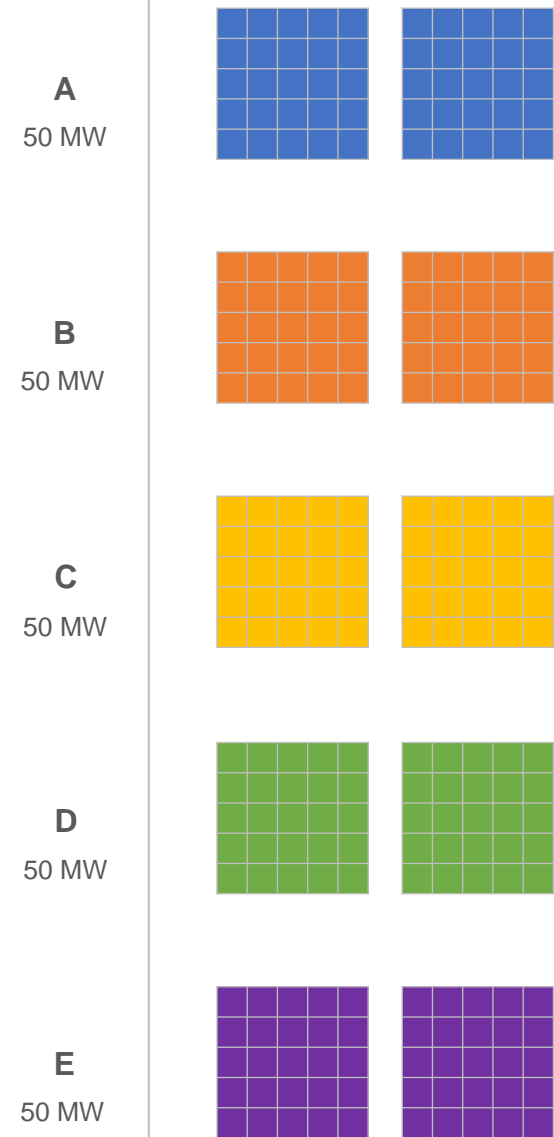
65 MW

£ 10/MWh

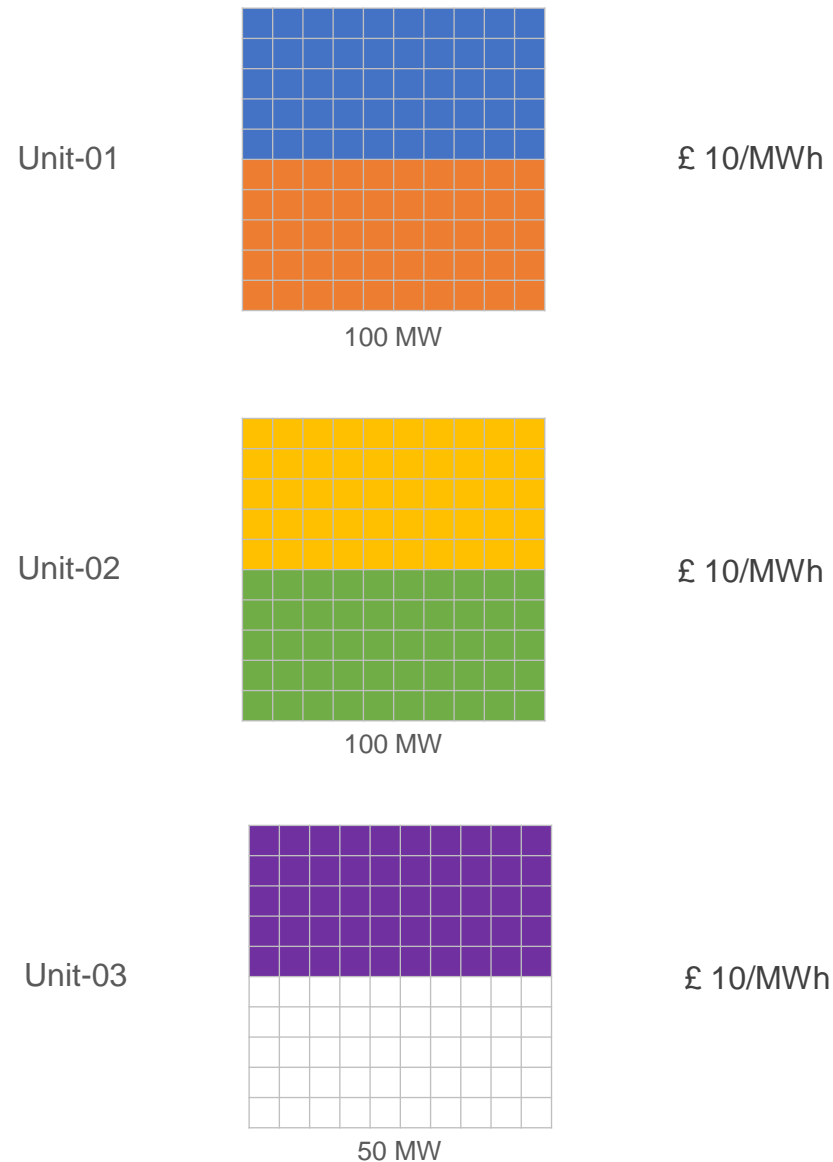
An all volume is available at the same price, and as the total is less than 100MW, it can all go in to one DFS unit

Example 2

MPANS Reduction at £10/MWh



DFS units



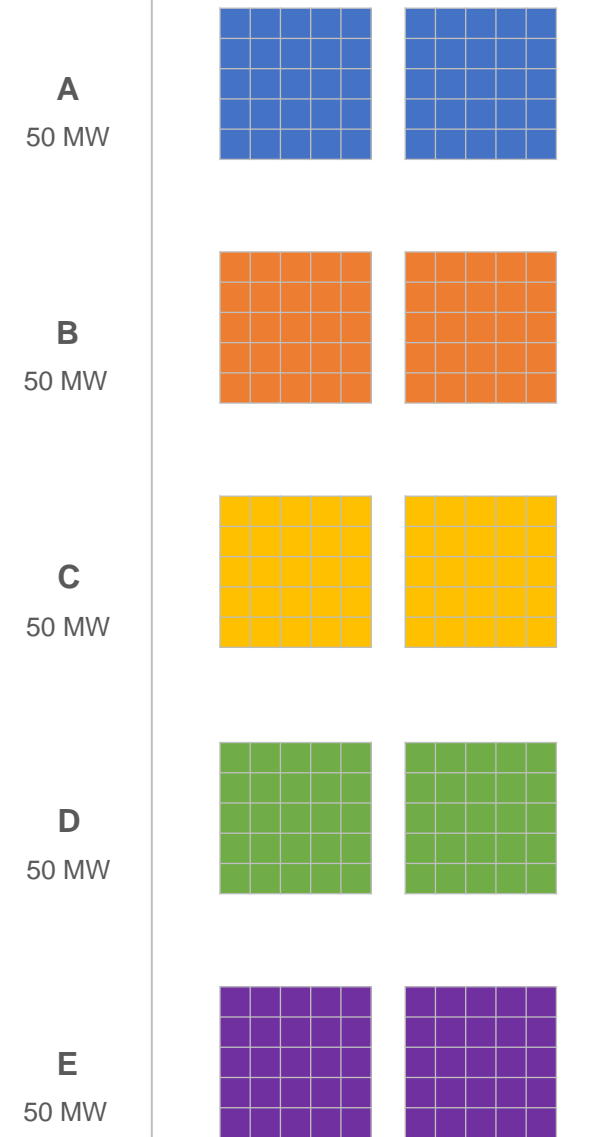
As the volume exceed 100MW, multiple DFS units are required

Providers can decide how to allocate volumes from different MPANs into DFS units

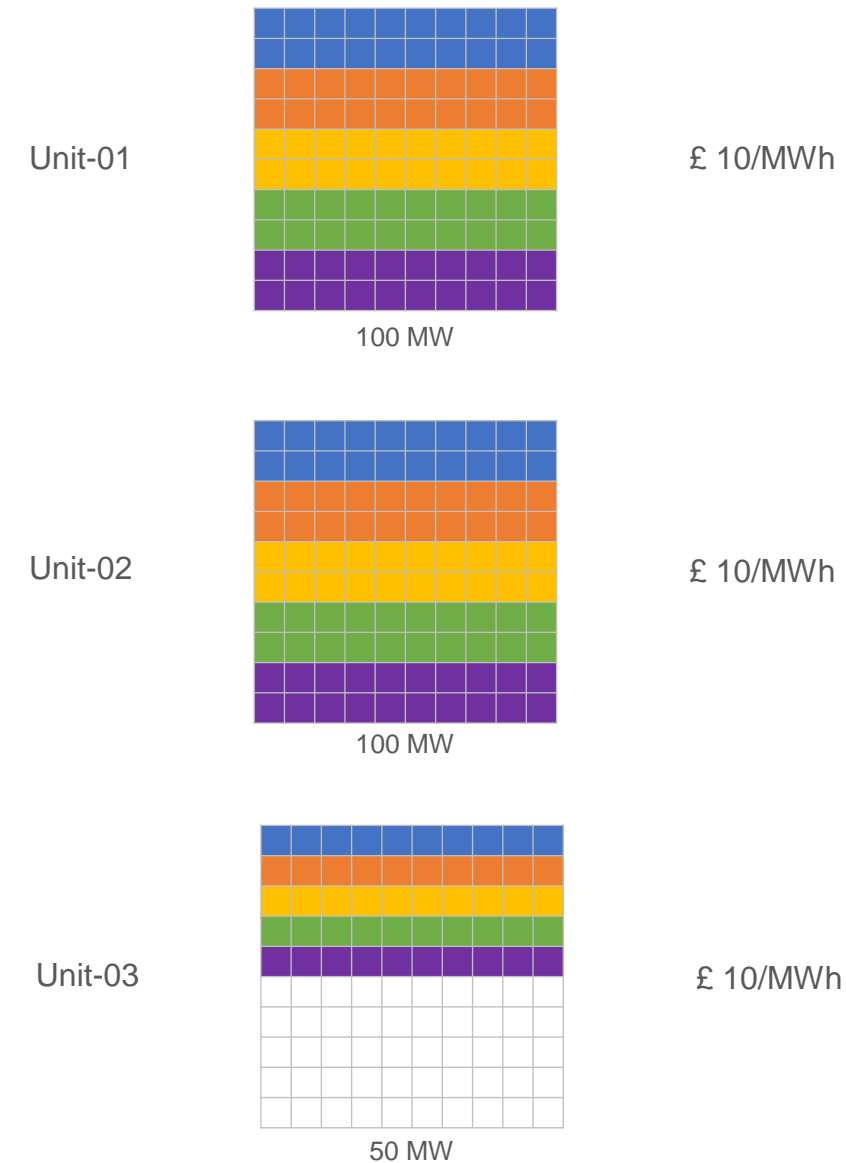
The different ways of allocation which are showed in Example 2 and 3 are functionally the same to the ESO.

Example 3

MPANS Reduction at £10/MWh



DFS units

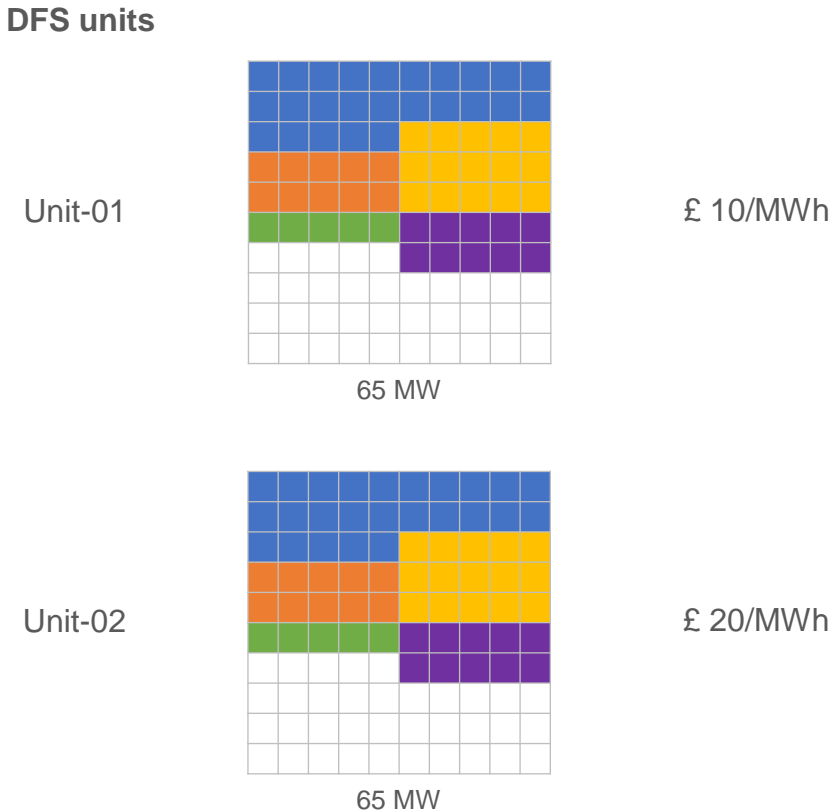
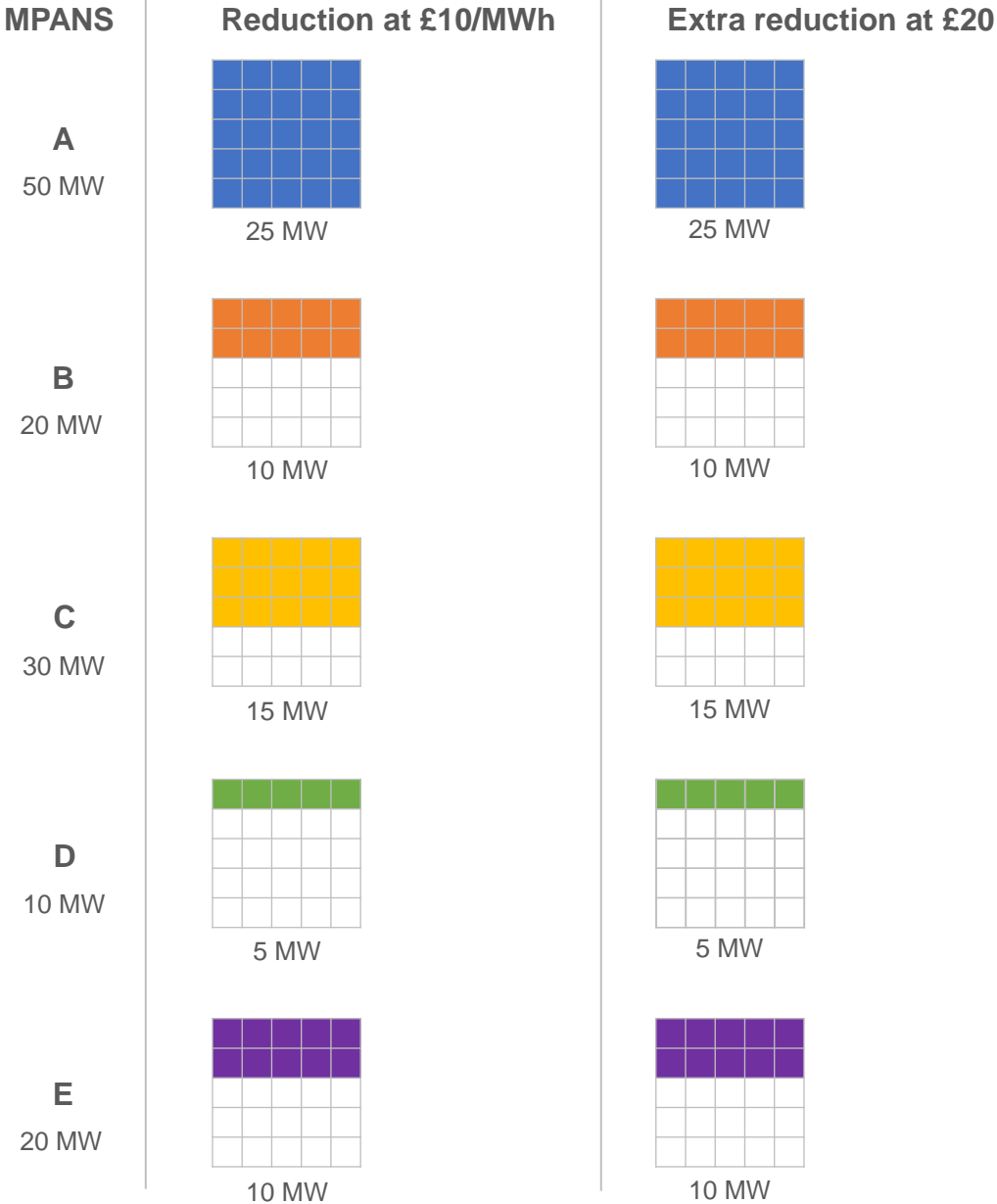


As the volume exceed 100MW, multiple DFS units are required

Providers can decide how to allocate volumes from different MPANs into DFS units

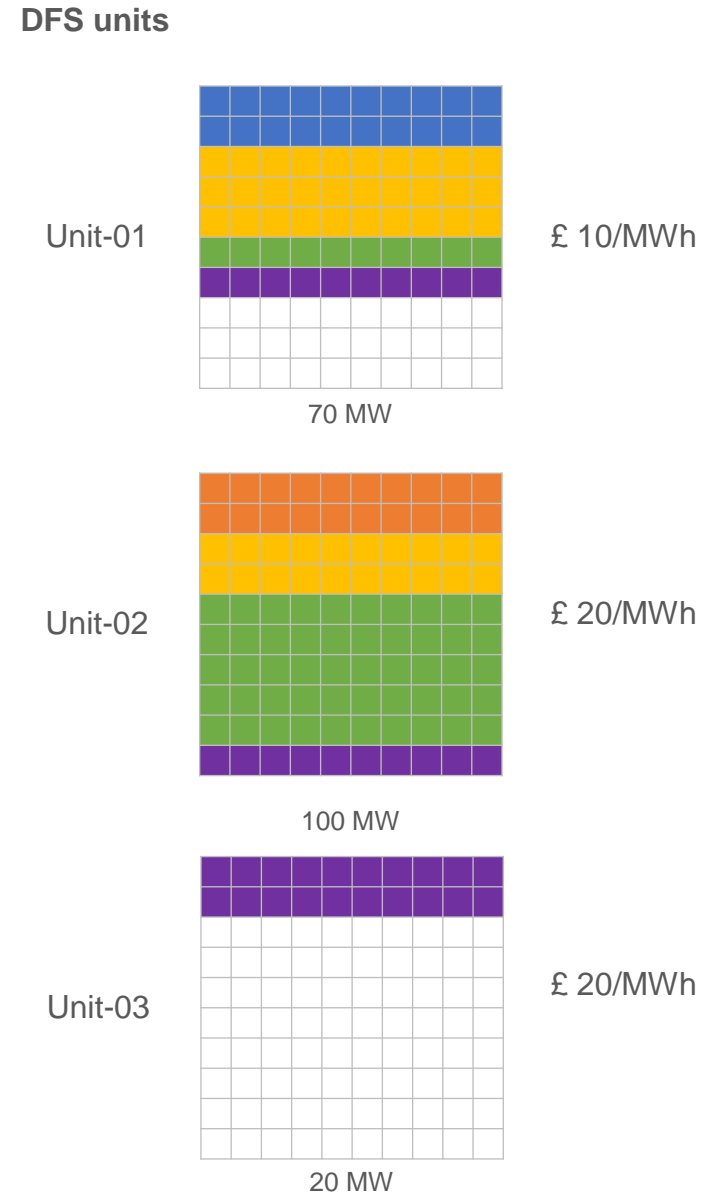
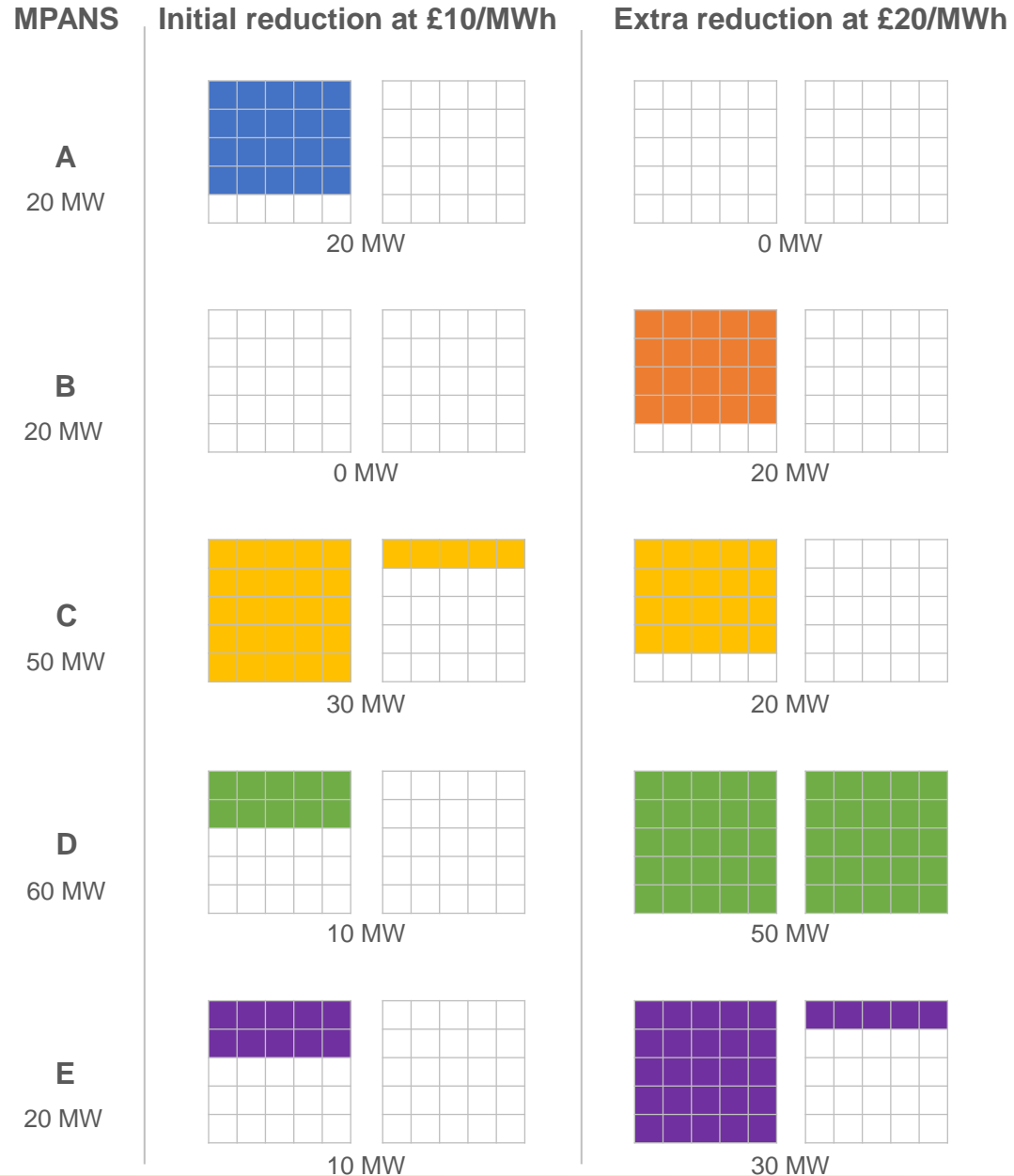
The different ways of allocation which are showed in Example 2 and 3 are functionally the same to the ESO.

Example 4



If the same consumer (meter) is will to do more reduction at a higher price, this can be reflect by splitting the volume across multiple DFS unit each with a different price

Example 5



A new DFS unit will be needed when :

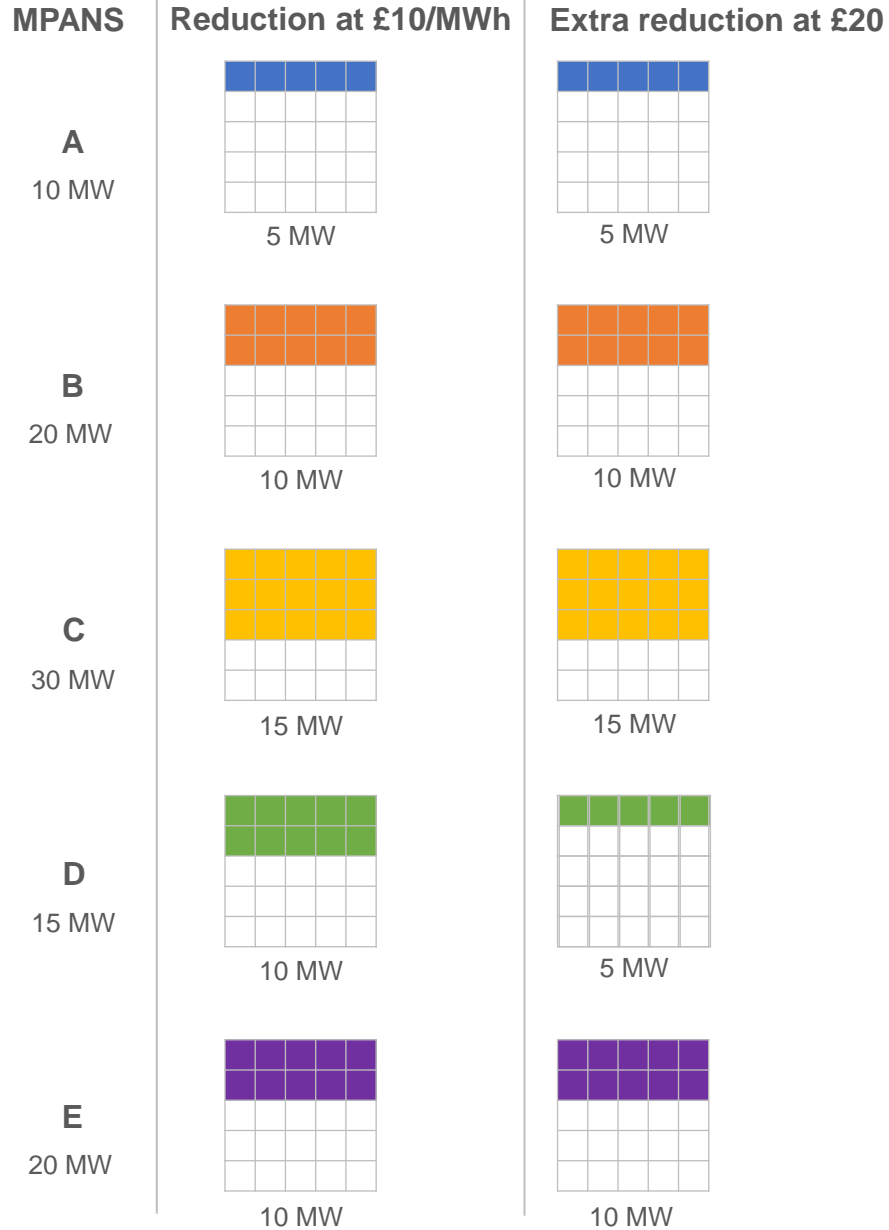
1) A new price band is needed

And/or

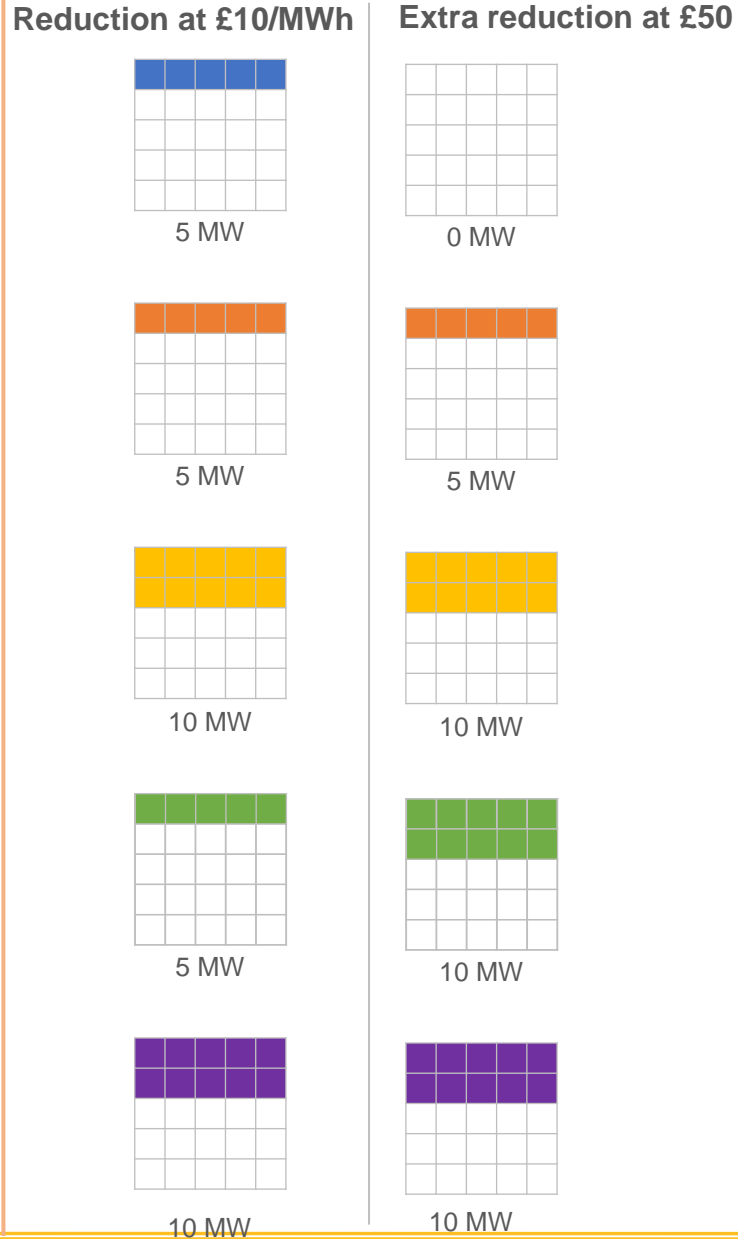
2) The 100 MW capacity cap is reached

Example 6

Service Window 1

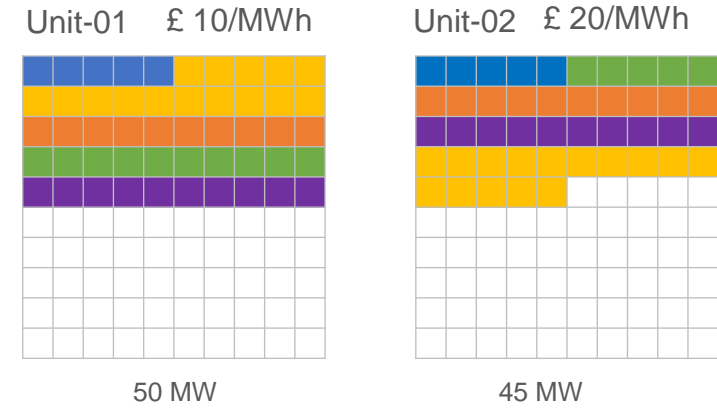


Service Window 2

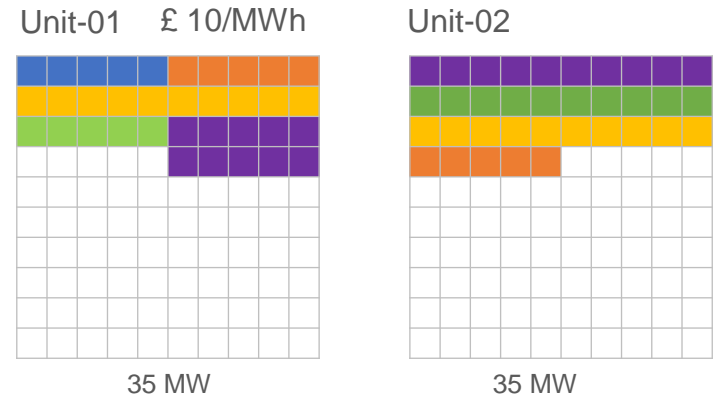


Ask questions at www.slido.com #DFS

Submission for Service Window 1

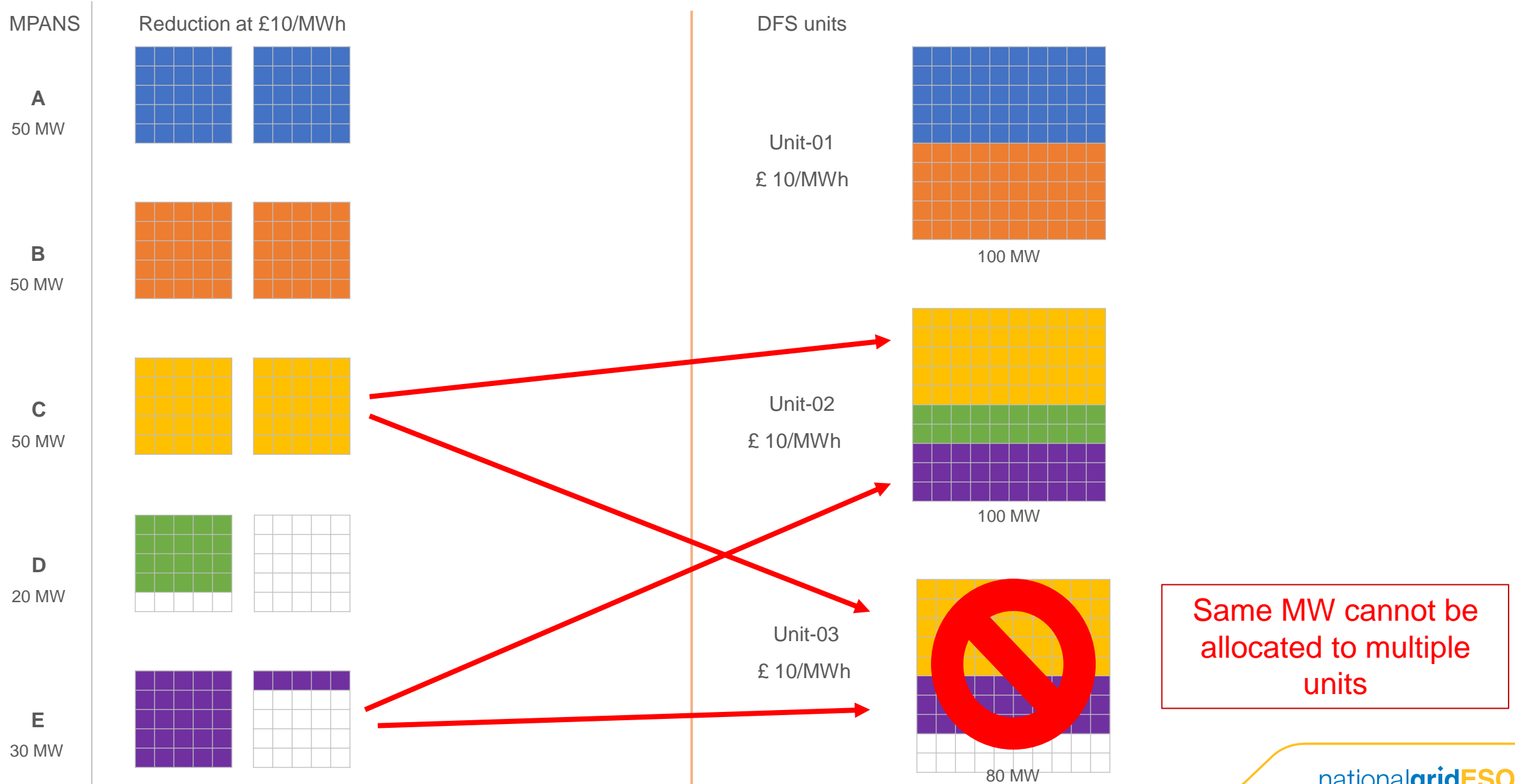


Submission for Service Window 2



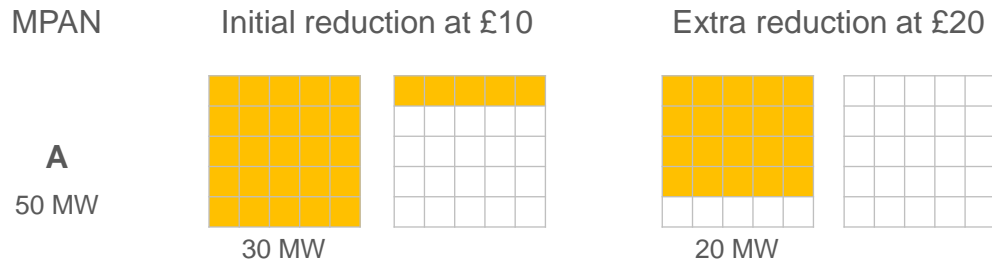
Submission volume can vary across different service windows and is not obliged to match the registered capacity

Not allowed

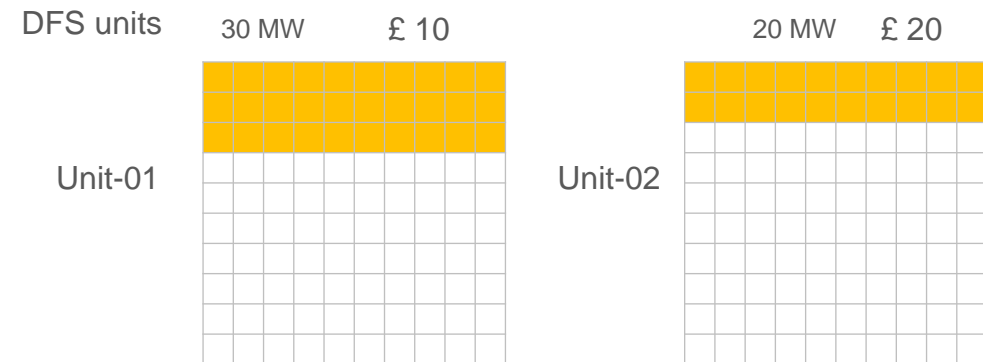


Example 7

- Supplier X has one participant who sits behind MPAN A
- The participant is happy to either:
 1. Be paid £300 to reduce by 30MWh, or
 2. Be paid £700 to reduce by 50MWh
- This can be broken up in to two bids across different units as follows:
 1. The first 30MWh can be entered at a price of £10/MWh ($30\text{MWh} \times £10/\text{MWh} = £300$)
 2. The next 20MWh can be entered at a price of £20/MWh ($20\text{MWh} \times £20/\text{MWh} = £400$)
- If both bids are accepted, the total volume is 50MWh (= 30 MWh + 20 MWh) and the total revenue is £700 (= £300 + £ 400), matching their available delivery



DFS Unit	MW	Price (£/MWh)	Constituent MPANs
Unit-01	30	10	A
Unit-02	20	20	A



Q&A



Q&A panel

Ask questions at www.slido.com #DFS



Kyle Martin
Market Change Delivery Senior Manager



Amy Weltevreden
Market Requirements Senior Manager



Robert Westmancoat
Senior Strategy Analyst



James Kerr
Consumer Strategy Lead



Kashia Cullen-Anderson
Senior Balancing Markets Development Officer



Jean Hamman
Operational Manager



Francisco Sanchez
Senior Strategy Analyst



Yingyi Wang
Senior Strategy Analyst

Thank you

