Demand Flexibility Service

Participation Guidance Document V.6

February 2023

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Contents

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Version Control

Version	Date	Change	Page
V.1	02/11/2022	Creation of document	N/A
V.2	04/11/2022	Addition of Operational Baseline calculation example and other clarificatory updates.	Appendix 4, and throughout document
V.3	14/11/2022	Clarificatory updates to section 1: Introduction. Updates to section 2: Onboarding (inclusion of a high-level process and information on first submission of Weekly Indicative Forecast and MPAN file). Updates to section 3: Participation in DFS (clarificatory updates added to DFS Tests, addition of sections on submitting DFS Bids and paying for delivery of DFS). Clarificatory updates to appendix 4.	Throughout document
V.4	24/11/2022	Additional information to clarify the process – see below for updates Section 2.4 Weekly Indicative Forecast Submission clarification on MPAN duplication process Section 2.5 Register as a DFS approved provider process updates for third parties Section 3.5 Paying for Delivered Demand Reduction - additional information stating duplicate MPANs cannot be submitted Appendix 2, Section 6 MPAN Submissions – clarification on ensuring submission of full MPAN numbers	Throughout the document
V.5	16/01/2023	Section 2.2 Half Hourly Settled MPANs removal of MS Form link and addition of BMU Registration team email address.	Page 7
		Section 2.4 MPAN Duplication – guidance on MPAN duplication resolution for parties.	Page 9
		Section 3.3 DFS Tests, additional sentence added to provide clarification for when DFS Tests may be run.	Page 14
		Section 3.5 Paying for Delivered Demand Reduction, additional sentence added to direct providers to section 2.4 for further information on MPAN duplications.	Page 16
		Appendix 1, File Column Headers – clarification that the DFS Provider name must be the same for all file submissions to the ESO.	Page 19
		Appendix 2, section 4 Weekly Settlement Submissions – clarification that only one row is required for days where there was no Service Requirement.	Page 24
		Appendix 2, section 4 Weekly Settlement Submissions – clarification first day of settlement week is the Monday of that week.	Page 24
		Appendix 2, section 4 Weekly Settlement Submissions and section 5 ABSVD Submission – alignment between the data validations across the two files. They need to be submitted in the same formats.	Page 25 & 26
V.6	02/02/2023	Appendix 1, addition of Common problem and solutions when saving files.	Page 22

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1. Introduction

The Demand Flexibility Service (DFS) has been developed to allow the ESO to access additional flexibility when the national demand is at its highest – during peak winter days – which is not currently accessible to the ESO. This innovative service will support suppliers/aggregators (as well as I&C customers) to incentivise end consumers for voluntarily reducing/flexing their electricity usage.

The Demand Flexibility Service will run from November 2022 – 31st March 2023.

This Participation Guidance Document should be read in conjunction with the following documents. For the avoidance of doubt if there is any confusion the below documents take precedent:

- DFS Procurement Rules; and the
- DFS Service Terms.

These can be found on the Demand Flexibility Service webpage: https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility

1.1 Onboarding steps to participation in DFS

- Single Market Platform
    - o Register as a provider on the Single Market Platform (SMP)
    - o Register DFS Units
    - o Accede to the DFS Procurement Documentation
- DFS IT process check
    - o Gain access to the development area of the DFS Assessment Platform (ESO DFS SharePoint site)
    - o Complete IT process check
- Ready to participate in the Demand Flexibility Service
    - o Gain access to the production area of the DFS Assessment Platform
    - o Submit onboarding Weekly Indicative Forecast and MPAN Data file
    - o Register as an approved DFS provider on our website
    - o Participate in Tests and live DFS events

Further information on the processes within the steps is shared in section 2. Onboarding.

1.2 Demand Flexibility Service Overview

Eligibility for DFS

To participate in the Demand Flexibility Service, Registered DFS Participants, and associated DFS Units, need to meet the below:

- Be half-hourly metered, can be either half-hourly settled, or non-half-hourly settled
- MPANs cannot be allocated to more than one Registered DFS Participant
- Cannot form part of a BM Unit except a Supplier Base BM Unit
- Cannot be providing any other ESO Balancing Service (including having a Capacity Market Agreement) or any similar service to any third party.
- Must be able to respond for a minimum of 30 minutes

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- 1 MW minimum DFS Unit size, up to 100 MW maximum DFS Unit size. Parties can register multiple units.

- Be able to respond to an instruction for day-ahead delivery.

- DFS Units can be aggregated on a national basis.

DFS Requirement

ESO have shared a view of how often the Demand Flexibility Service may be required aligning to our Winter Outlook Scenarios.

For further information on this please see our DFS webpage: https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility.

Direct link to document on the DFS Requirements: https://www.nationalgrideso.com/document/268851/download

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2. Onboarding

This section explains what steps are required to become a Registered DFS Participant and be ready to participate in the Demand Flexibility Service.

2.1 DFS onboarding process

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┌─────────────────────┐    ┌─────────────────────┐    ┌─────────────────────┐
│ Register as a       │    │ If a new provider   │    │ If provider has     │
│ provider on the     │──▶ │ to ESO complete     │──▶ │ half-hourly settled │
│ Single Markets      │    │ Settlement details  │    │ MPANs review        │
│ Platform            │    │ form                │    │ whether a           │
│                     │    │                     │    │ requirement to      │
│                     │    │                     │    │ register for ESO    │
│                     │    │                     │    │ BMU Codes           │
└─────────────────────┘    └─────────────────────┘    └─────────────────────┘
           │
           ▼
┌─────────────────────┐    ┌─────────────────────┐    ┌─────────────────────┐
│ Register DFS Units  │    │ Sign DFS            │    │ Recieve             │
│ on the SMP          │──▶ │ Declaration &       │──▶ │ confirmation of     │
│                     │    │ Adherence Form      │    │ pre-qualification   │
│                     │    │                     │    │ (and be confirmed   │
│                     │    │                     │    │ as a DFS approved   │
│                     │    │                     │    │ provider on our     │
│                     │    │                     │    │ DFS webpage)        │
└─────────────────────┘    └─────────────────────┘    └─────────────────────┘
           │
           ▼
┌─────────────────────┐    ┌─────────────────────┐    ┌─────────────────────┐
│ Complete an IT      │    │ Submit an           │    │ Ready to            │
│ process check, if   │──▶ │ onboarding Weekly   │──▶ │ participate in DFS  │
│ don't pass -        │    │ Indicative Forecast │    │                     │
│ reschedule          │    │ and MPAN Data file  │    │                     │
└─────────────────────┘    └─────────────────────┘    └─────────────────────┘
           │
           ▼
┌─────────────────────┐    ┌─────────────────────┐    ┌─────────────────────┐
│ Submit Friday       │    │ Complete two        │    │ Undertake two       │
│ Weekly Indicative   │──▶ │ Onboarding Tests    │──▶ │ Regular Tests each  │
│ Forecasts and MPAN  │    │ in your first month │    │ month you are part  │
│ Data files          │    │                     │    │ of the DFS          │
└─────────────────────┘    └─────────────────────┘    └─────────────────────┘
           │
           ▼
┌─────────────────────┐
│ Particpate in any   │
│ live DFS events     │
└─────────────────────┘
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2.2 Single Market Platform

To participate in the Demand Flexibility Service, you need to register on the Single Market Platform. This is where you will accede to the DFS Procurement Documentation and register DFS Units for participation in the Demand Flexibility Service.

The Single Market Platform can be accessed via this link: https://portal.nationalgrideso.com/smp/s/login/

DFS Units

A guidance document for how to register DFS Units on the SMP is accessible on our Demand Flexibility Service webpage, but can be accessed directly via this link: https://www.nationalgrideso.com/document/268366/download

Section 3.4 outlines how you can structure your DFS Units when submitting your DFS Bids and allocating your MPANs to your DFS Units.

DFS Procurement Documentation

To complete registration via the SMP, you will be required to accede to the DFS Procurement Documentation through submission of the DFS Declaration and Adherence Form.

The DFS Procurement Documentation consists of:

- DFS Procurement Rules; and the
- DFS Service Terms.

The DFS Procurement Documentation, along with the DFS Declaration and Adherence Form, can be found on the Demand Flexibility Service webpage: https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility

The Common Flexibility Service Terms and Conditions were developed in collaboration with the Energy Networks Association and its members, these can be accessed via this link: https://www.energynetworks.org/assets/images/Resource%20library/ON21-WS1A-P4%20Standard%20Agreement%20for%20procuring%20Flexibility%20Services%20(Version%202)%20(13%20Aug%202021).docx

The Balancing Services Glossary of General Terms and Rules of Interpretation can be accessed via this link: https://www.nationalgrideso.com/document/246716/download

Settlement process requirements

New provider: bank registration details

If you are a new provider to ESO, we will need to set up your bank details in our settlement systems. Please contact demandflexibility@nationalgrideso.com or settlement.queries@nationalgrideso.com to receive the Settlement Details form.

Do you have half hourly settled MPANs?

For all half hourly settled volume ESO will apply ABSVD to the Supplier's Base account. As per the DFS Service Terms you are required to supply the relevant Supplier Base BMU Elexon ID. This BMU Elexon ID needs to have an associated ESO ID for Elexon to process this data accurately.

If you are not the registered supplier of the MPANs please speak to your DFS account manager to discuss this process in more detail or contact bmu.registration@nationalgrideso.com

Settlement Calendar

The DFS Service Terms outline the provisions and processes required for payment with regards to settlement of the Demand Flexibility Service. The payment calendar that the ESO Settlement team follow can be found here: https://www.nationalgrideso.com/industry-information/balancing-services/settlements/payments-calendar

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2.3 DFS IT process check

Once you have started registration on the Single Market Platform, you will be contacted by our DFS team to arrange an IT process check. You will be provided with the relevant information to complete this, and access to the development area of the DFS Assessment Platform.

The purpose of the IT process check will be to ensure you have access to the correct templates and the required data flows are in place. During these checks, we will simulate a DFS Service Requirement.

A DFS IT process check will be completed within one day (between 09:00 – 12:00) but will simulate the normal weekly process for all DFS Service Requirements (including Tests).

IT process check – will be completed between 09:00 and 12:00 on the day you are scheduled to complete the process

- Provider to send Weekly Indicative Forecast and MPAN Data file
- ESO to send the Anticipated DFS Requirement Notice
- ESO to send the DFS Service Requirement
- Provider to send DFS Bids
- ESO to notify DFS Acceptance (accepted/rejected status for DFS Bids)
- Provider to send Updated Volume Forecast
- ESO publish DFS Utilisation Report to all participants
- Provider to send Weekly Settlement Submission (and ABSVD submission as applicable)
- Provider to send MPAN Data Settlement submission

The ESO will confirm once you have successfully completed an IT process check and you will then be ready to participate in the Demand Flexibility Service. If you are notified that the IT process check was not completed successfully you will be given the reasons why and another opportunity to complete a further IT process check.

For the purposes of the IT process check, no payment from ESO will take place as no demand reduction from customers is required at this stage. This checkpoint is to support operational readiness only.

2.4 Onboarding submission of Weekly Indicative Forecast and MPAN Data file

Once you have completed the SMP onboarding and the DFS IT process check, you will be ready to participate in the Demand Flexibility Service. You will be provided with access to the production area of the DFS Assessment Platform (further information on the DFS Assessment Platform is contained within appendix 1).

The penultimate step of onboarding is to then submit your onboarding Weekly Indicative Forecast and MPAN Data file. The data contained within the Weekly Indicative Forecast will enable ESO to schedule your Onboarding Tests and feed into our understanding of how much demand flexibility we have access to. Alongside this you will be required to submit a list of participating MPANs to the ESO for validation, using the MPAN Data file template, ESO will check for any duplications across Registered DFS Participants. More information on these files is contained within the appendices. These files need to be submitted via the DFS Assessment Platform.

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The Weekly Indicative Forecast that is submitted at both the onboarding stage and weekly on Fridays, MUST be as accurate as possible, inaccuracy will negatively impact the overall power system operation and DFS Test planning.

MPAN duplication

Under the Procurement Documentation, it is the responsibility of the Registered DFS Participant to ensure that their customers are only signed up to DFS once, as per clause 4.4.3 and 12.1(d) of the Procurement Rules. Registered DFS Participants should clearly state this to their customers, and it should form part of the contractual agreement/terms and conditions with the end customer. End consumers (individual MPANs) need to have actively opted-in to participate in the Demand Flexibility Service.

If an MPAN is found to be duplicated as part of the registration or weekly MPAN submissions, the relevant Registered DFS Participants will be notified. The Registered DFS Participants will be required to remove those MPANs from their portfolio for any DFS Tests or live events as per 4.4.3 and 12.1.2(d) of the DFS Procurement Rules until it has been resolved by the providers.

The duplicate MPAN may not be entered for any volume for settlement of DFS if it has been notified as a duplicate by the ESO. Once resolved by the Registered DFS Participants, the MPAN can be resubmitted as part of the weekly MPANs submissions. Once passed, this MPAN can then be entered in as volume for DFS.

For ease of resolution, ESO recommend that Registered DFS Participants give consent to ESO to share contact details with other Registered DFS Participants so a mutually agreed resolution can take place with minimal impact to consumers and the Registered DFS Participants.

ESO recommend the parties come to a mutual agreement of ownership of the MPANs between themselves by following these guidance notes:

- Division of the ownership of the duplicated MPAN(s) between the parties

- Reviewing time stamp sign up information and agreeing the ownership of the MPANs based on consumer registration dates

- Amendment to the upfront terms and conditions/contractual tie in clauses for consumers and adopt a tie in period based on the consumer registration date

Any other mutually agreed resolution that supports reducing resource challenges.

If consent is not given to ESO to share contact details or a resolution between parties cannot be reached using the guidance above, each party should de-register the duplicate customer from the service. This should be communicated clearly in an email explaining why the end consumer is unable to participate. The end consumer is then free to sign up again to the DFS under their chosen provider by re-registering for their service.

DFS Initiation Measures

As part of the SMP registration you will be required to define the DFS Initiation Measures (Delivery Method) for each DFS Unit you register. The MPAN Data file will also require you to identify the Type of each MPAN.

There are two types of DFS Initiation Measures (aka Delivery Method in SMP and Type in MPAN Data file): Manually Initiated and Directly Instructable.

"Directly Instructable" – the facility made available to a Registered DFS Participant by the owner and/or occupier of an MPAN during the DFS Procurement Period for the Registered DFS Participant to initiate delivery of DFS from a MPAN by communicating directly with the MPAN.

"Manually Initiated" – the initiation of delivery of DFS from a MPAN by an action on the part of the owner and/or occupier of the premises associated with that MPAN in response to a communication from the Registered DFS Participant.

A Registered DFS Participant can only submit Delivered Demand Reduction Volumes for settlement where the Registered DFS Participant has either instructed (Directly Instructable) or received an acceptance (Manually Initiated) for the specific Contracted Settlement Period. For any MPANs that showed a reduction in

demand but there is not evidence of an instruction sent (Directly Instructable) or an acceptance received (Manually Initiated) these MPANs must be excluded from the Delivered Demand Reduction calculation.

For audit purposes, you will be required to keep evidence of instructions sent to Directly Instructable MPANs, and acceptances from the consumer for Manually Initiated MPANs, for each relevant Contracted Settlement Period.

2.5 Register as a DFS approved provider

The final onboarding step is to register as an approved DFS provider on our DFS webpage.

The Registered DFS Participant must be registered in SMP, uploaded the signed DFS Declaration and Adherence Form, and have successfully completed an IT process check to be listed as an approved DFS provider.

If you are a third party participating via an aggregator, you must have a signed contract with the ' Registered DFS Participant'. The ' Registered DFS Participant' must notify us in writing of your participation by emailing demandflexibility@nationalgrideso.com.

Once verified, your information will be uploaded in 7-10 working days.

Please complete this Microsoft form to notify us you have been fully onboarded and we will add you as an approved DFS provider (Registered DFS Participant) to our website: https://forms.office.com/pages/responsepage.aspx?id=U2qK-fMlEkKQHMd4f800ldjciipmaaNAvf28kHm3Ch9UOFRaQkQ2Wk5UNFdYTUdJUUFZUlpGNjgzSS4u

This Microsoft Form is also accessible from our DFS webpage: https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility

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3. Participation in DFS

Once you have completed the onboarding process you will be able to participate in the Demand Flexibility Service. This section outlines the processes and requirements involved with participating in the DFS.

3.1 DFS high-level weekly process

This is the weekly process for the Demand Flexibility Service, section 3.2 explains this in further detail.
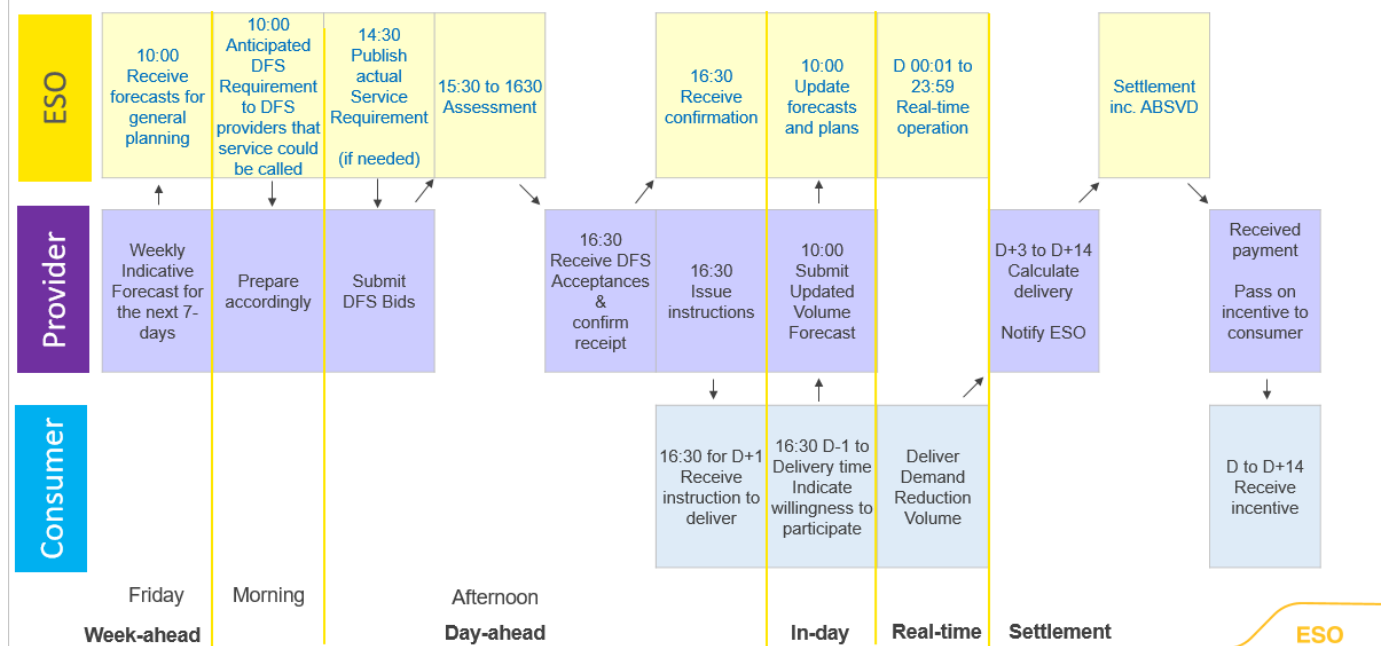
1. On a rolling weekly basis Registered DFS Participants will submit a Weekly Indicative Forecast, as well as the MPAN details of their registered end-consumers participating, at or around 10:00 hours each Friday.

2. At or around 10:00 hours, on any given day, ESO will publish an Anticipated DFS Requirement Notice to notify industry of a potential requirement via the ESO Data Portal. This shall be non-binding and not commit ESO to issue a Service Requirement. This will be a BMRS System Message and a Data Portal update. You can register for text updates for both BMRS and ESO Data Portal. See register for updates below

3. At or around 14.30 hours ESO may issue a DFS Service Requirement (this can include for Regular or Onboarding Tests, where a Guaranteed Acceptance Price will also be published).

4. By no later than 15.30 following issue of a Service Requirement (or if a Service Requirement is issued after 14:30, no later than 60 minutes following issue) Registered DFS Participants may submit DFS Bids.

5. At or around 16.30 ESO shall notify all Registered DFS Participants who submitted DFS Bids whether each DFS Bid was accepted or rejected.

6. ESO will publish a DFS Utilisation Report to the ESO Data Portal and/or its website.

7. Providers arrange with end consumers to reduce demand (via either a direct instruction to an asset or a communication to the end-consumer with an acceptance received back).

8. At or around 10:00 hours on the day in which Contracted Settlement Period(s) fall, Registered DFS Participants submit an Updated Volume Forecast.

9. Demand Reduction Volume is delivered by end-consumers.

10. Registered DFS Participants retain and store the relevant Performance Data set out in the Service Terms.

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11. Providers submit Settlement Data for each DFS Acceptance received during any calendar week ending midnight Sunday, no later than 10.00 hours on the second Monday after expiry of that calendar week. Providers also submit any relevant Applicable Balancing Services Volume Data.

3.2 Communications between Registered DFS Participants, industry and the ESO

There are several communications between the Registered DFS Participant, industry and the ESO. This section explains what these are, where they are shared, who sends the information, the frequency of the interactions and also the time frames.

ESO Data Portal and BMRS communications

The ESO has created an area on the Data Portal to share updates on the Demand Flexibility Service, this can be accessed via this link: https://data.nationalgrideso.com/data-groups/dfs. There are two sections, one for DFS Tests and one for DFS Live Events.

Certain updates on the Demand Flexibility Service will also be shared via the BMRS site, on the System Warnings webpage, which can be accessed via this link: https://www.bmreports.com/bmrs/?q=transmission/systemwarning.

Industry can register to receive updates from these webpages to know when information on the DFS has been published.

To register for SMS updates from the **D**ata Portal, this webpage explains how to set this up and subscribe for Data Portal notifications: https://data.nationalgrideso.com/registration-and-subscription#sms

To register for updates from BMRS, follow these steps:

1. 1.Go to https://www.elexonportal.co.uk/

2. Register for an account, and then follow activation link

3. Once logged in to your Elexon account, go to https://www.elexonportal.co.uk/systemwarnings

   and click "subscribe".

DFS file transfers

There are several required file transfers and communications between the Registered DFS Participant and the ESO. The ESO has developed the DFS Assessment Platform for the Demand Flexibility Service for these file transfers. Further detail on submitting these files, and the requirements to follow, can be found in the appendices.

This table shows each communication, who it is from and to, when and how the communication will be sent, and its frequency.

File number	File name	From	To	How	Frequency	When	Period
1	Weekly Indicative Forecast	Provider	ESO	DFS Assessment Platform	Weekly (also at the onboarding stage)	Friday at or around 10:00	7 days (Sat - Fri)
2	MPAN Data	Provider	ESO	DFS Assessment Platform	Weekly (also at onboarding stage and on request by audit)	Friday at or around 10:00	7 days (Sat - Fri)

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File number	File name	From	To	How	Frequency	When	Period
3	Anticipated DFS Requirement Notice	ESO	Provider	BMRS, ESO Data Portal & DFS Assessment Platform	Day ahead	At or around 10:00	NA
4	Service Requirement	ESO	Provider	BMRS, ESO Data Portal & DFS Assessment Platform	Day ahead	At or around 14:30	NA
5	DFS Bids	Provider	ESO	DFS Assessment Platform	Day ahead	15:30 or within 60 minutes of a Service Requirement	NA
6	(DFS Acceptance) DFS Participant Utilisation Report	ESO	Provider	DFS Assessment Platform	Post assessment	At or around 16:30	NA
7	DFS Utilisation Report	ESO	Industry	ESO Data Portal	Post assessment	As soon as possible following DFS Acceptances	
8	Updated Volume Forecast	Provider	ESO	DFS Assessment Platform	Day of DFS delivery	At or around 10:00	NA
9	Updated DFS Utilisation Report	ESO	Industry	ESO Data Portal	Post receiving Updated Volume Forecasts	As soon as possible post 10:00 on the day of DFS delivery	
10	Weekly Settlement Submission	Provider	ESO	DFS Assessment Platform	Weekly	Monday after the end of the DFS service week	7 days (Mon- Sun)
11	Weekly ABSVD Submission	Provider (as applicable)	ESO	DFS Assessment Platform	Weekly	Monday after the end of the DFS service week	7 days (Mon- Sun)
12	MPAN Data Settlement Period	Provider	ESO	DFS Assessment Platform	On request	48hrs after the request	N/A

3.3 DFS Tests

As part of this service, to make it viable and build confidence in its use, Registered DFS Participants will be invited to participate in a series of tests while the service is live.

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ESO will run a maximum of 12 tests for Registered DFS Participants entering from 18 November 2022, the tests will be accompanied by a Guaranteed Acceptance Price (GAP). For further information on the GAP, please see our DFS webpage: https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility. Direct link to document on the Guaranteed Acceptance Price here: https://www.nationalgrideso.com/document/268856/download

Four tests will take place in the first full month Registered DFS Participants are signed up (two Onboarding Tests and two Regular Tests), followed by two Regular Tests in each subsequent month. Tests will be for a period of one hour, they can be run back-to-back, on different days, and at different times.

All Registered DFS Providers will be offered two Onboarding Tests. These will be scheduled ad-hoc and, as and when Registered DFS Participants are ready to participate in DFS.

The same DFS process and file transfers, as described in the above table, will be followed for both DFS Tests and DFS live events. Registered DFS Participants will be notified at the day ahead stage if they are being offered a Test or if there is a live DFS Service Requirement.

The difference between a live Service Requirement and a Test is that a Guaranteed Acceptance Price (GAP) applies, as shared above. Once all volume under the GAP has been accepted any further required DFS volume for the hour of the Test Service Requirement will be accepted up to the Balancing Mechanism Marginal Price, which is the highest price for Energy the ESO is planning to instruct during that period.

DFS Tests will be scheduled by the ESO based on overall power system needs, the intention of tests is to maximise learning and so are likely to be during high demand periods.

The following table tells you how many DFS Tests you will be entitled to participate in, and the window when your first Tests will be conducted. This is based on the date you submit your first "Weekly Indicative Forecast" to us and complete the required onboarding steps. The testing period will run from Nov 2022 to 31st March 2023.

Date your first Weekly Indicative Forecast is submitted:	2 x Onboarding Tests (will be conducted during your first full month) + first 2 x Regular Tests will be conducted:	Total Test entitlement (Onboarding Tests + Regular Tests):
on or before 18th Nov 2022	Between submission date and 30th Nov 2022	12 (2 + 10)
on or before 25th Nov 2022	Between submission date and 31st Dec 2022	10 (2 + 8)
on or before 30th Dec 2022	Between submission date and 31st Jan 2023	8 (2 + 6)
on or before 27th Jan 2023	Between submission date and 28th Feb 2023	6 (2 + 4)
on or before 24th Feb 2023	Between submission date and 31st Mar 2023	4 (2 + 2)
on or after 1st March 2023	No test entitlement	0 (0 + 0)

3.4 Submitting DFS Bids

This section covers how you submit your DFS Bids. This was also explained during our Sep 2022: Post Consultation Launch Webinar, the recording is accessible via our website: https://www.nationalgrideso.com/industry-information/balancing-services/demand-flexibility. The part on submitting DFS Bids is between 32:39 to 35:54.

The slides are accessible via this link: https://www.nationalgrideso.com/document/266686/download, between slides 49 – 63 there are worked examples for submitting DFS Bids.

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Key information on submitting DFS Bids:

- Bids need to be submitted by 15:30 Day Ahead of the DFS Service Requirement, or one hour post publication of the Service Requirement.

- Each individual bid needs to:
    - Be for a specific DFS Unit
    - Be for a single Settlement Period
    - Have only one volume (an integer between 1MW and 100MW) and what is expected to be delivered if accepted
    - Have only one Utilisation Price (£/MWh)

- Registered DFS Participants **can**:
    - Submit multiple bids for different DFS Units for the same Settlement Period
    - Submit multiple bids for the same DFS Unit for different Settlement Periods

- Registered DFS Participants **cannot**:
    - Submit multiple bids for a single DFS Unit for the same Settlement Periods
    - Link bids or have mutually exclusive bids. (The ESO will accept DFS Bids in cost order, if all of your bids are accepted you must be able to deliver all of the Demand Reduction Volume).

At the point of submitting DFS Bids, this is where Registered DFS Participants decide how they wish to allocate MPAN volume between DFS Units.

- A DFS Unit can be aggregated across one or more MPANs

- If the Registered DFS Participant wants to create multiple price bands for the same MPAN then the same MPAN has to be in more than one DFS Unit.

Providers are free to submit different volumes in different periods. If you are unable to sustain delivery across all requirement periods (e.g., you could do full volume for one Settlement Period, or part volume for three Settlement Periods), we would encourage you to profile your bids proportionally to the requirement. For example, if we have a requirement for 100MW in SP34, 200MW in SP35 and 100MW in SP36, we would like you to profile your delivery on a 25%, 50%, 25% or proportional 1MW:2MW:1MW split.

3.5 Paying for Delivered Demand Reduction

Registered DFS Providers are required to calculate the operational baseline, using the agreed industry methodology of P376, for each of their MPANs and then use this to calculate the Delivered Demand Reduction Volume of their DFS Units following a DFS Test or DFS event. This is submitted to the ESO via the Weekly Settlement Submission, details of this file are outlined within the appendices.

The ESO will pay for any over or under delivery from DFS Units against their DFS Bids. If a Registered DFS Participant has split MPANs into different DFS Units, for bidding in using price bands, they must put any under or over delivery proportionally across the DFS Units containing the same MPAN so that the average cost per MW the ESO pays stays the same as it was when the bids were accepted. If a DFS Unit that was not accepted delivers a Demand Reduction this will not be paid for by ESO.

MPANs – further information

- Registered DFS Participants must calculate the Operational Baseline for all MPANs and keep a record of this for each MPAN that was submitted as delivering Demand Reduction in the Weekly Settlement Submission for audit purposes.

- DFS Initiation Measures evidence must be captured, as described in section 2.3.

- o Registered DFS Participants must get an acceptance/confirmation from each MPAN to say that that MPAN will participate in the specific Contracted Settlement Periods the Registered DFS Participant had accepted from their DFS Bids.

- o Example: if Registered DFS Participant submits a bid for tomorrow at 16:00 to 16:30, and the bid is accepted at D-1 16:30, the Registered DFS Participant MUST get confirmation between D-1 16:30 when the bid was accepted and the delivery time D 16:00 to say that that MPAN will participate in that Contracted Settlement Period. This MUST be kept as a record for auditing. If the Manually Initiated MPAN does not confirm during this time this MPAN CANNOT be included within the Weekly Settlement calculation. For MPANs where the reduction is Directly Instructable, the instruction sent to the MPAN is considered the confirmation. Again, this instruction must be kept as a record and the MPAN can be used for the Weekly Settlement calculation.

- For MPANs that are considered as having given confirmation (either via an acceptance or an instruction) for the Contracted Settlement Period, the baseline methodology is followed to calculate Delivered Demand Reduction Volume. Only the MPANs that show a reduction are submitted as part of the settlement calculation. Registered DFS Participants are not penalised for over or under delivery. The MPANs that increase demand during the Contracted Settlement Period (i.e., no Demand Reduction based on the baseline methodology) are not submitted within the Weekly Settlement calculation. Further information on the baseline calculation is contained within appendix 4.

- If the ESO identifies the MPAN as a duplicate with another Registered DFS Participant, the duplicate MPAN may not be entered for any volume for settlement of DFS until it is resolved by the Registered DFS Participants. Please see section 2.4: MPAN duplication for further information on how MPAN duplications can be resolved.

3.6 Contact details

If you need to contact the Demand Flexibility Team with any queries regarding onboarding, service design or other general queries, please email demandflexibility@nationalgrideso.com

Appendices

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Appendix 1 – General information on file submissions

This appendix contains general information for submitting the required files via the DFS Assessment Platform.

DFS Assessment Platform (ESO DFS SharePoint Site)

1. Each Provider will have their respective SharePoint Area allocated where they can see the following folders as shown in the figure (using "ESOEnergy" as an example provider).

2. All files are uploaded to the "Drop Box" folder and then validation checks take place. Further information on the validation checks undertaken can be found in appendix 2.
3. The "Templates" folder contains templates of the required files (explained further in appendix 2) and Sample Example files as a reference.
4. The "Bid Outcome" folder will be loaded with your DFS Acceptances (DFS Participant Utilisation Report) containing information on your accepted and rejected bids as soon as the assessment is complete for a DFS Service Requirement, at or around 16:30. You will be notified via email when this happens.
5. NOTE: If your submitted file moves from the "Drop Box" folder to the "Failed" folder you will receive an email detailing the reason for the failure, an example of this is shared in appendix 2. Only files that move from the Drop Box folder to the Processed folder have been successfully submitted.

Using and understanding the templates

Accepted files and naming conventions

PLEASE NOTE ESO will only accept files where:

a. the correct file naming convention Is used **and**
b. the file must be sent with .CSV extension.

Please do not add in additional columns or information to the templates or they will not upload correctly to the DFS Assessment Platform (ESO DFS SharePoint area).

File names follow this convention: "Provider_ProviderName_FileName_ddmmyyyy.csv"

*   **Provider** – Don't change this
*   **ProviderName** – Change this to the name of the Registered DFS Participant (E.g., ESOEnergy)
*   **File name** – E.g., WeeklyIndicativeForecast, don't change this
*   **ddmmyyyy** – Change this to either the first date of the file (e.g., Saturday, if for the Weekly Indicative Forecast) or delivery date (e.g., the next day as it will be day ahead, if for DFS Bids)

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Further information on the different data validation checks that will be completed can be found in appendix 2, below examples the file validations that will be completed.

File validations:

These are validations that will be completed on each file uploaded to the "Drop Box" folder. If files fail these validations they will be moved to the "Failed" folder and if they pass, they will be moved to the "Processed" folder.

File Name	1. Each part split by (_) underscore (Example: Provider_ESOEnergy_WeeklyIndicativeForecast_15102022.csv) 2. Should be 4 parts after split 3. 3rd Part should be WeeklyIndicativeForecast (or relevant file name) 4. 4th Part should be date and the relevant date depending on the file
File Headers	1. Trim spaces from File Headers and it should exactly match the predefined headers – as shown in the File Template 2. No special characters allowed in File Headers 3. Order of Headers should also be same.

File column headings and their descriptions

Header	Description
Date	Date of Delivery – e.g., for the Weekly Indicative Forecast dates of all the 7 days in ddmmyyyy format.
DFS Provider	Company name of the Registered DFS Participant i.e., the supplier or aggregator. This needs to be the same name across all of the files explained in appendix 2.
Unit	The ID given by ESO for the DFS Unit that is allocated to offer delivery of the Demand Reduction Volume. Please be aware this may change from the unit ID parties populate initially. This ID will be provided within the SMP and will follow this structure XXXXXX## (3 – 6 characters relating to the Registered DFS Participant's company name and two digits numbering the DFS Unit registered under this Registered DFS Participant for the DFS.
DFS Volume (MW)	The Demand Reduction Volume (MW) that is offered to be reduced by that DFS Unit in the relevant Settlement Period for the relevant DFS Bid. This must be a number between 1MW and 100MW.
From (GMT)	Time at which the Demand Reduction Volume starts – accepted format is HH:MM
To (GMT)	Time at which the Demand Reduction Volume ends – accepted format is HH:MM
Price GBP per MWh	The Utilisation Price (£/MWh) that is offered to provide the Demand Reduction Volume on that DFS Unit in the relevant Settlement Period.
GSP Group 14 Zones + Other + Total	Breakdown of the Demand Reduction Volume in MW of each DFS Unit per GSP Zone and Other column include any Demand Reduction Volume not in any of the GSP Zones. The Total column is the maximum aggregate Demand Reduction Volume (MW) of each DFS Unit across GSP Zones, it should be equal to DFS Volume (MW) that is offered.
Delivery Date	Date of Contracted Settlement Periods for the Demand Reduction Volume, or as specified within the detailed information in appendix 2.
DFS Required (MW)	This outlines the total required volume of Demand Flexibility for the relevant DFS Service Windows forming the Service Requirement.
Status	This is the status for the DFS Bids submitted by the Registered DFS Participant and outlines whether they were Accepted or Rejected.

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Baseline (MW & MWh)	This is the DFS Operational Baseline for each DFS Unit and for each Contracted Settlement Period, in both MW and MWh.
Metered (MW & MWh)	This is the aggregate Half-Hourly Metered Data for each Contracted Settlement Period, in both MW and MWh.
Delivered (MW & MWh)	This is the Delivered Demand Reduction Volume, the difference between the metered data and the baseline data, in both MW and MWh.
Accepted (MW & MWh)	Volumes that were accepted for delivery for that DFS Unit in the relevant period, in both MW and MWh.
Accepted Bid Price (GBP per MWh)	Utilisation Price that ESO accepted and will pay for the delivered Demand Reduction Volume allocated to each DFS Unit and for the relevant period, in £/MWh.
Payment (GBP)	The total amount of Utilisation Payment that the Registered DFS Participant will be paid for the Delivered Demand Reduction Volume on each DFS Unit and for the relevant period.
Elexon BMU ID	This is the Supplier's Elexon Base BMU ID for settlement purposes. Elexon BMU ID is the settlement ID allocated to the market participants who are registered as suppliers with Elexon. This is a unique ID provided by Elexon to the Base Supplier, this normally starts with "2_".
MPAN	The Unit Meter Point number allocated to the Registered DFS Participant for the relevant period. The MPAN has to be the core 13 MPAN digits without spaces. This is described further on the Elexon website: https://bscdocs.elexon.co.uk/guidance-notes/msid-mpan-guidance. The 13-digit number is made up of the combination of items 4, 5 and 6 (Distribution Identifier, Unique Reference Number, Check Digit), described on the Elexon link. This MPAN number is used throughout systems and processes as the reference or key to a particular Metering Point.
Type	This is the type of DFS Initiation Measure of each MPAN submitted within your MPAN Data file. The type can be either Directly Instructable or Manually Initiated. If an MPAN has any part considered Manually Initiated, the MPAN needs to be identified as Manually Initiated. See section 2.4 for further information.

GSP Zones for reference

These are the 14 GSP Zones:

- North Scotland
- South and Central Scotland
- North East England
- North West England
- Yorkshire
- East Midlands
- West Midlands
- London
- East England
- South East England
- South West England
- Southern England
- North Wales Merseyside and Cheshire
- South Wales

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Common problem and solutions when saving files.

When saving files, you can accidentally save the file in an UTF-BOM format. BOM characters are not visible and uploading files with this format can result in failing the process. Below we explain how to remove BOM from any text/XML file:

1. Download Notepad++
2. To check if BOM character exists, open the file in Notepad++ and look at the bottom right corner. If it says UTF-8-BOM then the file contains BOM character (see image below).
3. To remove BOM character, go to Encoding and select Encode in UTF-8
4. Save the file and retry uploading this in the SharePoint.

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Appendix 2 – Detailed information on file submissions

1. Weekly Indicative Forecast

Weekly Indicative Forecast gives a best estimate of the volume that each provider can deliver from each DFS Unit for 30-minute intervals starting from the following day (Saturday) first interval 00:00 – 00:30 to the next Friday 23:30 – 00:00 i.e., D+7. The file also shows the Demand Reduction Volume in MW for each DFS Unit in each GSP Zone.

1. Each provider will receive an email reminder usually on every Thursday afternoon informing them to submit the Weekly Indicative Forecast by 10:00 hours on the Friday. Providers can upload the file in the DROP BOX folder of the SharePoint link attached in the email.
2. Providers need to plan their forecast submission using the following template file "Provider_ProviderName_WeeklyIndicativeForecast_ddmmyyyy.csv"
   Where for ddmmyyyy – enter the FIRST date of the Forecast week in the filename for which you are submitting the data which will always be upcoming Saturday.
3. Note: The "GSP" columns plus the "Other" column need to equal the "Total" column.
4. ESO will accept the Weekly Indicative Forecast file only if providers follow the file template standards. The file headers are:

Date	DFS Provider	Unit	DFS Volume MW	From GMT	To GMT	Price GBP per MWh	GSP 14 Zones + Other + Total

Data Validations:

1. Submit Data for all the 7 dates of the week – starting from Saturday to next Friday.
2. In between Saturday and next Friday inclusive.
3. No Data Row should contain the same DFS Unit and the same Settlement Period for the same date.
4. Time difference between FROM GMT and TO GMT should always be 30 minutes.
5. Sum of all the GSP column+ Other should match the Total column and DFS Volume MW (Demand Reduction Volume). For the GSP Zone volumes, it is not a contractual requirement to enter volumes within the GSP Zone but the ESO would value this data, if you do not have this information you can input 0 within the GSP Zones).
6. No blank lines from starting, between and end in the file are allowed.
7. Each DFS Unit Volume MW (Demand Reduction Volume) must be between 0MW and 100MW and can contain decimal points.
8. DFS Volume and Price cannot be negative.

2. DFS Bids

DFS Bids submitted by the Registered DFS Participants includes volume and price that the provider can do for each DFS Service Window. It also shows the volume in MW of each DFS unit in each GSP Zone. Providers need to submit their Bids at Day Ahead.

Note: All volumes offered must be deliverable if you're your bids have been accepted. There are no mutually exclusive bids.

1. Providers need to submit their DFS Bids following the Service Requirement sent by the ESO using the following template file "Provider_ProviderName_DFSBids_ddmmyyyy.csv"
   Where ddmmyyyy – enter Date of Actual Delivery which is TOMORROW (D+1).
2. ESO will accept the DFS Bids file only if providers follow the file template standards. The file headers are:

Date	DFS Provider	Unit	DFS Volume MW	From GMT	To GMT	Price GBP per MWh	GSP 14 Zones + Other + Total

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Data Validations:

1. First column should be date and all the rows should only contain current day +1 (Day Ahead Date) – TOMORROW.
2. No Data Row should contain the same DFS Unit and the same Settlement Period for the same date.
3. Time difference between FROM GMT and TO GMT should always be 30 minutes.
4. Sum of all the GSP column+ Other should match the Total column and DFS Volume MW (Demand Reduction Volume). For the GSP Zone volumes, it is not a contractual requirement to enter volumes within the GSP Zone but the ESO would value this data, if you do not have this information you can input 0 within the GSP Zones).
5. No blank lines from starting, between and end in the file are allowed.
6. Each DFS Unit Volume MW (Demand Reduction Volume) must be between 1MW and 100MW and cannot contain decimal points.
7. DFS Volume and Price cannot be negative.

3. Updated Volume Forecast

Providers must send the Updated Volume Forecast on the actual delivery date (TODAY) usually at 10 AM. It is the best estimate of the Registered DFS Participant's delivery after DFS Acceptances but before actual delivery. **Providers must send the updated Volume Forecast only for the accepted bids** which are sent in the DFS Participant Utilisation Report (DFS Acceptances).

1. Providers need to submit their Updated Volume using the following template file
   "Provider_ProviderName_UpdatedVolumeForecast_ddmmyyyy.csv"
   Where ddmmyyyy – enter Date of Actual Delivery which is TODAY.
2. ESO will accept the Updated Volume Forecast file only if providers follow the file template standards. The file headers are:

Date	DFS Provider	Unit	DFS Volume MW	From GMT	To GMT	Price GBP per MWh	GSP 14 Zones + Other + Total

Data Validations:

1. First column should be date and all the rows should only contain Current Date which is TODAY.
2. No Data Row should contain the same DFS Unit and the same Settlement Period for the same date.
3. Time difference between FROM GMT and TO GMT should always be 30 minutes.
4. Sum of all the GSP column+ Other should match the Total column and DFS Volume MW (Demand Reduction Volume). For the GSP Zone volumes, it is not a contractual requirement to enter volumes within the GSP Zone but the ESO would value this data, if you do not have this information you can input 0 within the GSP Zones).
5. No blank lines from starting, between and end in the file are allowed.
6. Each DFS Unit Volume MW (Demand Reduction Volume) must be between 0MW and 100MW and can contain decimal points.
7. DFS Volume cannot be negative.
8. Submit data only for Accepted Bids.

4. Weekly Settlement Submission

Registered DFS Participants need to submit their Settlement Data (Weekly Settlement Submission) **only for Accepted Bids** for the entire service week. The service week will be considered as Monday to Sunday. So, the Registered DFS Participants need to submit their Weekly Settlement file to get paid accordingly. The data

for the Weekly Settlement file for a service week should be sent by the second Monday following the end of the service week (i.e., 8 calendar days after the Sunday). This file needs to show the actual delivery from each DFS Unit, this does not need to be an integer MW. ESO will pay for actual delivery, including where Registered DFS Participants have under or over delivered. Please see section 3.5 for further information and appendix 4 for an example of calculating the operational baseline.

1. Providers need to submit their Weekly Settlement file on Monday using the following template file "Provider_ProviderName_WeeklySettlementSubmission_ddmmyyyy.csv"
   Where ddmmyyyy – enter the FIRST date of the Weekly Settlement Submission service week in the file name for which you are submitting the data which will always be service week starting MONDAY
2. Providers need to Submit their Weekly Settlements data for the previous service week (Monday to Sunday) on the coming MONDAY to get paid accordingly.
3. ESO will accept the Weekly Settlement Submission file only if providers follow the file template standards. The file headers are:

Date	From GMT	To GMT	DFS Provider	Unit	Base line MWh	Base line MW	Meter ed MWh	Meter ed MW	Deliver ed MWh	Deliver ed MW	Accept ed MWh	Accept ed MW	Accepted Bid Price GBP per MWh	Payment GBP

Please note. Payments are settled in 30 min periods not 1-hour periods. Therefore, if your accepted Utilisation Price was £1,000 per MWh and you reduce by 50 MWh during a Contracted Settlement Period, your payment would be £50,000.

Data Validations:

1. Submit data for all the 7 dates of the previous service week – starting from Monday to Sunday of the previous service week, file must contain data of entire service week.
2. FOR NON-DELIVERY DATES: - submit 00:00 as From GMT and 00:30 as To GMT, NA for Unit and zeros (0) for all volumes and prices so that your file will not move to Failed folder. There only needs to be one row for each day where there was no Service Requirement.
3. No data for the future date is allowed because Settlement data must contain previous service week.
4. Data in the file cannot start from any intermediate dates of service week.
5. Submit data only for Accepted Bids clearly entering the relevant settlement period in the FROM GMT and TO GMT columns on days where there was a Service Requirement. If there was no Service Requirement see data validation 2.
6. No Data Row should contain Same UNIT and Same Settlement period for same date.
7. Time difference between FROM GMT and TO GMT should always be 30 minutes.
8. Baseline MW = 2(Baseline MWh), Metered MW = 2(Metered MWh), Delivered MW =2(Delivered MWh) and Accepted MW = 2(Accepted MWh).
9. Delivered MW should be the difference between Baseline MW and Metered MW. If delivery is less than zero, please put 0.
10. Delivered MWh should be the difference between Baseline MWh and Metered MWh. If delivery is less than zero, please put 0.
11. Payment GBP = Accepted Bid Price GBP per MWh * Delivered MWh.
12. No blank lines from starting, between and end in the file are allowed.
13. DFS Volume and Price cannot be negative.

5. ABSVD Submission

Registered DFS Participants need to submit their Weekly ABSVD Settlement file for the entire service week. The service week will be considered as Monday to Sunday. So, the Registered DFS Participants need to submit their Weekly ABSVD Settlement file (Starting from Monday to Sunday) of a service week. The data for weekly ABSVD settlements for a service week should be sent by the second Monday following the end of the service week (i.e., 8 calendar days after the Sunday). Each Registered DFS Participant needs to submit the

total volume that has been delivered by half-hourly-settled MPANs assigned to each Elexon BMU ID for each Contracted Settlement Period of the entire service week.

1. Providers need to submit their Weekly ABSVD Submission on Monday using the following template file "Provider_ProviderName_WeeklyABSVDSubmission_ddmmyyyy.csv"
   Where ddmmyyyy – enter the FIRST date of the Weekly ABSVD Submission week in the file for which they are submitting the data which will always be ideally MONDAY.
2. ESO will accept the Weekly ABSVD Settlement file only if providers follow the file template standards. The file headers are:

Date	DFS Provider	Elexon BMU ID	From GMT	To GMT	Delivered MWh

Data Validations:

1. Submit data for all the 7 dates of the previous service week – starting from Monday to Sunday of the previous service week, file must contain data of entire service week.
2. FOR NON-DELIVERY DATES: - submit 00:00 as From GMT and 00:30 as To GMT, NA for Unit and zeros (0) for all volumes and prices so that your file will not move to Failed folder. There only needs to be one row for each day where there was no Service Requirement.
3. Submit data only for Accepted Bids clearly entering the relevant settlement period in the FROM GMT and TO GMT columns on days where there was a Service Requirement. If there was no Service Requirement see data validation 2.
4. No Data Row should contain the same Elexon BMU ID and same Settlement Period for the same date.
5. Time difference between FROM GMT and TO GMT should always be 30 minutes.
6. No blank lines from starting, between and end in the file are allowed.
7. Delivered MWh should be the difference between Baseline MWh and Metered MWh. If delivery is less than zero, please put 0.

6. MPAN Submissions

- MPANs will need to be submitted to the ESO to check for duplications against other Registered DFS Participants using the template provided.

- MPANs should only be submitted for customers who have agreed to participate in the Demand Flexibility Service.

- MPANs must be allocated to a DFS Unit (units in the case of multiple price bands) when submitting DFS Bids.

Note: Two types of MPAN data need to be shared, so ESO have developed two different file formats. The ESO will keep a register of all the MPANs a Registered DFS Participant has registered to use in their DFS Units, using the MPAN Data template. To assess over or under delivery, the ESO will need to understand which MPANS were in specific DFS Units, for this the MPAN Data Settlement template has been developed.

MPAN Data

Each Registered DFS Participant needs to submit the MPAN Data file weekly, on a Friday alongside the Weekly Indicative Forecast, and when requested for audit by ESO.

The file should only contain customer's MPANs that have explicitly signed up to the DFS service through the relevant Registered DFS participant for auditing and duplication checking. If these MPAN(s) are not flagged as duplicated, they could take part in any events for the next 7 days (Saturday 00:00 – Friday 23:59).

Please note that MPAN data is never released by the ESO and will only be used for the purpose of auditing and duplication checking. Delivery Date is the date of file submission.

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1. Providers need to submit their MPAN Data file on a Friday when requested by ESO using the following template file "Provider_ProviderName_MPAN_DATA_ddmmyyyy.csv"
   Where "ddmmyyyy" enter the FIRST date of the MPAN Data submission week in the file.
2. ESO will accept the MPAN Data file only if providers follow the file template standards. The file headers are:

Delivery Date	DFS Provider	MPAN	Type

Data Validations:

- Type needs to be completed with either "Manually Initiated" or "Directly Instructable". (Further explanation is contained within Section 2.3, DFS Initiation Measures).

- Please ensure the data is stored as number, with zero decimal places and do not use scientific notation.

- Please ensure your MPAN numbers are shown in full detail once entered into the template, ahead of being submitted. Otherwise your file may not be accepted.

MPAN Data Settlement Period

MPAN Data Settlement Period file contains the list of all MPANs included in each DFS Unit for each Accepted DFS Bids. Providers will submit this file when requested, for audit by ESO.

1. Providers need to submit their MPAN Data Settlement Period file when requested by ESO using the following template file "Provider_ProviderName_MPAN_Data_SettlementPeriod_ddmmyyyy.csv"
   Where "ddmmyyyy" – enter the FIRST date of the MPAN Data Settlement Period submission week in the file.
2. ESO will accept the MPAN Data Settlement Period file only if providers followed the file template standards. The file headers are:

Delivery Date	From GMT	To GMT	DFS Provider	Unit	MPAN

7. File Validation Failure – communications from ESO

Registered DFS Participants will receive an email notification if they fail to meet the file validations and data validations, when uploading files to the "Drop Box" folder in the DFS Assessment Platform.

1. Providers are strictly instructed to follow the file and data validations to process their respective files.
2. An email notification will be sent to their registered email address if the Registered DFS Participant has submitted a file which failed to meet the file and data validations from no-reply-DFS@nationalgrideso.com
3. Registered DFS Participants can see the Error message in the email notification describing why they have failed to meet the file and data validations for each respective file.
4. Example "failed validation" email notification:

From: no-reply-DFS <no-reply-DFS@nationalgrideso.com>
Sent: 26 October 2022 12:51
To:
Subject: [EXTERNAL] File Validations Failed
Importance: High

CAUTION: This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe. If you suspect this email is malicious, please use the 'Report Phish' button.

The Validations for the File (Provider_ _DFSBids_27102022.csv) has failed. Please correct the file as per below error and resubmit the file.

Error - The service provider action failed with error code 'ServiceOperationFailed' and error message 'DFS Volume cannot be less than 0 or greater than 100.'.

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Appendix 3 – ESO communications to Registered DFS Participants and Industry

1. Anticipated DFS Requirement Notice

The ESO will share at or about 10:00 hours if there is an Anticipated Service Requirement and set out whether it is a Test or live Service Requirement. This will be published on the ESO Data Portal and via BMRS.

This will also be shared via the DFS Assessment Portal and Registered DFS Participants who have access to the platform will receive an email, this will outline whether it is a live Service Requirement or Test (Regular or Onboarding).

The Anticipated DFS Requirement Notice shall be non-binding and not commit ESO to issue a Service Requirement.

2. DFS Service Requirement

At or about 14:30 hours the ESO will notify a Service Requirement for DFS for the following day via the DFS Assessment Platform and publish on the Data Portal. This will set out the DFS Service Windows and total required volume (MW) of Demand Flexibility. An email will be sent to Registered DFS Participants and will highlight whether the Service Requirement is a live Service Requirement or a Test (Regular or Onboarding). If the Service Requirement is a test a Guaranteed Acceptance Price will also be contained within the email.

1. ESO will send the Service Requirement to all Registered DFS Participants using the following template "ESO_DFS_Service_Requirement_ddmmyyyy.csv" where "ddmmyyyy" is the date of the Service Requirement which is TOMORROW
2. The DFS Service Requirements file contains the following headers:

Delivery Date	From GMT	To GMT	DFS Required MW

3. DFS Participant Utilisation Report (DFS Acceptances)

DFS Acceptances will be sent at or around 16:30 hours. The DFS Participant Utilisation file contains the DFS Acceptances (list of the Registered DFS Participant's DFS Bids with Accepted/Rejected status). A single file will be sent to each Registered DFS Participant.

1. ESO will send the DFS Participant Utilisation Report post assessment to all Registered DFS Participants using the following template "ESO_ProviderName_DFSParticipantUtilisationReport_ddmmyyyy.csv" where "ddmmyyyy" is the Day Ahead
2. Providers can see and download the DFS Participant Utilisation Report in the Bid Outcome folder of their respective SharePoint location.
3. DFS Participant Utilisation Report contains the following headers:

Date	DFS Provider	Unit	DFS Volume MW	From GMT	To GMT	Price GBP per MWh	Status

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4. DFS Utilisation Report

The DFS Utilisation Report will be shared as soon as reasonably practical following the DFS Acceptances on the Data Portal.

This will contain, in relation to each DFS Service Window and DFS Bid, the below and whether it was subject to a DFS Acceptance:

- Name of the Registered DFS Participant
- DFS Unit
- Applicable Settlement Period over which the DFS Bid is defined
- Utilisation Price (£/MWh)
- Offered Demand Reduction Volume (MW)

All accepted and rejected bids will be included in this file.

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Appendix 4 – Example Operational Baseline calculation

1. Find Eligible Days (For both I&C and domestic consumers)

- For Working days (Monday – Friday) The unadjusted baseline is calculated using data from the **10** most recent eligible days
  - Days will **not** be eligible if they have been days where DFS has been used.
- For Non-working days (Saturday, Sunday and bank holidays) the unadjusted baseline is calculated using **4** most recent eligible days
  - From the **4** most recent days the mean average of the 2 median days will be taken
  - Days will **not** be eligible if they have been days where DFS has been used.
- The selection of eligible days is taken from the time **D-60** to **D-1**

Selection of Eligible Days for use in calculating the baseline		
Day Type	**No. of Eligible Days identified in the 60-day window**	**Historical Settlement Days used to calculate the baseline**
Working Day	Ten or more Eligible Days	Ten most recent Eligible Days
Working Day	5 to 9 Eligible Days	All Eligible Days
Working Day	Less than five Eligible Days The MPAN cannot be used	Baseline Values default to out-turn metered data for the Metering System(s) in the Baselined Entity, and they will be reported to the Lead Party as having insufficient data.
Non-Working Day	Four or more Eligible Days	Four most recent Eligible Days
Non-Working Day	Less than four Eligible Days	Baseline Values will default to out-turn metered data for the Metering System(s) in the Baselined Entity, and they will be reported to the Lead Party as having insufficient data.

2. Unadjusted baseline (For both I&C and domestic consumers)

- Based on historical actual metered data, calculating each eligible day's **Actual Usage** (MW) using (MPAN +) – (MPAN -) to give you the MPAN Total.

Day type	From	To	Day1 MPAN+	Day 1 MPAN-	Day 1 MPAN Total
Working Day	00:00	00:30			=Day1(MPAN+) -(MPAN-)
Working Day	00:30	01:00			...
Working Day	...	...			...

  - You should never have figures in both "mpan +" and "mpan-" fields in the same settlement period. One should always be 0.
- The unadjusted baseline is calculated by taking the average of all Eligible Days' Actual Usage (MW), the steps are listed as follows:

- o Determine Time period (e.g. if it is for working day, you will need 10 most recent eligible days: days 1-10)
- o Add together all the days Actual Usage in each Settlement Period then divide by total number of days
- o Unadjusted Baseline j = $\sum n$ Actual Usage / n
- o where j is the jth Settlement Period and n is number of Eligible Days
- o Repeat this for each Settlement Period to give your 24-hour unadjusted baseline.

Day type	From	To	Day1 MPAN Total	Day 2 MPAN Total	….	Day 10 MPAN Total	Unadjusted baseline (MW)
Working Day	00:00	00:30					= Average (Day 1 MPAN Total : Day 10 MPAN total)
Working Day	00:30	01:00					…
Working Day	…	…					…

3. In-day adjustment (Domestic consumers only)

- The in-day adjustment is calculated using the 6 Settlement Periods between Event Time- 4 Hours (E-4) and Event Time- 1 Hours (E-1).
  - o For example, if the DFS event happens at 18:00, the E-4 is 14:00 and E-1 is 17:00, the in-day adjustments would be calculated using Metered Volume (MW) for the periods:
    - 14:00- 14:30
    - 14:30-15:00
    - 15:00-15:30
    - 15:30-16:00
    - 16:00-16:30
    - 16:30-17:00
- From this you would work out the In-day Adjustment (MW)
  - o In Day Adjustment = $\sum$ (Metered Volume – Unadjusted Baseline Value) / 6

Day type	From	To	Unadjusted Baseline	Event Day Metered	In-day Adjustment (MW)
Working Day	14:00	14:30			=Event Day Metered - Unadjusted Baseline
Working Day	14:30	15:00			…
Working Day	15:00	15:30			…
Working Day	15:30	16:00			…
Working Day	16:00	16:30			…
Working Day	16:30	17:00			…
					= Average In-day Adjustment between E-4 and E-1

- Finally, you get the Baseline Value (MW)
  - o Baseline Value = Unadjusted Baseline Value + In Day Adjustment

Day type	From	To	Unadjusted Baseline	In-day Adjustment (MW)	Baseline (MW)
Working Day	00:00	00:30		= Average In-day Adjustment between E-4 and E-1	= Unadjusted Baseline+ In-day Adjustment
Working Day	00:30	01:00		…	…
Working Day	…	…		…	…