nationalgridESO

Demand Flexibility Service

Questions and answers

Requirement

Q: When will the service be used?

A: Both the Winter Contingency Contracts and the Demand Flexibility Service will be enacted as enhanced actions, when everyday actions are insufficient. This has been communicated and agreed through the C16. This means that we will be taking all actions available, including trading interconnectors at higher prices as against DFS and coal, prior to enacting DFS and coal.

We will assess the DFS and Winter Contingency contracts collectively to derive the best cost option overall for the system. Everything else being equal we would look to use the DFS service first but will consider the relative size and certainty of each lever at our disposal in our dispatch consideration.

Q: How often will you require actual use of the service?

A: As an enhanced action, our new Demand Flexibility Service (DFS) will allow us 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.

There are a range of scenarios for what this winter might look like, so we can't be definitive on how often we will need to use the service. We intend to release information on how often we might need to use the service for actual events following publication of the Winter Outlook Report.

Q: What's the maximum total amount of demand reduction you expect could be delivered through this service?

A: Based on our engagement so far, we believe there is over 1.5 GW of capacity available to participate in this service for this winter; and will seek to maximise volumes throughout winter to enable maximum benefit and learning from this service.

Q: In calculating DFS need, did you consider the capacity of demand and embedded generation withdrawing from triad management because of declining triad value?

A: To calculate the requirement we will look at several variables, including expected system margins, generation availability, weather forecast. Our Demand Forecasting Team are constantly refining their models to account for assumptions, including reviewing capacity of embedded generation and assumptions associated with triad avoidance.

Q: Suppliers are already incentivised for efficient 1/2 hourly Demand Side Response (DSR) via wholesale, Balancing Mechanism (BM), and cash out. Why intervene, beyond the incentives on all balancing parties?

A: The lack of market-wide half-hourly (HH) settlement means that for the majority of demand any reduction in their consumption will not be reflected in the half-hour it is delivered, meaning that suppliers end up with an imbalance exposure.

Eligibility

Q: Will this be open to generators? If so, can generators behind the meter, be utilised to deliver a response? Will exports onto the network also be valued as well as offsetting site grid demand?

A: The service seeks a reduction in demand as measured at the boundary meter. Embedded generation can't participate but behind the meter generation could; providing the baseline shows the reduction at the boundary meter. This includes going from import to export at the boundary meter.

Q: Can we self-aggregate as a business and register directly if we have the minimum 1 MW across multiple MPANs (Meter Point Administration Number)? Or do we need to go via our supplier/an aggregator?

A: Yes, you can register directly if you meet the service requirements. We welcome new participants to the market as we are looking for new demand flexibility capacity.

Service parameters

Q: Can you confirm when the activation signal from ESO will take place? Will be after DA (day ahead) clearing to make sure volumes are not double counted and only consumers not having reacted to DA prices?

A: The assessment will be in the afternoon, after DA clearing.

Q: Are our bids for nationally aggregated volumes; and we only have to provide forecast volumes for GSP (Grid supply point) Group? Please confirm there is no GSP Group limit on aggregation?

A: DFS units do not need to be split by GSP group for registration purposes or for bid submission but when updated forecasts are submitted intraday these will need to be broken down by GSP group.

Q: Is there a maximum number of bids a provider can submit for any event?

A: There are no maximum bids currently however a provider must be able to deliver all bids they submit or any combination of them as stipulated in the service terms.

Q: What is the granularity for bidding, baselining and performance (e.g., 1MW vs 1.2MW vs. 1.22 MW etc.)?

A: For registration and bidding purposes these need to be made in whole MW values. For the purpose of settlement, providers will be paid for what is delivered, e.g., a provider bid in 50 MW but delivered 37.6 MW, they will be paid 37.6MW.

Q: After registering the initial DFS units, can additional units be added later?

A: Yes, providers may continue to register units during the period when the service is active.

Q: From November, will auction data be accessible on the data portal?

A: Yes, a number of DFS related datasets, including auction timings, will be available from the data portal.

Baseline and metering

Q: What baselines will be available?

A: We propose to use the methodology set out in BSC P376 'Utilising a Baselining Methodology to set Physical Notifications' with an in-day adjustment for domestic consumers. Baselining is required to calculate the actual demand reduction at a meter level. 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 (Mon to Fri)
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 chosen, excluding event days

1. Working days = the 10 most recent days
2. Non-working days = the most recent 4 days

For domestic consumers, an 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.

Q: Why is there an adjustment of the baseline for domestic consumers only and not for industrial and commercial?

A: Following feedback from our previous webinar on the risk of gaming, we propose only Domestic customers are to be adjusted. As I&C customers are as not as affected by weather events, it is more reflective of actual demand. Domestic are much more affected by weather conditions and therefore require adjustments. We welcome further views and solutions via our consultation and engagement process.

Q: Could consumers moving demand in anticipation of an event influence the in-day baseline readjustment?

A: We acknowledge that this is a risk. This is another one of the factors for the DFS being an enhanced action rather than an everyday action. We hope that the use of an industry agreed baseline methodology with the agreed sample size will be sufficient to avoid such behaviour.

Q: Will a meter just need to be capable of recording HH (half hourly) data (such as a smart meter) or will it need to be HH settled to participate?

A: The ESO requirement is for half-hourly metered data, not half-hourly settled.

Q: What is the reason for excluding asset metering, given that this excludes aggregators with direct dispatch in place and may violate EBGL?

A: We are proposing using boundary meters only. We would like to use asset metering if we can find a viable way giving us reassurance that sites are not just submitting the volumes of asset meters that naturally reduce during an event. We welcome further views and solutions via our consultation and engagement process.

Q: As you are requiring boundary metered data, how can customers participate where their registered supplier isn't interested in taking part?

A: End consumers can participate in DFS via their suppliers or via aggregator entities. If the consumers supplier does not offer the DFS service consumers may switch to another provider/aggregator. The supplier or aggregator will be able to let the consumer know if they are eligible to participate in the service.
A provider can represent the MPAN(s) of another supplier as long as the MPAN(s) are not duplicated by both suppliers. For example, a consumer could use supplier A for energy, and aggregator B to provide DFS service.

Q: Does non-HH settled DSR get paid twice - once by the DSF bid price and again on the "negative spill" at system price?

A: The way that non-HH settled demand is associated to suppliers through Load Profiles and GSP Group Correction means that the impact of any demand reduction from one provider is ""smeared"" across multiple suppliers and multiple settlement periods, not allocated to that particular provider. This means that any additional ""spill payment"" for a provider if their delivery is beneficial against market length is minimal.

Q: Please clarify what data you used for the HHI calculations.

The analysis is based on supplier and aggregator feedback from our industry engagement facilitated by Energy UK during the summer.

Assessment and settlement

Q: Do the DFS units have to be split by GSP group?

A: DFS units do not need to be split by GSP group for registration purposes or for Bid submission but when updated forecasts are submitted intraday these will need to be broken down by GSP Group. Please refer to slide 31 on the post consultation webinar slides

Q: Is there a maximum number of bids a provider can submit for any event?

A: There are no maximum bids currently however a provider must be able to deliver all bids they submit or any combination of them as stipulated in the service terms.

Q: What the rationale of Pay as bid vs Pay as clear?

A: According to the result of our Herfindahl–Hirschman Index (HHI) analysis, in most cases, the HHI demonstrates the Demand Flexibility market is expected to be a moderately concentrated market - especially during the morning and evening peaks when this Demand Flexibility Service is most likely to be needed.

The competitive market criteria of applying uniform market price (i.e. Pay-as-clear) has not been met under this analysis therefore, Pay-as-bid is recommended to be used as the payment mechanism as it will be a more efficient mechanism for DFS market.

Q: How we evidence load shedding?

A: For each unit, during each contracted settlement period, participants will need to submit 3 datasets to ESO:

1) total half-hour baseline of their participating consumers

2) total half-hour readings for the outturn demand of their participating consumers

3) total half-hour calculation for the delivery of their service by their participating consumers, the delivery volume will be the difference between the metering and baseline.

The settlement data needs to be submitted no later than 10:00 on the second Monday after expiry of the service week, more details can be found in Service Terms section 5, 6, and 8 (on page 4-6).

Q: Would a Flex Provider be paid for over delivery. i.e., where 100MW is bid, and 110MW is delivered. Is the full delivered volume paid for?

A: Yes – in your example, you would be paid for the full 110MW of delivery.

Q: Can a DFS unit include a mix of HH and non-HH settled meters? And if so, how is the ABSVD (Applicable Balancing Services Volume Data) relevant response notified?

A: Yes. We require a specific, separate set of data for the settlement process for each settlement period: the Elexon unit ID and volume of ABSVD to be applied for any HH-settled volume. Moreover, multiple DFS Units can be part of an Elexon unit ID to apply ABSVD.

Q. Will there be a transfer of energy mechanism of the provider of the service is not the supplier of the consumer (and allocation of the activated volumes?)

A: We will be applying ABSVD to half-hourly settled volume. Any underlying agreements between providers of service and the supplier of the service are for those participants to agree.

Q: Can providers change the allocation of MPANs to units from day to day and/or period to period?

A: Yes. The framework described before allows the DFS provider to allocate the same MPAN to multiple DFS units in the same service window. Moreover, every service window is assessed independently. MPANs allocated to one DFS unit for SP 38 could be allocated to another DFS unit in SP 39.

Q: Can you explain why this isn't incentivised by balancing and settlement arrangements already? This seems to encroach on the market when it is still trading.

A: The lack of market-wide half-hourly settlement means that for the majority of demand any reduction in their consumption will not be reflected in the half-hour it is delivered, meaning that suppliers end up with an imbalance exposure.

Q: When will BSAD information be published, prior to the event (and be subject to some error) or after the event (and lose timeliness as a signal to the market)?

A: We will be using the assessment data for BSAD, so it is based on forecast rather than outturn. This aligns to the process for other balancing services. BSAD data will be published post event, normally if this service was issued through systems, then data would be sent every 30 mins rather than the following day, and they would see the impact of the costs of this service asap.

Q: Do we expect instructed/delivered volumes to impact Net Imbalance Volumes (potentially increasing NIVs when dispatched) or sit outside of cash out?

A: We will feed the expected volumes and accepted prices in to cash out via BSAD, so that the impact of the service is properly accounted for in cash out.

Commercial proposition and Guaranteed Acceptance Price for testing

Q: What prices will be accepted for the actual use of the service?

A: If we need to use the Demand Flexibility Service, it would be because we have used or expect to use all of our existing services and market incentives. In these circumstances, the Guaranteed Acceptance Price (GAP) and price cap on acceptances prices will not apply. We will assess submissions through a pay as bid tender process, with the bids being accepted from low to high until we secure the required volume.

Q: What is the Guaranteed Acceptance Price (GAP) and what's its purpose?

A: The GAP is designed to provide certainty to providers by giving an absolute lowest price we will accept during tests of the Demand Flexibility Service.

While we expect that the marginal BM price will be higher than the GAP on most occasions, we cannot guarantee it, and so we are aiming to give certainty by guaranteeing this minimum price threshold instead.

As a reminder, there will be two tests every month, plus an additional two test tests in a provider's first full month of the service. Tests are not a pre-requisite to participate in the actual service.

NB: Providers could choose to bid below the Guaranteed Acceptance Price if they wanted, and would be accepted at their bid price, but it would probably not be in their commercial interest to do so. Some may require a higher value to participate in test, this can also be done, but they may risk not being accepted if the price is above the marginal BM price.

Q: What level will the Guaranteed Acceptance Price for testing be set at?

A: At our webinar on Monday 5th September 2022, we outlined our proposal to set the GAP for testing according to the prevailing average Ofgem price cap for a unit of electricity. This would have been £520/MWh from October 2022, the equivalent of 52p/kWh.

Since then, there has been an update from government on the energy price cap for this winter, reducing the unit price cap to the equivalent of £340/MWh. This would make the service less attractive and could reduce the volume participating.

We have also received a range of feedback on the proposed price level from potential providers, which indicates that a GAP level of £2,000/MWh or higher is required to unlock maximum volumes and to meet our aim of making the service viable for this winter. Considering these developments, we intend to increase the GAP from our initial proposal, but we welcome further feedback before our final decision once the consultation closes on Monday 3rd October.

Q: On GAP, will this flex per event?

A: We expect that the GAP for testing will remain the same across all tests.

Q: Will the 12 tests be paid? That does seem a lot of activations to provide if they are not paid.

A: Yes, all successful bids will be paid for. In the tests, any bids at or below the guaranteed acceptance price will be accepted. More expensive bids may be accepted but are not guaranteed to be accepted.

Q: If only a subset of providers is invited in each test, will every participant be guaranteed 12 test or are 12 tests guaranteed across the service in its entirety?

A: All providers will get two onboarding tests in their first month, plus two regular tests in each month they remain in the service. So, if you join from November 2022, you will get ten regular tests across the five months from November to March. That makes a total of twelve tests across the winter.

We may test different providers at different times or on different days for operational management purposes, but we'll make sure each provider is invited to the full numbers of tests they're entitled to.

Q: Do I need to deliver demand reduction during the tests?

A: Yes, we expect you to deliver any demand reduction we accept during the tests, just like in a real event. The only differences between tests and actual usage are 1) only tests will have a Guaranteed Acceptance Price, and 2) all providers will be asked to submit bids for an actual use, but for tests we may call different sub-sets of providers at different times.

Q: Why not do fewer tests at a higher price?

A: The number and timing of tests is designed to meet a number of key aims, including creating and maintaining confidence in the forecast volumes and incentivising early and continued participation in the service.

As market participants don't have an incentive to themselves, we are setting up the Demand Flexibility Service to unlock this additional flexibility as an enhanced action if we have exhausted all our usual actions.

Consumer

Q: In terms of payment, how is that split by the participant active in DFS and the customers on the ground? Will this be different by supplier?

A: Each provider will decide how they share the revenue with their “consumers on the ground”, and we understand that this is likely to differ between providers. Providers will own the relationship and agreements between themselves and end consumer. As this is separate from the terms of the Demand Flexibility Service, the ESO will not be advising on these arrangements.

Q: If I understood correctly, you are asking for response to align with settlement periods. Is this realistic for domestic consumers to work to?

A: We’ve seen from previous trials that domestic consumers can reduce demand for longer than one or two settlement periods.

Q: Are you expecting/hoping that this scheme will incentivise a move to half hourly settled meters?

A: The increase in uptake of HH or Smart meters could be an additional benefit of this service.

Q: How does National Grid ESO intend to avoid discriminating against those customers that don’t have smart meters?

A: We understand that this service does not exclude domestic consumers without smart meters however the ESO will require half hourly data from the provider to process the service.

Version 1.1 Published 28 September 2022