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Demand Flexibility Service:

API Schema Document for all the DFS Data Submissions

and Data Retrievals

Version 1.1

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II.   Introduction

Following the launch of the Demand Flexibility Service (DFS) in winter 22/23 as part of our industry engagement and co-creation, ESO received strong feedback that participants would value greater automation around the key data sharing processes. Considering this, DFS has brought more automation in the data submissions process for the providers by facilitating a provision to make all the DFS data submissions via API route, in addition to the SharePoint route. From this year, DFS also offers data retrieval options from ESO to providers, which are listed below. This document offers DFS providers the technical details for the API(s) schema for the below data submissions process from DFS Providers to ESO and data retrieval from ESO to providers.

Data Submission APIs (POST APIs) - Providers to ESO:

1. **Weekly Indicative Forecast submission to ESO - NEW**
2. **Unit Meter Point Schedule submission to ESO**
3. **Bid Submission to ESO**
4. **Weekly Settlement Submission to ESO - NEW**

Data Retrieval APIs (GET APIs) – ESO to Providers:

5. **MPAN Portfolio from ESO - NEW**
6. **Bid Results from ESO - NEW**
7. **Summarised Settlement Report from ESO - NEW**
8. **Summarised ABSVD Domestic Report from ESO - NEW**
9. **Summarised ABSVD I&C Report from ESO - NEW**

As part of the open EBR Article 18 consultation ESO have proposed several changes to the service terms and therefore this API Schema document may be subject to change until that process concludes with the regulator. ESO anticipates that the API options offered and explained throughout this document will support industry in their delivery of the service.

For those participants from previous iterations, please be aware that some submission documents have changed (updated file formats). These details will subsequently be shared in our updated guidance material as we progress through the consultation process.

Please send your feedback on this document to: demandflexibility@nationalgrideso.com.

III.   API Onboarding Process

DFS Support team will create an NG ID (one ID for Sandbox and one ID for PROD) for each registered provider willing to consume APIs for their DFS data submissions and data retrieval which are mentioned above following the contractual agreement.

Once user migration from NG ESO to NESO takes place, the DFS Support team will provide you with NESO IDs as part of BAU.

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The basic requirements to consume the API are Provider Name, Email, Contact number, and DFS Registered Units. These details will be captured as part of the DFS onboarding process with the Single Market Platform (SMP) and the DFS Contracts team.

Subsequently, the DFS Support team will share the API credentials i.e. client_id, client_secret, grant_type, username, password and tenantID (used to get the bearer token from Microsoft) to their registered email address. Please head to **Get token from Microsoft for authentication of** section for more details.

The DFS Support team will also share the API URLs for their DFS data submissions and data retrievals along with API credentials to their registered Email address. These URLs can be used by providers for their DFS data submissions and data retrievals for the files which are mentioned above. The actual data should be added in the body of the API and the authentication token (called bearer token) should be added in the header section of the API.

The API URLs will differ based on the DFS Event type – one URL for Sandbox testing and one for Production.

IV.   Get token from Microsoft for authentication of API.

The APIs for the above mentioned DFS data submission and data retrievals in the Introduction section can only be consumed by authorised users of DFS platform. As part of the authorisation process, users should get the authentication token from Microsoft and use that token to get authorised by the DFS application while sending data via APIs. The following URL and the parameters can be used to get the authentication token.

Login URL*: https://login.microsoftonline.com/<tenantID>/oauth2/v2.0/token

Updated URL with tenantID will be shared at later stage once providers get onboarded

Parameters to be configured*:

client_secret:
grant_type: password
scope: api:
username: UserNGID (NG User ID needs to be filled in)
password: UserPassword (NG User Password needs to be filled in)
client_id:

The above parameters will be shared as part of Onboarding process

This call, if successful, will return a Bearer Token which is to be sent in the API call.

Note: All the API URLs will be shared as part of onboarding process. The API data should be added in the body of the API and the authentication token (called as Bearer token) should be added in the headers section of API.

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V.   API payload size and Pagination for all the DFS APIs

1. API Payload Size

IMPORTANT!

1. Providers are requested to divide the data records, primarily for Unit Meter Point Schedule Submissions (MPAN) and DFS Weekly Settlements. Provider should send **no more than 5000 records in a single API call for all the POST APIs** and ESO will also send **no more than 5000 records in a single API call for all the GET APIs.**

2. Providers can send the payload in multiple frequencies provided the payload doesn't contain more than 5000 records.
   Example: - Assume Provider A wants to submit 100k records for a day, then provider A must submit the records in the batches (API calls) where each batch (API call) should not contain more than 5000 records. So, to submit 100k records, Provider A must split the 100k records and needs to submit in 20 API calls(100k/5000).

3. The API RATE limit is 30 calls per minute.

2. Concept of Pagination

The Concept of Pagination is primarily applied for GET APIs for which the data records that will be processed are huge in number. It will be applied for the following APIs:

- **DFS MPAN Portfolio API**

- **DFS Summarised Settlements Report API.**

- **DFS Summarised ABSVD Domestic Report API**

- **DFS Summarised ABSVD I&C Report API**

The below pointers are to be followed by providers for the above-mentioned APIs.

1. Pagination is applied to the API schema which contains the total number of records for data retrieval as per query parameters, current page which data is retrieved, page size and number of pages as per query parameter.

2. To get/receive the entire MPAN portfolio/ Summarised Settlements/ Summarised ABSVD Domestic/ Summarised ABSVD I&C, please call API with for all the pages.

For more details please check the API schema and sample payloads for the above-mentioned API in the Appendix section.

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VI. DFS Data Submission APIs (POST APIs) – Providers to ESO

3. List of Post APIs

Below is the list of Post APIs that DFS Providers can use to send the data to ESO.

1. **Weekly Indicative Forecast submission to ESO**
2. **Unit Meter Point Schedule submission to ESO**
3. **Bid Submission to ESO**
4. **Weekly Settlement Submission to ESO**

4. Data Headers of all the POST APIs

1) DFS column headers for Weekly Indicative Forecast Submission

The column headers for the Weekly Indicative Forecast submission are shown below.

JSON Payload Field Name	Request Data Type	Schema Validation	Is Required
Delivery Date	String	1. Min and Max length should be 10 2. Format is dd-mm-yyyy	Mandatory
Registered DFS Participant	String		Mandatory
DFS Unit ID	String		Mandatory
DFS Volume MW	Number		Mandatory
From	String	1. Min and Max length should be 5. 2. Format is HH:MM e.g., 14:30, 22:00	Mandatory
To	String	1. Min and Max length should be 5 2. Format is HH:MM e.g., 14:30, 22:00	Mandatory
Utilisation Price GBP per MWh	Number	Should be a number, can be decimal	Mandatory

2) DFS column headers for Unit Meter Point Schedule Submission

The column headers for the Unit Meter point Schedule submission are shown below.

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JSON Payload Field Name	Request Data Type	Schema Validation	Is Required
Submission Date	String	1. Min and Max length should be 10 2. Format is dd-mm-yyyy	Mandatory
Registered DFS Participant	String		Mandatory
Import MPAN	String	Min and Max length should be 13	Mandatory
Export MPAN	String	Min length is 0 and Max is 13 digits	Non-Mandatory
MPANs Effective From	String	Min length is 0 and Max is 13 digits	Non-Mandatory
MPANs Effective To	String	Min length is 0 and Max is 10 digits	Non-Mandatory
MPANs Customer Consent Flag	String	Min length is 0 and Max is 5 digits	Non-Mandatory
Consent Effective From	String	Date in dd-mm-yyyy format or can be empty	Non-Mandatory
Consent Effective To	String	Date in dd-mm-yyyy format or can be empty	Non-Mandatory
Sub Meter Serial Number	String	1. Allowed special characters are whitespace, hyphen, underscore and forward slash 2. Min length is 0 and Max is 30 characters	Non-Mandatory
Timestamp Subscribed	String	Min and Max 16 digit	Mandatory
DFS Unit ID	String		Mandatory
Opt In	Boolean	true/false	Mandatory
HH Settled	Boolean	true/false	Mandatory
Consumer Type	String - Enum	Possible values are as below: **Domestic** **Industrial & Commercial**	Mandatory
DFS Initiation Measure	String - Enum	Possible values are as below **Manually Initiated** **Directly Instructable**	Mandatory
Action	String - Enum	Possible values are as below **Add** **Remove**	Mandatory

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3) DFS column headers for Bids Submissions

Please find the column headers of DFS Bids submissions

Json Payload Field Name	Request Data Type	Required Validation	Is Required
Delivery Date	String	1. Min and Max length should be 10. 2. Should be a valid date and in dd-mm-yyyy format	Mandatory
Registered DFS Participant	String		Mandatory
DFS Unit ID	String		Mandatory
DFS Volume MW	Number	whole number only	Mandatory
From	String	1. Min and Max length should be 5 2. Format is HH:MM e.g., 14:30, 22:00	Mandatory
To	String	1. Min and Max length should be 5 2. For e.g., 14:30, 22:00	Mandatory
Utilisation price GBP per MWh	Number	Should be a number, can be decimal	Mandatory
North Scotland	Number	Should be a number, can be decimal	Non-Mandatory
South and Central Scotland	Number	Should be a number, can be decimal	Non-Mandatory
North East England	Number	Should be a number, can be decimal	Non-Mandatory
North West England	Number	Should be a number, can be decimal	Non-Mandatory
Yorkshire	Number	Should be a number, can be decimal	Non-Mandatory
East Midlands	Number	Should be a number, can be decimal	Non-Mandatory
East England	Number	Should be a number, can be decimal	Non-Mandatory
West Midlands	Number	Should be a number, can be decimal	Non-Mandatory
London	Number	Should be a number, can be decimal	Non-Mandatory
East England	Number	Should be a number, can be decimal	Non-Mandatory
South East England	Number	Should be a number, can be decimal	Non-Mandatory
South West England	Number	Should be a number, can be decimal	Non-Mandatory
Southern England	Number	Should be a number, can be decimal	Non-Mandatory
North Wales Merseyside and Cheshire	Number	Should be a number, can be decimal	Non-Mandatory
South Wales	Number	Should be a number, can be decimal	Non-Mandatory
Other	Number	Should be a number, can be decimal	Non-Mandatory
Total	Number	Whole number only	Mandatory

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4) DFS column headers for Weekly Settlements Submissions

Please find the column headers of Weekly Settlement submissions

JSON Payload Field Name	Request Data Type	Schema Validation	Is Required
Delivery Date	String	1. Min and Max length should be 10 2. Date in dd-mm-yyyy format	Mandatory
From	String	1. Min and Max length should be 5 2. Format is HH:MM e.g. 14:30, 22:00	Mandatory
To	String	1. Min and Max length should be 5 2. Format is HH:MM e.g. 14:30, 22:00	Mandatory
Registered DFS Participant	String		Mandatory
DFS Unit ID	String		Mandatory
Import MPAN	String	Min and Max length should be 13	Mandatory
Export MPAN	String	Min length is 0; if there is a value then the Min and Max length should be 13 digits	Non Mandatory
Sub Meter Serial Number	String	1. Allowed special characters are whitespace, hyphen and underscore and forward slash 2. Min length is 0 and Max is 30 characters	Non Mandatory
Participating	Boolean	true/false	Mandatory
Baseline kWh	Number	Should be a number, can be decimal	Mandatory
Metered kWh	Number	Should be a number, can be decimal	Mandatory
Delivered kWh	Number	Should be a number, can be decimal	Mandatory
Accepted Utilisation Price GBP per MWh	Number	Should be a number, can be decimal	Mandatory
HH Settled	Boolean	true/false	Mandatory
Participating Meter Electricity Supplier	Boolean	true/false	Mandatory
Consumer Type	String - Enum	Possible values are as below **Domestic** **Industrial & Commercial**	Mandatory
Elexon BMU ID	String	1. Allowed special characters are whitespace, hyphen and underscore and forward slash 2. Min length is 0 and Max is 30 characters	Non Mandatory

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5. Response Codes/Messages of all the POST APIs.

The following are response codes which shows the status of the various DFS POST API call(s) made. This will help users understand the status of their API calls.

Code: 202 Accepted

```
{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."

}
```

Note: -

- As soon as providers send their submissions, this response code will be triggered to respective providers informing the request is successfully received.
- If the data has passed all the validations and the data gets accepted, providers will be notified with the success message via email.
- If the data has not passed all the validations and the data gets rejected, providers will be notified with the suitable error message via email.

FAILURE SCENARIOS:

JSON Response Codes

Code: 400 BAD REQUEST

```
{
"code": "400 Bad Request",
"message": "Error identified in the submitted data. An email will be triggered with further details."
}
```

Code: 503 Service Unavailable

```
{
"code": "503 Service unavailable",
"message": "Unable to connect to the server. Please try after some time."
}
```

Code: 429 Too Many Requests

```
{
"code": "429 Service unavailable",
"message": "Too Many requests. Please try after some time."
}
```

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Non-JSON Response Codes

Code: 401 Unauthorized

Message: "Invalid token"

Code: 402 Forbidden

Message: "Requested resource not found"

Code: 403 Forbidden

Message: "Insufficient Permissions"

VII. DFS Data Retrieval APIs (GET APIs) – ESO to Providers

6. List of GET APIs

Below is the list of GET APIs that ESO to send the data to Providers.

Data Submission APIs (GET APIs) – ESO to Providers:

- **MPAN Portfolio from ESO**
- **Bid Results from ESO**
- **Summarised Settlement Report from ESO**
- **Summarised ABSVD Domestic Report from ESO**
- **Summarised ABSVD I&C Report from ESO**

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7. Query Parameters of all the POST APIs

1) DFS MPAN portfolio API Request

Parameter	Type	Required	Description
PortfolioDate	string	yes	The date on which portfolio is generated after performing a duplication checks and filtering records. It is in the dd-MM-yyyy format. **Kindly note that it is not the MPAN Submission date**.
page	number	no	The page number for pagination. Defaults to 1 if not provided

Example Request URL:

[Base URL]/api/[endpoint]?PortfolioDate=08-02-2024&page=1

Note: - Providers should append the Portfolio Date and Page number (if required) with Base URL in   the MPAN Portfolio API request as mentioned above.

> ****Updated URL with tenantID will be shared at later stage once providers get onboarded****

2) DFS BID RESULTS

DFS Bids Results API will allow you to access the DFS Auction results after the assessment via API route in addition to the SharePoint and Data portal. The Bids results are accessible via API only for the latest DFS event. Below information could help you to access the results via API.

HTTP Method: GET

Name: Bid Results

Description: This API will allow providers to access their DFS Bid results via API only for the last DFS event.

Example Request URL: [Base URL]/api/[endpoint]

> ****Updated URL with tenantID will be shared at later stage once provider get onboarded to DFS service and opted for API route****

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3) DFS Summarised Settlements Report

The Providers Summarised Settlements can be accessed via API using the below information.

HTTP Method: GET

Name: Summarised Settlements

Query Parameters: ** As mentioned below**

Parameter	Type	Required	Description
DeliveryDate	string	yes	The date used for filtering records, in the format dd-MM-yyyy. **Note: - Records starting from the given delivery date up to next 30 days will be fetched**
page	number	no	The page number for pagination. Defaults to 1 if not provided

Example Request URL:

[Base URL]/api/[endpoint]?DeliveryDate=08-02-2024&page=1

Note: - Providers should append the Delivery Date and Page number (if required) with Base URL in the DFS Summarised Settlements API request as mentioned above.

Updated URL with tenantID will be shared at later stage once providers get onboarded

4) DFS Summarised ABSVD Domestic Report

The Providers Summarised ABSVD Domestic records be accessed via API using the below information.

HTTP Method: GET

Name: Summarised ABSVD Domestic

Query Parameters: ** As mentioned below**

Parameter	Type	Required	Description
DeliveryDate	string	yes	The date used for filtering records, in the format dd-MM-yyyy. **Note: - Records starting from the given delivery date up to next 30 days will be fetched**
page	number	no	The page number for pagination. Defaults to 1 if not provided

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Example Request URL:

[Base URL]/api/[endpoint]?DeliveryDate=08-02-2024&page=1
Note: - Providers should append the Delivery Date and Page number (if required) with Base URL in the DFS Summarised ABSVD Domestic API request as mentioned above.

Updated URL with tenantID will be shared at later stage once providers get onboarded

5) DFS Summarised ABSVD I&C Report

The Providers Summarised ABSVD I&C records be accessed via API using the below information.

HTTP Method: GET

Name: Summarised ABSVD I&C

Query Parameters: ** As mentioned below**

Parameter	Type	Required	Description
DeliveryDate	string	yes	The date used for filtering records, in the format dd-MM-yyyy. **Note: - Records starting from the given delivery date up to next 30 days will be fetched**
page	number	no	The page number for pagination. Defaults to 1 if not provided

Example Request URL:

[Base URL]/api/[endpoint]?DeliveryDate=08-02-2024&page=1

Note: - Providers should append the Delivery Date and Page number (if required) with Base URL in the DFS Summarised ABSVD I&C API request as mentioned above.

Updated URL with tenantID will be shared at later stage once providers get onboarded

8. Response Codes/Messages of all the GET APIs.

The following are response codes which shows the status of the various DFS GET API call(s) made. This will help users understand the status of their API calls in terms success and failure.

Code: 202 Accepted

{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."

}

Note: -

- As soon as providers send their submissions, this response code will be triggered to respective providers informing the request is successfully received.
- If the data has passed all the validations and the data gets accepted, providers will be notified with the success message via email.
- If the data has not passed all the validations and the data gets rejected, providers will be notified with the suitable error message via email.

Invalid Response Examples:

Case 1: Invalid page number

```
{
 "response code": 200,
 "message": "Invalid page number. Page number must be between 1 and 10.",
 "data": {},
 "pagination": {}
}
```

FAILURE SCENARIOS:

JSON Response Codes

Code: 503 Service Unavailable

```
{
"code": "503 Service unavailable",
"message": "Unable to connect to the server. Please try after some time."
}
```

Code: 429 Too Many Requests

```
{
"code": "429 Service unavailable",
"message": "Too Many requests. Please try after some time."
}
```

Non-JSON Response Codes

Code: 401 Unauthorized

Message: "Invalid token"

Code: 402 Forbidden

Message: "Requested resource not found"

Code: 403 Forbidden

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Message: "Insufficient Permissions"

1) Response messages for DFS Bids results to cover various cases.

The following are different response messages for various cases for DFS Bids API.

Different Response Messages for various cases:
Invalid Response Examples:

Case 1: When requestor has not participated in the DFS event.
```
{
  "response code": 200,
  "message": "No bids submission found.",
  "data": {}
}
```

Case 2: When Bids Assessment is in progress for the DFS event.
```
{
  "response code": 200,
  "message": "  Assessment is in progress.",
  "data": {}
}
```

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9. DFS APIs Schemas

1) Weekly Indicative Forecast API Request Schema

Below contains the JSON schema (i.e., structure of the data to be sent in the body of the API) for the DFS Weekly Indicative Forecast Submission. This schema can be used by the developers who wish to consume the API in their applications.

```json
{

  "type": "array",

  "items": {

    "type": "object",

    "properties": {

      "Delivery Date": {

        "type": "string"

      },

      "Registered DFS Participant": {

        "type": "string"

      },

      "DFS Unit ID": {

        "type": "string"

      },

      "DFS Volume MW": {

        "type": "integer"

      },

      "From": {

        "type": "string"

      },
```

```
        "To": {

            "type": "string"

        },

        "Utilisation price GBP per MWh": {

            "type": "integer"

        }

    },

    "required": [

        "Delivery Date",

        "Registered DFS Participant",

        "DFS Unit ID",

        "DFS Volume MW",

        "From",

        "To",

        "Utilisation price GBP per MWh"

    ]

  }

}
```

2) Unit Meter Point Schedule API Request Schema

Please find the API Schema for DFS Unit Meter Point Schedule (MPAN) submissions below which contains the JSON schema (I.e., structure of the data to be sent in the body of the API) for MPAN. This schema can be used by the developers who wish to consume the API in their applications.

```
{

    "type": "array",

    "items": {

        "type": "object",
```

```
"properties": {

    "Submission Date": {

        "type": "string"

    },

    "Registered DFS Participant": {

        "type": "string"

    },

    "Import MPAN": {

        "type": "string"

    },

    "Export MPAN": {

        "type": "string"

    },

    "MPANs Effective From": {

        "type": "string"

    },

    "MPANs Effective To": {

        "type": "string"

    },

    "MPANs Customer Consent Flag": {

        "type": "string"

    },

    "Consent Effective From": {

        "type": "string"
```

```
    },

    "Consent Effective To": {

        "type": "string"

    },

    "Sub Meter Serial Number": {

        "type": "string"

    },

    "Timestamp Subscribed": {

        "type": "string"

    },

    "DFS Unit ID": {

        "type": "string"

    },

    "Opt In": {

        "type": "boolean"

    },

    "HH Settled": {

        "type": "boolean"

    },

    "Consumer Type": {

        "type": "string"

    },

    "DFS Initiation Measure": {

        "type": "string"
```

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```
    },

    "Action": {

        "type": "string"

    }

},

"required": [

    "Submission Date",

    "Registered DFS Participant",

    "Import MPAN",

    "Export MPAN",

    "MPANs Effective From",

    "MPANs Effective To",

    "MPANs Customer Consent Flag",

    "Consent Effective From",

    "Consent Effective To",

    "Sub Meter Serial Number",

    "Timestamp Subscribed",

    "DFS Unit ID",

    "Opt In",

    "HH Settled",

    "Consumer Type",

    "DFS Initiation Measure",

    "Action"

]
```

```
    }

}
```

3) Bid Submission API Request Schema

The below contains the JSON schema (i.e., structure of the data to be sent in the body of the API) for DFS Bids. This schema can be used by the developers who wish to consume the API in their applications.

```
{
  "schema": {
    "items": {
      "properties": {
      "Delivery Date": {
         "type": "string"
      },
      "North West England": {
         "type": "integer"
      },
      "Yorkshire": {
         "type": "integer"
      },
      "East Midlands": {
         "type": "integer"
      },
      "West Midlands": {
         "type": "integer"
      },
      "London": {
         "type": "integer"
      },
      "East England": {
         "type": "integer"
      },
      "South East England": {
         "type": "integer"
      },
      "South West England": {
         "type": "integer"
      },
      "Southern England": {
         "type": "integer"
      },
      "North Wales Merseyside and Cheshire": {
         "type": "integer"
      },
      "Registered DFS Participant": {
         "type": "string"
      },
      "South Wales": {
```

```
                "type": "integer"
            },
            "Other": {
                "type": "integer"
            },
            "Total": {
                "type": "integer"
            },
            "DFS Unit ID": {
                "type": "string"
            },
            "DFS Volume MW": {
                "type": "integer"
            },
            "From": {
                "type": "string"
            },
            "To": {
                "type": "string"
            },
            "Utilisation price GBP per MWh": {
                "type": "integer"
            },
            "North Scotland": {
                "type": "integer"
            },
            "South and Central Scotland": {
                "type": "integer"
            },
            "North East England": {
                "type": "integer"
            }
        },
        "required": [
            "Delivery Date",
            "North West England",
            "Yorkshire",
            "East Midlands",
            "West Midlands",
            "London",
            "East England",
            "South East England",
            "South West England",
            "Southern England",
            "North Wales Merseyside and Cheshire",
            "Registered DFS Participant",
            "South Wales",
            "Other",
            "Total",
            "DFS Unit ID",
            "DFS Volume MW",
```

```
                    "From",
                    "To",
                    "Utilisation price GBP per MWh",
                    "North Scotland",
                    "South and Central Scotland",
                    "North East England"
                ],
                "type": "object"
            },
            "type": "array"
        }

}
```

4) Weekly Settlement Submission API Request Schema

Please find the API Schema for DFS Weekly Settlement submissions below which contains the JSON schema (I.e., structure of the data to be sent in the body of the API) for Weekly Settlements. This schema can be used by the developers who wish to consume the API in their applications.

```
{

  "type": "array",

  "items": {

    "type": "object",

    "properties": {

      "Delivery Date": {

        "type": "string"

      },

      "From": {

        "type": "string"

      },

      "To": {

        "type": "string"

      },
```

```json
"Registered DFS Participant": {

    "type": "string"

},

"DFS Unit ID": {

    "type": "string"

},

"Import MPAN": {

    "type": "string"

},

"Export MPAN": {

    "type": "string"

},

"Sub Meter Serial Number": {

    "type": "string"

},

"Participating": {

    "type": "boolean"

},

"Baseline kwh": {

    "type": "number"

},

"Metered kwh": {

    "type": "integer"

},

"Delivered kwh": {
```

```
        "type": "integer"

    },

    "Accepted Utilisation Price GBP per MWh": {

        "type": "integer"

    },

    "HH Settled": {

        "type": "boolean"

    },

    "Participating Meter Electricity Supplier": {

        "type": "boolean"

    },

    "Consumer Type": {

        "type": "string"

    },

    "Elexon BMU ID": {

        "type": "string"

    }

},

"required": [

    "Delivery Date",

    "From",

    "To",

    "Registered DFS Participant",

    "DFS Unit ID",

    "Import MPAN",
```

```
        "Export MPAN",

        "Sub Meter Serial Number",

        "Participating",

        "Baseline kwh",

        "Metered kwh",

        "Delivered kwh",

        "Accepted Utilisation Price GBP per MWh",

        "HH Settled",

        "Participating Meter Electricity Supplier",

        "Consumer Type",

        "Elexon BMU ID"

      ]

    }
```

5) MPAN Portfolio API Response Schema

Below is the MPAN Portfolio API Response Schema

```
Response

{
   "type": "object",
   "properties": {
    "response code": number,
     "message": {
      "type" :"string",
       "description": The status of the API response, e.g. 'success' or 'error'."
    },
     "data": {
      "type": "array",
      "items": {
       "type": "object",
       "properties": {
        "Submission Date": { "type": "string", "format": "date" },
        "Registered DFS Participant": { "type": "string" },
        "Import MPAN": { "type": "string" },
```

```
          "Export MPAN": { "type": "string" },
          "MPANs Effective From": { "type": "string", "format": "date" },
          "MPANs Effective To": { "type": "string", "format": "date" },
          "MPANs Customer Consent Flag": { "type": "string" },
          "Consent Effective From": { "type": "string", "format": "date" },
          "Consent Effective To": { "type": "string", "format": "date" },
          "Sub Meter Serial Number": { "type": "string" },
          "Timestamp Subscribed": { "type": "string", "format": "date-time" },
          "DFS Unit ID": { "type": "string" },
          "OptIn": { "type": "boolean" },
          "HHSettled": { "type": "boolean" },
          "ConsumerType": { "type": "string" },
          "DFSInitiationMeasure": { "type": "string" }
        }
      }
    },
    "pagination": {
     "type": "object",
     "properties": {
      "totalRecords": { "type": "integer" },
      "currentPage": { "type": "integer" },
      "pageSize": { "type": "integer", "default": 5000 },
      "totalPages": { "type": "integer" }
     }
    }
   }
  }
```

6) Bid Results API Response Schema

Below is the DFS Bid Results API Schema

```
Response

  {
   "type": "object",
   "properties": {
    "response code": {
     "type": "integer",
     "description": "The HTTP response code indicating the
  result of the API call."
    },
    "message": {
     "type": "string",
     "description": "A message providing additional information
  about the API response."
    },
```

```
    "data": {
     "type": "array",
     "items": {
      "type": "object",
      "properties": {
       "Delivery Date": {
        "type": "string",
        "format": "date",
        "description": "The date of delivery in dd-MM-yyyy
format."
       },
       "Registered DFS Participant": {
        "type": "string",
        "description": "The name of the registered DFS
participant."
       },
       "DFS Unit ID": {
        "type": "string",
        "description": "The ID of the DFS unit."
       },
       "DFS Volume MW": {
        "type": "number",
        "description": "The volume of DFS in MW."
       },
       "From": {
        "type": "string",
        "description": "The start time of the delivery period
(HH:mm)."
       },
       "To": {
        "type": "string",
        "description": "The end time of the delivery period
(HH:mm)."
       },
       "Utilisation price GBP per MWh": {
        "type": "string",
        "description": "The utilisation price in GBP per MWh."
       },
       "Status": {
        "type": "string",
        "enum": ["Accepted", "Rejected"],
        "description": "The status of the bids."
       }
      },
      "required": [
       "Delivery Date",
       "Registered DFS Participant",
       "DFS Unit ID",
       "DFS Volume MW",
       "From",
       "To",
```

```
          "Utilisation price GBP per MWh",
          "Status"
        ]
      }
    }
  },
  "required": ["response code", "message", "data"]
}
```

ESO

7) Summarised Settlement Report API Response Schema

Below is the Summarised Settlements API Response Schema

Response

```
{
   "type": "object",
   "properties": {
    "response code": number,
     "message": {
      "type" :"string",
       "description": The status of the API response, e.g. 'success' or 'error'."
    },
     "data": {
      "type": "array",
      "items": {
       "type": "object",
       "properties": {
        "Delivery Date": { "type": "string", "format": "date" },
        "From": { "type": "string" },
        "TO": { "type": "string" },
        "Settlement Period": { "type": "number" },
        "Registered DFS Participant": { "type": "string"},
        "DFS Unit ID": { "type": "string" },
        "Baseline MWh": { "type": "number", "format": "float" },
         "Metered MWh": { "type": "number", "format": "float" },
        "Delivered MWh": { "type": "number", "format": "float" },
        "Accepted Utilisation Price GBP per MWh": { "type": "number", "format":
"float" },
        "Settled MWh":{ "type": "number", "format": "float" }
         }
     }
    },
    "pagination": {
     "type": "object",
     "properties": {
      "totalRecords": { "type": "integer" },
      "currentPage": { "type": "integer" },
      "pageSize": { "type": "integer", "default": 5000 },
      "totalPages": { "type": "integer" }
     }
    }
   }
  }
```

ESO

8) Summarised ABSVD Domestic Report API Response Schema

Below is the Summarised ABSVD Domestic API Response Schema

```
Response
{
    "type": "object",
    "properties": {
     "response code": number,
      "message": {
       "type" :"string",
        "description": The status of the API response, e.g. 'success' or 'error'."
    },
     "data": {
      "type": "array",
      "items": {
       "type": "object",
       "properties": {
        "Delivery Date": { "type": "string", "format": "date" },
        "From": { "type": "string" },
        "TO": { "type": "string" },
        "Settlement Period": { "type": "number" },
        "Registered DFS Participant": { "type": "string"},
        "DFS Unit ID": { "type": "string" },
        "Delivered MWH": { "type": "number", "format": "float" },
        "Elexon BMU ID": { "type": "string"}
         }
      }
    },
     "pagination": {
      "type": "object",
      "properties": {
       "totalRecords": { "type": "integer" },
       "currentPage": { "type": "integer" },
       "pageSize": { "type": "integer", "default": 5000 },
       "totalPages": { "type": "integer" }
      }
    }
   }
  }
```

ESO

9) Summarised ABSVD I&C Report API Schema

Below is the Summarised ABSVD I&C API Response Schema

```
Response
{
    "type": "object",
    "properties": {
     "response code": number,
      "message": {
       "type" :"string",
        "description": The status of the API response, e.g.
'success' or 'error'."
     },
      "data": {
       "type": "array",
       "items": {
        "type": "object",
         "properties": {
         "Delivery Date": { "type": "string", "format": "date" },
         "From": { "type": "string" },
         "TO": { "type": "string" },
         "Settlement Period": { "type": "number" },
         "Registered DFS Participant": { "type": "string"},
         "DFS Unit ID": { "type": "string" },
          "Import MPAN": { "type": "string" },
         "Export MPAN": { "type": "string" },
         "Delivered MWH": { "type": "number", "format": "float"
},
         "Accepted Utilisation Price GBP per MWh": { "type":
"number", "format": "float" }
          }
      }
    },
    "pagination": {
     "type": "object",
      "properties": {
       "totalRecords": { "type": "integer" },
       "currentPage": { "type": "integer" },
       "pageSize": { "type": "integer", "default": 5000 },
       "totalPages": { "type": "integer" }
     }
    }
   }
  }
```

10. DFS APIs Sample Requests and Responses

1) Weekly Indicative Forecast API Sample Request

Providers who wish to consume the API in their application must send the DFS Weekly Indicative Forecast data in JSON format in the body of the API. This is also called as payload of the API. The below shown JSON is a sample JSON payload which can be used as a reference by the providers who wish to consume the DFS Weekly Indicative Forecast API.

Note: The order of the parameters does not matter if your submissions are through API.

Please find the request JSON payload as below

```
[

  {
"Delivery Date": "02-10-2024",
"Registered DFS Participant": "Provider 1",
"DFS Unit ID": "Unit1",
"DFS Volume MW": 11,
"From": "00:00",
"To": "00:30",
"Utilisation price GBP per MWh": 100,
},

  {

   "Delivery Date": "03-09-2024",
   "Registered DFS Participant": "Provider 1",
   "DFS Unit ID": "Unit2",
   "DFS Volume MW": 15,
   "From": "18:00",
  "To": "18:30",
   "Utilisation price GBP per MWh": 300,
  }

        ]
```

2) Unit Meter Point Schedule API Sample Request

Providers who wish to consume the API in their application must send the MPAN data in JSON format in the body of the API. This is also called as payload of the API. The below shown JSON is a sample JSON payload which can be used as a reference by the providers who wish to consume the MPAN API.

Note: The order of the parameters does not matter if your submissions are through API.

Please find the request JSON payload as below

```
[

  {

    "Submission Date": "11-11-2024",

     "Registered DFS Participant": "Provider4",
```

```
    "Import MPAN": "1058345931959",

    "Export MPAN": "1012895832928",

    "MPANs Effective From":"11-11-2024",

    "MPANs Effective To": "11-12-2024",

    "MPANs Customer Consent Flag": "true",

    "Consent Effective From": "11-11-2024",

    "Consent Effective To": "11-12-2024",

    "Sub Meter Serial Number": "y14146a",

    "Timestamp Subscribed": "11-11-2024 21:00",

    "DFS Unit ID": "NGESO-01",

    "Opt In": true,

    "HH Settled": false,

    "Consumer Type": "Domestic",

    "DFS Initiation Measure": "Manually Initiated",

    "Action": "Add"

},

{

    "Submission Date": "11-11-2024",

    "Registered DFS Participant": "Provider4",

    "Import MPAN": "1012345899835",

    "Export MPAN": "1012345054134",

    "MPANs Effective From":"11-11-2024",

    "MPANs Effective To": "11-12-2024",

    "MPANs Customer Consent Flag": "true",

    "Consent Effective From": "11-11-2024",

    "Consent Effective To": "11-12-2024",

    "Sub Meter Serial Number": "y14146a",

    "Timestamp Subscribed": "11-11-2024 21:00",

    "DFS Unit ID": "NGESO-02",

    "Opt In": true,

    "HH Settled": false,

    "Consumer Type": "Industrial & Commercial",
```

```
    "DFS Initiation Measure": "Manually Initiated",

    "Action": "Add"

  }

]
```

3) Bid Submission API Sample Request

providers who wish to consume the API in their application must send the DFS Bid data in JSON format in the body of the API. This is also called as payload of the API. The below shown JSON is a sample JSON payload which can be used as a reference by the providers who wish to consume the DFS Bids API.

Note: The order of the parameters does not matter if your submissions are through API.

Please find the request JSON payload as below

```
[
 {

   "Delivery Date": "07-06-2024",

   "North West England": 1,

   "Yorkshire": 0,

   "East Midlands": 1,

   "West Midlands": 1,

   "London": 1,

   "East England": 1,

   "South East England": 1,

   "South West England": 1,

   "Southern England": 0,

   "North Wales Merseyside and Cheshire": 0,

   "Registered DFS Participant": "Provider4",

   "South Wales": 0,

   "Other": 0,

   "Total": 10,

   "DFS Unit ID": "UNIT-001",

   "DFS Volume MW": 10,

   "From": "15:00",
```

```
  "To": "15:30",

  "Utilisation price GBP per MWh": 200,

  "North Scotland": 1,

  "South and Central Scotland": 1,

  "North East England": 1

 },

 {

  "Delivery Date": "07-06-2024",

  "North West England": 1,

  "Yorkshire": 1,

  "East Midlands": 6,

  "West Midlands": 1,

  "London": 1,

  "East England": 1,

  "South East England": 1,

  "South West England": 1,

  "Southern England": 1,

  "North Wales Merseyside and Cheshire": 1,

  "Registered DFS Participant": "Provider4",

  "South Wales": 1,

  "Other": 1,

  "Total": 20.8,

  "DFS Unit ID": "UNIT-002",

  "DFS Volume MW": 20.8,

  "From": "16:00",

  "To": "16:30",

  "Utilisation price GBP per MWh": 450,

  "North Scotland": 1.8,

  "South and Central Scotland": 1,

  "North East England": 1

 }

]
```

4) Weekly Settlement Submission API Sample Request

Providers who wish to consume the API in their application must send the Weekly Settlements data in JSON format in the body of the API. This is also called as payload of the API. The below shown JSON is a sample JSON payload which can be used as a reference by the providers who wish to consume the Weekly Settlement API.

Note: The order of the parameters does not matter if your submissions are through API.

Please find the request JSON payload as below

```
[
  {
     "Delivery Date": "22-09-2024",

     "From": "00:00",

     "To": "00:30",

     "Registered DFS Participant": "Provider 1",

     "DFS Unit ID": "Unit1",

     "Import MPAN": "1012345691950",

     "Export MPAN": "1012344731950",

     "Sub Meter Serial Number": "y14146a",

     "Participating": true,

      "Baseline kwh": 23.5,

      "Metered kwh": 32.0,

      "Delivered kwh": 20.0,

     "Accepted Utilisation Price GBP per MWh":30,

     "HH Settled": false,

      "Participating Meter Electricity Supplier": false,

       "Consumer Type": "Domestic",

      "Elexon BMU ID": "H-0039203"


  },
{

     "Delivery Date": "22-09-2024",

     "From": "00:00",
```

```
    "To": "00:30",

    "Registered DFS Participant": "Provider 1",

    "DFS Unit ID": "Unit2",

    "Import MPAN": "1012965937329",

    "Export MPAN": "1012345936329",

    "Sub Meter Serial Number": "y14159a",

    "Participating": true,

    "Baseline kwh": 23.5,

    "Metered kwh": 32.0,

    "Delivered kwh": 20.0,

    "Accepted Utilisation Price GBP per MWh":30,

    "HH Settled": false,

    "Participating Meter Electricity Supplier": false,

    "Consumer Type": "Domestic",

    "Elexon BMU ID": "H-0038129"


  }
]
```

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5) MPAN Portfolio API Sample Response

Please find the below examples of MPAN Portfolio API

Response Example :

```
{
  "response code" 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Submission Date": "08-02-2024",
     "Registered DFS Participant": "Participant A",
     "Import MPAN": "5432112345543",
     "Export MPAN": "",
     "MPANs Effective From": "01-01-2024",
     "MPANs Effective To": "31-12-2024",
     "MPANs Customer Consent Flag": "True",
     "Consent Effective From": "01-01-2024",
     "Consent Effective To": "31-12-2024",
     "Sub Meter Serial Number": "SN123456",
     "TimestampSubscribed": "08-02-2024 12:34",
      "DFS Unit ID":"Unit -A",
     "OptIn": true,
     "HHSettled": false,
     "ConsumerType": "Domestic",
     "DFSInitiationMeasure": "Manually Initiated"
   },
   {
     "SubmissionDate": "08-02-2024",
     "RegisteredDFSParticipant": "Participant B",
     "ImportMPAN": "5432112345543",
     "ExportMPAN": "0987634567892",
     "MPANsEffectiveFrom": "02-01-2024",
     "MPANsEffectiveTo": "30-11-2024",
     "MPANsCustomerConsentFlag": "False",
     "ConsentEffectiveFrom": "02-01-2024",
     "ConsentEffectiveTo": "30-11-2024",
     "SubMeterSerialNumber": "SN654321",
     "TimestampSubscribed": "08-02-2024 14:56",
     "DFS Unit ID":"Unit -A",
     "OptIn": false,
     "HHSettled": true,
     "ConsumerType": "Industrial & Commercial",
     "DFSInitiationMeasure": "Directly Instructable"
   }

  ],
  "pagination": {
   "totalRecords": 15000000,
     "currentPage": 1,
```

```
    "pageSize": 5000,
    "totalPages": 3000
  }
}
```

6) Bid Results API Sample Response

Below is the DFS Bids Response Example

```
Response Example
{
  "response code": 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Delivery Date": "14-08-2024",
     "Registered DFS Participant": "Participant A",
     "DFS Unit ID": "Unit-1",
     "DFS Volume MW": 50,
     "From": "15:00",
     "To": "15:30",
     "Utilisation price GBP per MWh":"50",
     "Status": "Accepted"
   },
   {
     "Delivery Date": "14-08-2024",
     "Registered DFS Participant": "Participant B",
     "DFS Unit ID": "Unit-2",
     "DFS Volume MW": 75,
     "From": "16:00",
     "To": "16:30",
     "Utilisation price GBP per MWh": "100",
     "Status": "Rejected"
   }
  ]
}
```

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Please find the below examples of DFS Summarised Settlements API Response Examples

---

Response Example:

Response Example :

```
{
  "response code" 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Delivery Date": "08-02-2024",
     "From": "15:00",
     "To": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
     "Baseline MWh":25.0,
     "Metered MWh": 27.0,
      "Delivered MWh": 25.4,
     "Accepted Utilisation Price GBP per MWh": 22,
     "Settled MWh": 100.0
    },
   {
      "Delivery Date": "08-02-2024",
     "From": "15:00",
     "To": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
     "Baseline MWh":"25.0",
     "Metered MWh": "27.0",
      "Delivered MWh": 25.4,
     "Accepted Utilisation Price GBP per MWh": 22,
     "Settled MWh": 100.0
    }
  ],
  "pagination": {
   "totalRecords": 15000000,
   "currentPage": 1,
   "pageSize": 5000,
   "totalPages": 3000
  }
}
```

ESO

8) Summarised ABSVD Domestic Report API Sample Response

Please find the below examples of DFS Summarised ABSVD Domestic API Response Examples

Response Example:

```
{
  "response code" : 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Delivery Date": "08-02-2024",
     "From": "15:00",
     "TO": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
     "Delivered MWH": "25.4",
     "Elexon BMU ID": "BMU ID",
    },
   {
     "Delivery Date": "08-02-2024",
     "From": "15:00",
     "TO": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
     "Delivered MWH": "25.4",
     "Elexon BMU ID": "BMU ID",
    }
  ],
  "pagination": {
   "totalRecords": 15000000,
   "currentPage": 1,
   "pageSize": 5000,
   "totalPages": 3000
  }
}
```

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9) Summarised ABSVD I&C Report API Sample Request

Please find the below examples of DFS Summarised ABSVD I&C API Response Examples

Response Example:

```
{
  "response code" 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Delivery Date": "08-02-2024",
     "From": "15:00",
     "TO": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
      "Import MPAN": "5432112345543",
     "Export MPAN": "",
     "Delivered MWH": 25.4,
     "Accepted Utilisation Price GBP per MWh": 22,
   },
   {
     "Delivery Date": "08-02-2024",
     "From": "15:30",
     "TO": "16:00",
     "Settlement Period": 32,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
      "Import MPAN": "5432112345543",
     "Export MPAN": "",
     "Delivered MWH": 25.4,
     "Accepted Utilisation Price GBP per MWh": 50,
   }
  ],
  "pagination": {
   "totalRecords": 15000000,
   "currentPage": 1,
   "pageSize": 5000,
   "totalPages": 3000
  }
}
```

ESO

11. DFS APIs Examples

1) Weekly Indicative Forecast API Request Example

Response Code: **202 Accepted**

```
{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."

}
```

Example 1 Invalid Data Column Header

```
[
  {
     "Date": "14-08-2024",
    "Registered DFS Participant": "Provider 1",
     "DFS Unit ID": "Unit1",
      "DFS Volume MW": 11,
       "From": "00:00",
     "To": "00:30",
     "Utilisation price GBP per MWh": 300,
  }
]
```

- **Response Code: 202 Accepted**

```
{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."
}
```

Example 2 Invalid Delivery Date

```
[
  {
    "Delivery Date": "31-07-2024",
    "Registered DFS Participant": "Provider 1",
    "DFS Unit ID": "Unit1",
     "DFS Volume MW": 11,
     "From": "00:00",
    "To": "00:30",
    "Utilisation price GBP per MWh": 300,
  }
]
```

- **Response Code: 202 Accepted**

```
{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."
}
```

2) Unit Meter Point Schedule API Request Example

Response Code**: 202 Accepted**

```
{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."
}
```

Example 3 Incorrect submission date

```
[
  {
    "Submission Date": "02-08-2024",
    "Registered DFS Participant": "Provider 1",
    "Import MPAN": "2310000000060",
    "Export MPAN": "2310000000061",
    "MPANs Effective From": "11-11-2024",
    "MPANs Effective To": "11-11-2024",
    "MPANs Customer Consent Flag": "true",
```

```
    "Consent Effective From": "11-11-2024",
    "Consent Effective To": "11-11-2024",
    "Sub Meter Serial Number": "y14146a",

    "Timestamp Subscribed": "11-11-2022 21:00",

    "DFS Unit ID": "NGESO-01",
    "Opt In": true,
    "HH Settled": false,
    "Consumer Type": "Domestic",
    "DFS Initiation Measure": "Manually Initiated",
    "Action": "Add"
  }

]
```

3) Bid Submission API Request Example

Response Code: **202 Accepted**

```
{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."

}
```

Example 4 Invalid Data Column Header

```
[
  {
    "Date": "14-08-2024",

    "North West England": 1,

    "Yorkshire": 0,

    "East Midlands": 1,

    "West Midlands": 1,

    "London": 1,

    "East England": 1,

    "South East England": 1,

    "South West England": 1,

    "Southern England": 0,

    "North Wales Merseyside and Cheshire": 0,

    "Registered DFS Participant": "Provider 1",

  "South Wales": 0,
```

```
    "Other": 0,

    "Total": 10,

    "DFS Unit ID": "Unit-A",

    "DFS Volume MW": 10,

    "From": "15:00",

    "To": "15:30",

    "Utilisation price GBP per MWh": 200,

    "North Scotland": 1,

    "South and Central Scotland": 1,

    "North East England": 1

  }

]
```

- **Response Code: 202 Accepted**

```
{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."
}
```

Example 5 Invalid Delivery Date

```
[
  {
    "Delivery Date": "14-08-2024",

    "North West England": 1,

    "Yorkshire": 0,

    "East Midlands": 1,

    "West Midlands": 1,

    "London": 1,

    "East England": 1,

    "South East England": 1,

    "South West England": 1,

    "Southern England": 0,

    "North Wales Merseyside and Cheshire": 0,

    "Registered DFS Participant": "Provider 1",

"South Wales": 0,

    "Other": 0,
```

```
    "Total": 10,

    "DFS Unit ID": "Unit-A",

    "DFS Volume MW": 10,

    "From": "15:00",

    "To": "15:30",

    "Utilisation price GBP per MWh": 200,

    "North Scotland": 1,

    "South and Central Scotland": 1,

    "North East England": 1
  }
]
```

4) Weekly Settlement Submission API Request Example

Response Code: **202 Accepted**

```
{
"code": "202 Accepted",
"message": "A request has been submitted for further processing. An email will be triggered if any errors are identified."
}
```

Example 6 Incorrect submission date

```
[
{
    "Delivery Date": "22-09-2024",

    "From": "00:00",

    "To": "00:30",

     "Registered DFS Participant": "Provider 1",

    "DFS Unit ID": "Unit2",

     "Import MPAN": "1012345937329",

    "Export MPAN": "1012345937329",

     "Sub Meter Serial Number": "y14159a",

    "Partcipating": true,

     "Baseline kwh": 23.5,

     "Metered kwh": 32.0,
```

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```
      "Delivered kwh": 20.0,

      "Accepted Utilisation Price GBP per MWh":30,

      "HH Settled": false,

      "Participating Meter Electricity Supplier": false,

       "Consumer Type": "Domestic",

      "Elexon BMU ID": "H-0038129"


  }
]
```

5) MPAN Portfolio API Response Example

Please find the below examples of MPAN Portfolio API

```
Response Example:
 Case 1: If portfolio present for the given portfolio date
{
  "response code" 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Submission Date": "08-02-2024",
     "Registered DFS Participant": "Participant A",
     "Import MPAN": "5432112345543",
     "Export MPAN": "",
     "MPANs Effective From": "01-01-2024",
     "MPANs Effective To": "31-12-2024",
     "MPANs Customer Consent Flag": "True",
     "Consent Effective From": "01-01-2024",
     "Consent Effective To": "31-12-2024",
     "Sub Meter Serial Number": "SN123456",
     "TimestampSubscribed": "08-02-2024 12:34",
      "DFS Unit ID":"Unit -A",
     "OptIn": true,
     "HHSettled": false,
     "ConsumerType": "Domestic",
     "DFSInitiationMeasure": "Manually Initiated"
   },
   {
     "SubmissionDate": "08-02-2024",
     "RegisteredDFSParticipant": "Participant B",
     "ImportMPAN": "5432112345543",
     "ExportMPAN": "0987634567892",
     "MPANsEffectiveFrom": "02-01-2024",
     "MPANsEffectiveTo": "30-11-2024",
```

```
      "MPANsCustomerConsentFlag": "False",
      "ConsentEffectiveFrom": "02-01-2024",
      "ConsentEffectiveTo": "30-11-2024",
      "SubMeterSerialNumber": "SN654321",
      "TimestampSubscribed": "08-02-2024 14:56",
      "DFS Unit ID":"Unit -A",
      "OptIn": false,
      "HHSettled": true,
      "ConsumerType": "Industrial & Commercial",
      "DFSInitiationMeasure": "Directly Instructable"
    }

 ],
 "pagination": {
   "totalRecords": 15000000,
   "currentPage": 1,
   "pageSize": 5000,
   "totalPages": 3000
 }
}
```

Case 2: If portfolio is not present for the given portfolio date.

```
{
 "response code" 200,
 "message": "No data found for the given portfolio date.",
 "data":[],
"pagination":[]
}
```

Case 3: If the provided page number is invalid

```
{
 "response code" 200,
 "message": "Invalid page number. Page number must be between 1 and
total pages",
 "data":[],
"pagination":[]
}
```

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6) Bid Results API Response Example

Below is the DFS Bids Response Example

```
Response Example
{
  "response code": 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Delivery Date": "14-08-2024",
     "Registered DFS Participant": "Participant A",
     "DFS Unit ID": "Unit-1",
     "DFS Volume MW": 50,
     "From": "15:00",
     "To": "15:30",
     "Utilisation price GBP per MWh":"50",
     "Status": "Accepted"
   },
   {
     "Delivery Date": "14-08-2024",
     "Registered DFS Participant": "Participant B",
     "DFS Unit ID": "Unit-2",
     "DFS Volume MW": 75,
     "From": "16:00",
     "To": "16:30",
     "Utilisation price GBP per MWh": "100",
     "Status": "Rejected"
   }
  ]
}
```

7) Summarised Settlement Report API Response Example

Please find the below examples of DFS Summarised Settlements API Response Examples

Response Example:

```
{
  "response code" 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Delivery Date": "08-02-2024",
     "From": "15:00",
     "TO": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
      "Import MPAN": "5432112345543",
     "Export MPAN": "",
     "Delivered MWH": 25.4,
     "Accepted Utilisation Price GBP per MWh": 22,
     "Settled MWH": 100.0
   },
   {
     "Delivery Date": "08-02-2024",
     "From": "15:30",
     "TO": "16:00",
     "Settlement Period": 32,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
      "Import MPAN": "5432112345543",
     "Export MPAN": "",
     "Delivered MWH": 25.4,
     "Accepted Utilisation Price GBP per MWh": 50,
     "Settled MWH": 100.0
   }
  ],
  "pagination": {
   "totalRecords": 15000000,
   "currentPage": 1,
   "pageSize": 5000,
   "totalPages": 3000
  }
}
```

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8) Summarised ABSVD Domestic Report API Response Example

Please find the below examples of DFS Summarised ABSVD Domestic API Response Examples

```
Response Example:

{
  "response code" : 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Delivery Date": "08-02-2024",
     "From": "15:00",
     "TO": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
     "Delivered MWH": "25.4",
     "Elexon BMU ID": "BMU ID",
    },
   {
     "Delivery Date": "08-02-2024",
     "From": "15:00",
     "TO": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
     "Delivered MWH": "25.4",
     "Elexon BMU ID": "BMU ID",
    }
  ],
  "pagination": {
   "totalRecords": 15000000,
   "currentPage": 1,
   "pageSize": 5000,
   "totalPages": 3000
  }
}
```

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9) Summarised ABSVD I&C Report API Response Example

Please find the below examples of DFS Summarised ABSVD I&C API Response Examples

Response Example:

```
{
  "response code" 200,
  "message": "Data retrieved successfully",
  "data": [
   {
     "Delivery Date": "08-02-2024",
     "From": "15:00",
     "TO": "15:30",
     "Settlement Period": 31,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
      "Import MPAN": "5432112345543",
     "Export MPAN": "",
     "Delivered MWH": 25.4,
     "Accepted Utilisation Price GBP per MWh": 22,
    },
   {
     "Delivery Date": "08-02-2024",
     "From": "15:30",
     "TO": "16:00",
     "Settlement Period": 32,
     "Registered DFS Participant": "Provider A",
     "DFS Unit ID": "Unit - A",
      "Import MPAN": "5432112345543",
     "Export MPAN": "",
     "Delivered MWH": 25.4,
     "Accepted Utilisation Price GBP per MWh": 50,
   }
  ],
  "pagination": {
   "totalRecords": 15000000,
   "currentPage": 1,
   "pageSize": 5000,
   "totalPages": 3000
  }
}
```

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IX.   Version history

Number	Draft Date	Comments
1	03/09/2024	First Draft
1.1	18/09/2024	- Removed MPAN Query API - Added a case scenario if Bids Assessment is in progress. - Added missing 202 Response Code to Weekly Indicative Forecast - Added a new case for MPAN Portfolio API request