

Single Market Platform API

October 2024

Version 1.05

Detailed Specification

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Introduction

This document aims to provide a closer look at the APIs the National Energy System Operator (NESO) offers to enable access to the GB Single Market Platform (SMP) for Market Participants, via the Single Market Platform Application Programming Interface (SMP API). The SMP API provides a potentially more efficient way for Market Participants to interact with the SMP.

This document aims to provide Market Participants with:

- An understanding of what is required to interact with the SMP API
- An overview of the APIs published by the SMP API

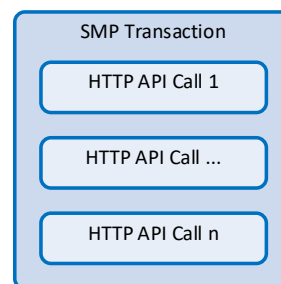
Further information

More information about the Single Market Platform, including the SMP API, is available on the [Single Market Platform](#) page of the NESO website.

To discuss opportunities offered by Single Market Platform and the SMP API, please contact NESO via your account manager or email Commercial.Operation@nationalenergyso.com

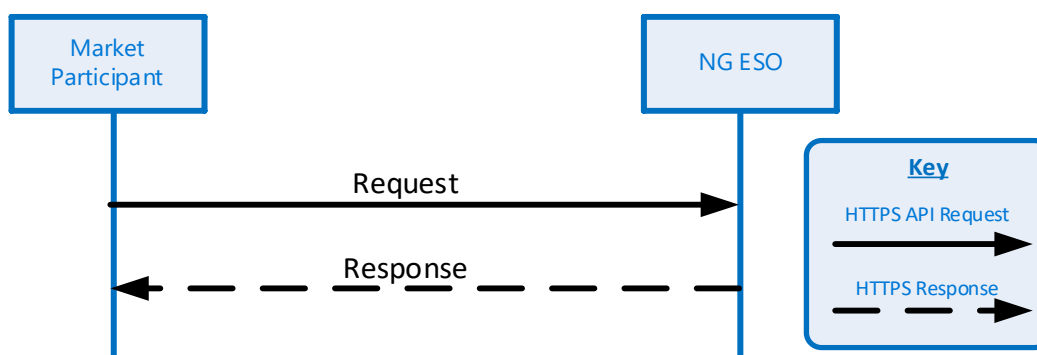
Overview

Transactions with the SMP API may be synchronous or asynchronous¹ and are made up of one or more HTTPS API Calls (All asynchronous transactions will be composed of an assembly of synchronous API calls) While a limited number of these HTTPS API calls will be initiated by NESO, the majority will be initiated by the Market Participant.



Transaction Patterns

Synchronous SMP API Transaction

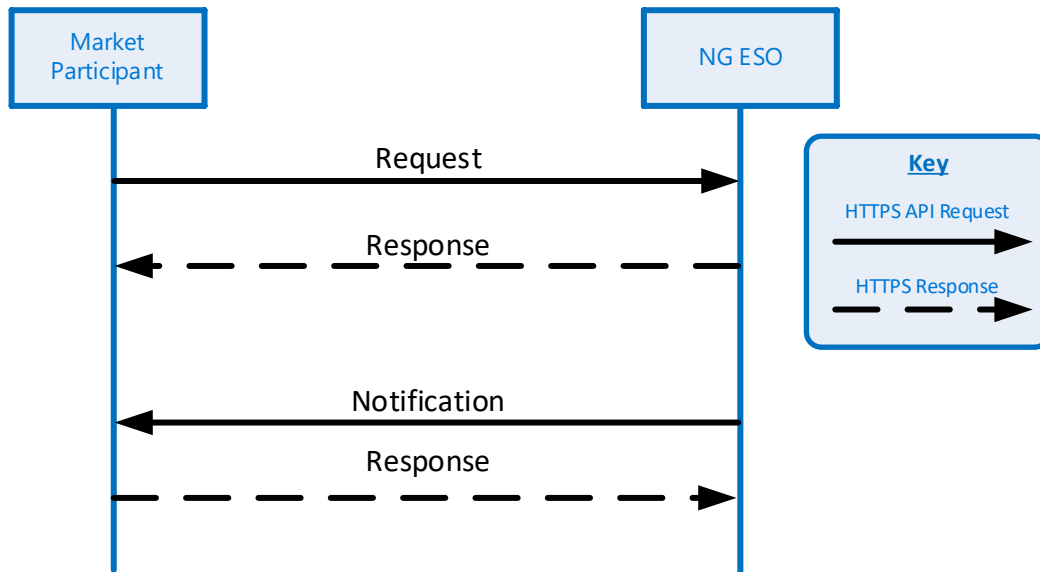


Synchronous SMP API Transactions will return the results of the requested transaction in the return payload of the HTTPS Call. The flows of information in this case will generally be:

- Market Participant initiates the transaction using an HTTPS API Request
- NESO processes the transaction
- NESO returns the results of the transaction in the response payload for the HTTPS API Call.

¹ An Asynchronous Transaction may be long running, so results of such a transaction are unlikely to be immediately available

Asynchronous SMP API Transaction



Asynchronous SMP API Transactions will return the results of the requested transaction in a notification, and Transaction State will be updated as the request progresses. The flows of information in this case will generally be along the format of:

- Market Participant initiates the transaction using an HTTPS API Request
- NESO validates the transaction request
- In the return HTTPS payload, NESO provides a Transaction ID and either indicates via Transaction State whether the transaction has been accepted (“Load Completed” or rejected (“Load Failed”) for further processing. In the event of a “Load Failed” being issued, the issues in the request should be resolved and a new request made.
- If NESO accepts the transaction,
 - After a period, NESO will initiate an HTTPS API call to the Market Participant with the transaction results. The Transaction State at this time be either “Process Completed” if no issues were found, or “Process Error” if issues were encountered.
 - The Market Participant is expected to acknowledge receipt of the transaction results with an HTTPS 200 OK message.

The Market Participant can query the state of a transaction at any time after the TransactionID has been issued using the Get Transaction Status API.

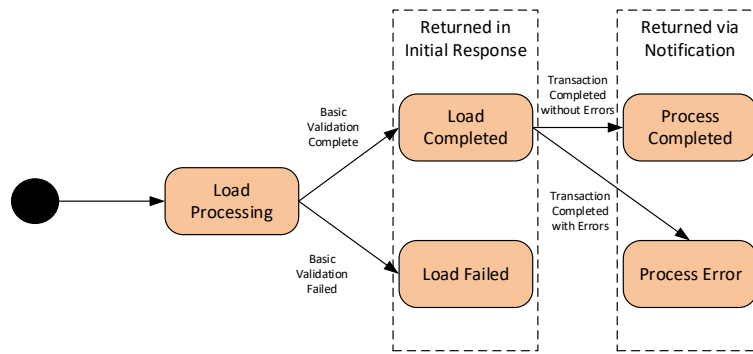


Diagram: Transaction States

Available SMP Transactions

Transaction	Type	Purpose	Pre-requisites	Associated API Calls
Authenticate	Sync	Request an Authentication Token	None	
Manage Asset	Async	Create new Asset(s) in SMP	Must have a valid authentication Token	Create Asset Notification GetTransactionState
Read Asset	Async	Get details of Assets owned or managed by the user's account in SMP	Must have a valid authentication Token	Select Asset Notification
Manage Unit	Async	Create a new Unit in SMP	Must have a valid authentication Token	Create Unit Notification GetTransactionState

Read Unit	Async	Get details of Units owned or managed by the user's account in SMP	Must have a valid authentication Token	Select Unit Notification
Read Service Catalog	Async	Get details of Services available in SMP	Must have a valid authentication Token	Select Service Catalog Notification
Manage Asset Testing Service	Async	Create new Asset Testing Service(s) in SMP	Must have a valid authentication Token	Create Asset Testing Service Notification GetTransactionState
Update Inventory	Async	Update Unit and Unit Service details, Asset Alignments, Asset Details and Asset Testing Service Details	Must have a valid authentication Token	Update Inventory Notification GetTransactionState

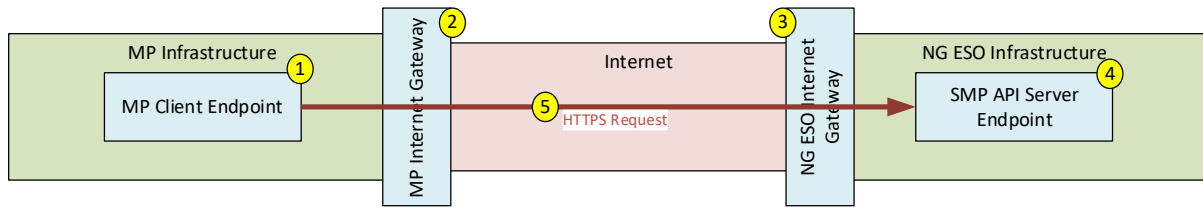
Available SMP API Calls

API Name	Initiated by	Purpose	Pre-requisites	Request	Response
Authenticate	Market Participant	Request an Authentication Token for use in other API Calls	None	Authentication Credentials	JWT token
Create Asset	Market Participant	Start a transaction to create new Asset(s) in SMP	Must have a valid authentication Token	Asset JSON (max 1000 Assets)	Transaction ID or Asset Error JSON
Create Unit	Market Participant	Start a transaction to create a new Unit in SMP	Must have a valid authentication Token	Unit JSON (max 1 unit)	Transaction ID or Unit Error JSON
Update Unit	Market Participant	Start a transaction to update a Unit in Draft Status in SMP	Must have a valid authentication Token	Unit JSON (max 1 unit)	Transaction ID or Unit Error JSON
Create Asset Testing Service	Market Participant	Start a transaction to create a new Asset Testing Service in SMP	Must have a valid authentication Token	Asset Testing Service JSON (max 1000 Asset Testing Services)	Transaction ID or Unit Error JSON

Select Asset	Market Participant	Get information about Assets linked to the user's account in SMP	Must have a valid authentication Token		Asset JSON
Select Unit	Market Participant	Get information about Units linked to the user's account in SMP	Must have a valid authentication Token		Unit JSON
Get Transaction Status	Market Participant	Get the status of a submitted transaction	Must have a valid authentication Token Must have a valid Transaction ID	Transaction ID	Incomplete Transaction: Transaction Status Complete Transaction: Asset JSON or Unit JSON
Notify	SMP API	Notify the Market Participant of the results of an asynchronous transaction	SMP API must have been provided with URL, Username and Password in the API Call initiating the transaction.	Asset JSON or Unit JSON	-

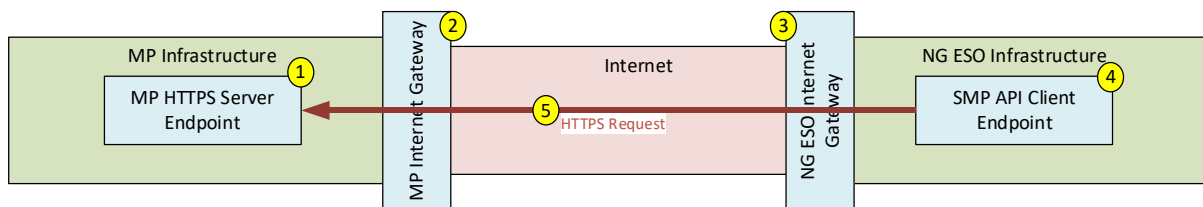
Market Participant Infrastructure Requirements

Market Participant Initiated Calls



#	Item	Type	Description
1	MP Client Endpoint	Component	This is the Client Endpoint that will initiate a connection to the SMP API.
2	MP Internet Gateway	Component	This is the Internet Gateway that provides connectivity between the Market Participant's Client Endpoint and the internet. It should implement appropriate security measures.
3	NE SO Internet Gateway	Component	This is the Internet Gateway that provides connectivity between the SMP API and the Internet. It implements security points and checks, including validating incoming flows are coming from known sources.
4	SMP API Server Endpoint	Component	This is the HTTPS endpoint that the Market Participant will connect to when initiating a call to the SMP API. It will enforce that the client is using TLS1.2 or later.
5	HTTPS API Request	Flow	This is an instance of a connection from Market Participant to SMP API, for example to perform an authentication request or submit a transaction.

SMP API Initiated Calls



#	Item	Type	Description
1	MP HTTPS Server Endpoint	Component	This is the server endpoint that the SMP API will connect to when it wants to send data to the Market Participant, e.g. the results of an

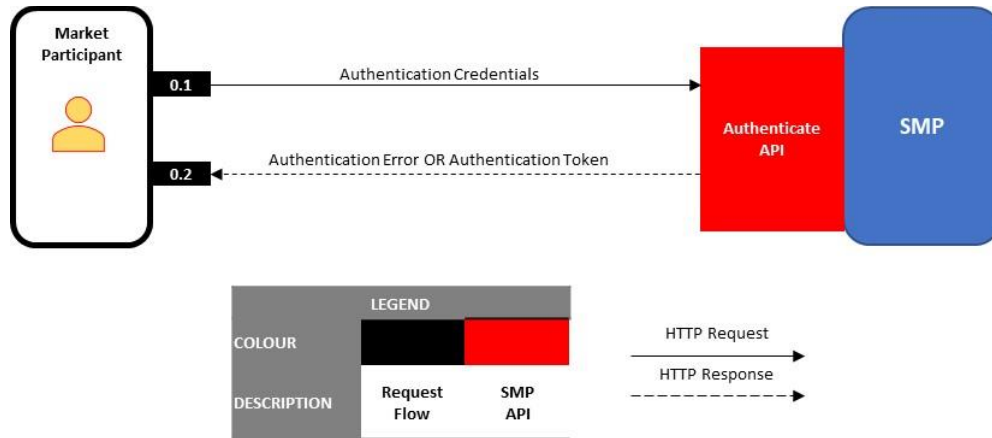
			Asynchronous Transaction. This must implement at least TLS1.2 (ideally 1.3+) and Basic Authentication.
2	MP Internet Gateway	Component	This is the Internet Gateway that provides connectivity between the Market Participant's HTTPS Server Endpoint and the internet. It should implement appropriate security measures to ensure the integrity of the connections.
3	NESO Internet Gateway	Component	This is the Internet Gateway that provides connectivity between the SMP API and the Internet. It implements security best practices.
4	SMP API Client Endpoint	Component	This is the Endpoint that will initiate a connection to the Market Participant. It will enforce that the Market Provider's HTTPS Endpoint is using TLS1.2 or later and provide the Username/Password for authorisation prior to presenting the outgoing message to the MP HTTPS Endpoint.
5	HTTPS Request	Flow	This is an instance of a connection from SMP API to Market Participant, for example to carry the results of an asynchronous transaction. Upon receipt of the data from SMP API, the Market Participant's HTTPS Server Endpoint should issue an HTTPS 200 OK message.

It should be noted that, to receive the results of an asynchronous transaction, the URL of the MP HTTPS Server Endpoint, and the username and password to be used for Basic Authentication will need to be submitted as part of the call initiating the asynchronous transaction. Providing this dynamically as part of the initiating call means the Market Participant can rotate the username/password in use and switch to alternative sites without manual intervention.

API: Authenticate

Overview

Market Participant to make a call to Authenticate API to get JWT Token which can then be provided to authorise access to other SMP APIs (e.g., Create Asset, Get Transaction Status etc).



#	Dataflow	Transfer Type	Payload
0.1	Request Transaction Status	Request	Authentication Credentials
0.2	Receive Transaction status	Response	One of: <ul style="list-style-type: none"> Authentication Error Authentication Token

Specification

Submission

The submission to the Authenticate API is a POST request made up of the following parameters:

PARAMETER	DESCRIPTION
-----------	-------------

client_id	Client ID for the SMP API; provided by NESO for access during registration
client_secret	Client Secret for the SMP API; provided by NESO as part of registration
grant_type	Grant being requested – always "password"
username	Market Participant's SMP API Username; provided by NESO as part of registration
password	Market Participant's SMP API Password; provided by NESO as part of registration
Scope	Scope for the SMP API; provided by NESO as part of registration

Response

The Authentication API will response with a JSON Payload of the following format:

Key	Value
token_type:	Always "Bearer"
scope:	Will match the Scope provided
expires_in:	Time to expiry of token
ext_expires_in:	Time to expiry of token
access_token:	The access token that can be used to authorise access to other SMP API calls.

Payload Examples

Submission Example

Rather than post a sample URL, we have included a sample CURL Request as that shows the required information clearly:

```
curl --location --request POST 'https://login.microsoftonline.com/f98a6a53-25f3-4212-901c-c7787fcd3495/oauth2/v2.0/token' \
--header 'Content-Type: application/x-www-form-urlencoded' \
--header 'Cookie: fpc=AsOugKfV9eNChNiNJ4sd8jj2f-MfAQAAAoc919oOAAAA; stsservicecookie=estsfd; x-ms-gateway-slice=estsfd' \
--data-urlencode 'client_id=my_client_id' \
--data-urlencode 'client_secret=my_client_secret' \
--data-urlencode 'grant_type=password' \
--data-urlencode 'username=my_username' \
--data-urlencode 'password=my_password' \
--data-urlencode 'scope=api://57070d1e-35df5-4e11-9d04-47033e3048be/SMP_API'
```

Response Example

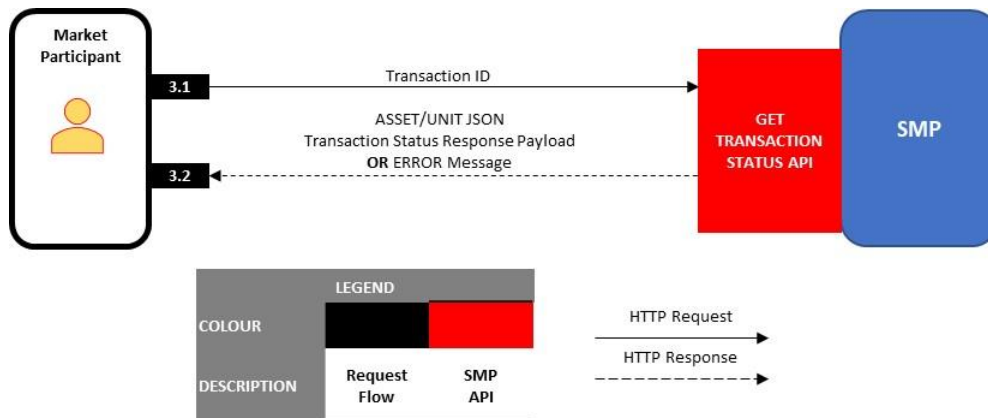
```
{
  "token_type": "Bearer",
  "scope": "api://57070d1e-35df5-4e11-9d04-47033e3048be/SMP_API",
  "expires_in": 4918,
  "ext_expires_in": 4918,
  "access_token": "eyJhbGciOiJIUzI1NiJ9.eyJ1bm1xdWVfbmFtZSI6IjZSI6I1NNUFVzZXJhbmE21haW4u"
```

```
Q29tIiwiYXBwaWRhY3IiOiIxIiwic2NvcGUiOiJhcGk6Ly81NzA3MGQxZS0zNWRmNS00ZTEkMDQtNDcwMzNlMzA  
00GJlL1NNUF9BUEkiLCJncmFudF9UeXB1IjoIUGFzc3dvcmQiLCJhcHBpZCI6IjY3MD11YjEyLTM1OTUtNjd1Mi05ZD  
A0LTc2ZjIzZWJjMDFiZSIsImlzcYI6IkVTTyIsImNsaWVudF9zZWNyZXQiOiJNeVNlY3JldCI6ImV4cCI6IjIwMjItM  
TEtMTdUMTA6Mjk6NDguNjI4WiIsIm1hdCI6IjIwMjItMTEtMTdUMTA6Mjk6NDguNjI4WiIsImNsaWVudF9pZCI6Ik15  
Q2xpZW50SUQifQ.PZgKpDsrPS9mDMz8uIL6nMChn5QHs2lhGhqTLNz6VGk "  
}
```

API: Get Transaction Status

Overview

Once an Asynchronous Transaction has been submitted and accepted, the resulting Transaction ID can be used to query the status of the transaction. If the transaction has completed, this call will return the payload that would have been sent via the resulting Notify Call.



#	Dataflow	Transfer Type	Payload
3.1	Request Transaction Status	Request	Get Transaction Status Request
3.2	Receive Transaction status	Response	One of: <ul style="list-style-type: none"> Transaction ID Error Transaction Status Transaction Asset Transaction Unit

Specification

Prerequisites

The Market Participant must

- have a valid JWT token issued by the Authenticate API
- have a valid TransactionID Issued by an initial asynchronous transaction call such as Create Asset or Create Unit.

Request

The request is a GET call with the transaction ID suffixed to the GetTransactionStatusURL, i.e. <GetTransactionStatusURL>/<Transaction ID>, and the Authorisation JWT included in the headers,

Response

Invalid Transaction / Incomplete Transaction

If the transaction is unknown, then the API will return an Invalid Transaction response. If the transaction is incomplete, it will return the current status of the Transaction.

```
{  
  <Transaction Block>      Information to notify of transaction information – see “Model –  
                           Transaction” for key-value pairs contained in <Transaction Block>  
}
```

Complete Transaction – Create Unit

Please see Notify Response Payloads in Create Asset

Complete Transaction – Create Asset

Please see Notify Response Payloads in Create Asset

Payload Examples

Response – Transaction Incomplete

```
{  
  "Transaction ID":"0000000963",  
  "Transaction Status":"Load Completed",  
  "Transaction Type":"Asset",  
  "Action Type":"Create"  
}
```

Response – Invalid Transaction

```
{  
  "Transaction ID":"0000000462",  
  "Error":"Unable to locate transaction"  
}
```

Response – Create Asset Complete

Please see Notify Sample Payloads in Create Asset

Response – Create Unit Complete

Please see Notify Sample Payloads in Create Unit

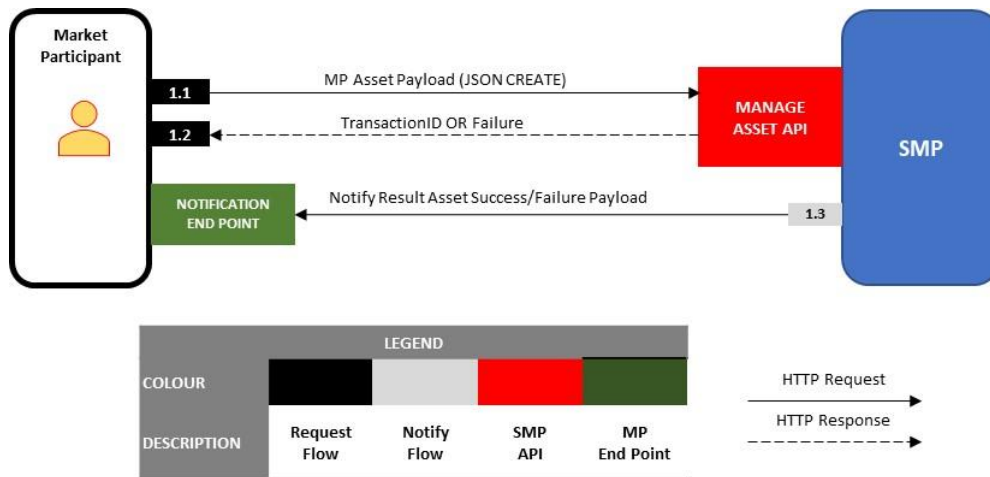
Model – Transaction

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values	Other Validation Rule
O	Transaction ID	Text(10)	0000000418		Will be null if payload fails basic validation
M	Transaction Status	Text(10)	Process Completed	See Transaction State Diagram	
M	Transaction Type	Text(10)	Asset	"Asset", "Unit"	
M	Action Type	Text(10)	Create	"Create, Update"	

API: Create Asset

Overview



#	Dataflow	Transfer Type	Payload
1.1	Submit Asset Transaction	Request	JSON Asset Payload
1.2	Transaction Response	Response	One of: <ul style="list-style-type: none"> Failed Data Validation Transaction ID
1.3	Notification	Request	Asset Transaction JSON file providing: <ul style="list-style-type: none"> Successful records with SMP Asset ID Unsuccessful records with errors

Specification

Request

The request is a simple JSON payload made up of 2 sections:

Key

```
{  
  <Notify Block>,  
  
  "Assets":  
  [  
    {<Create Asset>},  
    {<Create Asset>}  
  ]  
}
```

Value

Information required for SMP API to notify of transaction completion – see “Model – Notify” for key-value pairs contained in <Notify Block>

Section containing information on the Assets to be loaded into SMP. It will consist of one or more instance of <Create Assetk>. See “Model – Create Asset” for key-value pairs.

Response

A successful response is a JSON payload made up of 2 sections

```
{  
  <Transaction Block>,  
  
  "Assets":  
  [  
    {<Asset Block>},  
    {<Asset Block>}  
  ]  
}
```

Information to notify of transaction information – see “Model – Transaction” for key-value pairs contained in <Transaction Block>

Optional Section containing information on the Assets to be loaded into SMP. It will consist of one or more instance of <Asset Block>. See “Model – Create Asset” for key-value pairs.

Notify

After a Create Asset transaction has completed, the resulting notification will consist of a JSON payload made up of 2 sections

```
{  
  <Transaction Block>,  
  
  "Assets":  
  [  
    {<Asset Block>},  
    {<Asset Block>}  
  ]  
}
```

Information to notify of transaction information – see “Model – Transaction” for key-value pairs contained in <Transaction Block>

Section containing information on the Assets to be loaded into SMP. It will consist of one or more instance of <Asset Block>. See “Model – Asset” for key-value pairs.

Payload Models

Model – Notify

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
M	Notification Address	Text(255)	https://api.myco.com/SMPNotify/		
O	Notification Username	Text(255)	MyUsername		
O	Notification Password	Text(255)	MyPassword		

Model – Create Asset

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
M	Asset Name	Text(80)	MyAssetName		Must be Unique
O	Asset Owner Company ID	Text(30)	04031152		Companies House Number Must have an Approved Related Entity agreement between User's Account and Account belonging to the Company ID
O	Asset Agent Company ID	Text(30)	04031153		Companies House Number Must be the Companies House Number of the user's Account

Asset Owner Company ID must be populated in order for the user to populate this payload tag

M	Asset Type	Picklist (Multi-Select)	Generation Unit	See Appendix Picklist – Unit Types	
M	Applicable Market	Picklist	Balancing Services	See Appendix Picklist – Asset Markets	
M	Effective From Date	Date	2022-11-11	YYYY-MM-DD	Must be today or later
M	Fuel Type	Picklist	Batteries	See Appendix Picklist – Fuel Types	
O	Other Fuel Type	Text(255)	My Fuel Type		Mandatory if “Fuel Type” = “Other”
O	Generation Capacity	Number(15,3)	50	XXXXXXXXXXXXXXXXX.XXX	Unit: MW Mandatory if “Asset Type” = “Generation Unit”
O	Demand Capacity	Number(15,3)	50	XXXXXXXXXXXXXXXXX.XXX	Unit: MW Mandatory if “Asset Type” = “Demand Unit”
M	Connection Type	Picklist	Firm	See Appendix Picklist – Connection Type	
O	Connection Method	Picklist	Firm	See Appendix Picklist – Connection Method	
M	Connected to DNO	Picklist	True	See Appendix Picklist – Boolean	
O	DNO	Picklist	SP Energy Networks	See Appendix Picklist - DNO	Mandatory if “Connected to DNO” = True Must be one of ‘National Grid Electricity Distribution’ or ‘UK Power Networks’ if Applicable Market = RDP MW Dispatch
O	DNO Unique Reference Number	Text(10)	93265829452		Only required if “Connected to DNO” =

					True AND "Applicable Market" = "RDP MW Dispatch"
M	Connection Point Voltage	Picklist	400	See Appendix Picklist – Connection Point Voltage	Unit: KV
O	Other Connection Point Voltage kV	Number(16,2)	1100.00	XXXXXXXXXXXXXXXXXX.YY	Unit: KV Mandatory if "Connection Point Voltage" = "Other"
M	Postcode	Text(8)	AB6 7GH		
M	Longitude	Number(3,15)	51.707079	+/- XXX.YYYYYYYYYYYYYYY	Accepts -180 to +180
M	Latitude	Number(2,15)	-3.584902	+/- XX.YYYYYYYYYYYYYYY	Accepts -90 to +90
O	Nearest Node	Text(6)	EFG		Mandatory if "Applicable Markets = Balancing Services"
					Must be one of ABHA_1, ALVE_1, AXMI_1, BRWA_1, EXET_1, INDQ_1, LAND_1 or TAUN_1 if the DNO = National Grid Electricity Distribution and the Applicable Market = RDP MW Dispatch
M	GSP	Picklist (Multi-Select)	ABHA_1	See Appendix Picklist - GSP	Must be one of BOLN_1, NINF_1, SELL_1, CANT_1, RICH_1 if the DNO = UK Power Networks and the Applicable Market = RDP MW Dispatch
O	Other GSP	Text(10)	My GSP		Mandatory if "GSP" = "Others"

M	GSP Group ID	Picklist	Eastern England	See Appendix Picklist – GSP Group	Must be South Western England if the DNO = National Grid Electricity Distribution and the Applicable Market = RDP MW Dispatch
M	Primary Despatch Phone Number	Text(10)	7554456564		
M	Primary Despatch Phone Country	Picklist	United Kingdom	See Appendix - Picklist Country (Telephone)	Must be South Eastern England if the DNO = UK Power Networks and the Applicable Market = RDP MW Dispatch
M	Secondary Despatch Phone Number	Number(10)	7676567657		
M	Secondary Despatch Phone Country	Picklist	United Kingdom	See Appendix - Picklist Country (Telephone)	
O	Fax Despatch Phone Number	Text(10)	4645654643		
O	Fax Despatch Phone Country	Picklist	United Kingdom	See Appendix - Picklist Country (Telephone)	
M	Operational Metering Availability	Picklist	Yes	See Appendix Picklist – Operational Metering Availability	
O	MPAN Import	Text(13)	1001010101010.00		Mandatory if “Applicable Market” = “Balancing Services”
O	MPAN Export	Text(13)	1001010101011.00		Mandatory if “Applicable Market” = “RDP MW Dispatch”

O	Additional MPAN Import	Text(80)	1001010101010.00		Not allowed if "Applicable Market" = "RDP MW Dispatch"
O	Additional MPAN Export	Text(80)	1001010101011.00		Not allowed if "Applicable Market" = "RDP MW Dispatch"
O	Asset Size	Number(3,13)	50	XXX	Unit: MW
O	Site Contact Name	Text(255)	SMP User		
O	Site Contact Number	Number(10)	65767687688		
M	Site Street Address	Text(255)	Coronation Street		
M	Site City	Text(255)	Reading		
M	Site State or County	Text(255)	Berkshire		
M	Site Country	Text(255)	United Kingdom		
O	Agent or Applicant Operational Email	Email	smpuser@test.com		
O	Agent or Applicant Operational Phone	Number(10)	65767687688		

Model – Asset

This Model includes all fields in Model – Create Asset plus the following:

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload.

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
O	Asset ID	Number(10)	0000000636	XXXXXXXXXX	Will be returned if Assets Created successfully
O	Error Message	Long Text		O	Error Message

Model – Transaction

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values	Other Validation Rule
O	Transaction ID	Text(10)	0000000418		Will be null if payload fails basic validation
M	Transaction Status	Text(10)	Process Completed	See Transaction State Diagram	
M	Transaction Type	Text(10)	Asset	“Asset”, “Unit”	
M	Action Type	Text(10)	Create	“Create”	

Payload Samples

Request

```
{
  "Notification Address":"https://api.mycompany.com/SMPNotification",
  "Notification Username":"MyUsername",
  "Notification Password":"MyPassword",
  "Action Type":"Create",
  "Assets":
  [
    {
      "Asset Name":"MyAsset01",
      "Asset Type":"Generation Unit",
      "Applicable Market":"Balancing Services",
      "Effective From Date":"2023-09-01",
      "Fuel Type":"Batteries",
      "Generation Capacity":200,
      "Connection Type":"Firm",
      "Connected to DNO":true,
      "DNO":"ESB Networks",
      "Connection Point Voltage":"400",
      "Latitude":"-3.584902",
      "Longitude":"51.707079",
      "GSP":"ABHA_1",
      "GSP Group ID":"Eastern England",
      "Nearest Node":"MyNode",
      "Primary Despatch Phone Number":"7554456564",
      "Primary Despatch Phone Country":"United Kingdom",
      "Secondary Despatch Phone Number":"7676567657",
      "Secondary Despatch Phone Country":"United Kingdom",
      "Fax Despatch Phone Number":"4645654643",
      "Fax Despatch Phone Country":"United Kingdom",
      "Operational Metering Availability":"Yes",
      "MPAN Import":"1001010101010",
      "MPAN Export":"1001010101011",
      "Asset Size":180,
      "Site Contact Name":"Mr Site Contact",
      "Site Contact Number":"6576768768",
      "Site Street Address":"26 Coronation Street",
      "Site City":"Warwick",
      "Site State or County":"Warwickshire",
      "Site Country":"United Kingdom",
      "Postcode":"CV34 6DA"
    },
    {
      "Asset Name":"MyAsset02",
      "Asset Type":"Generation Unit",
      "Applicable Market":"Balancing Services",
      "Effective From Date":"2023-09-01",
      "Fuel Type":"Batteries",
      "Generation Capacity":50,
      "Connection Type":"Firm",
      "Connected to DNO":true,
      "DNO":"ESB Networks",
      "Connection Point Voltage":"400",
      "Latitude":"-3.584902",
      "Longitude":"51.707079",
      "GSP":"ABHA_1",
      "GSP Group ID":"Eastern England",
      "Nearest Node":"MyNode",
      "Primary Despatch Phone Number":"7554456564",
      "Primary Despatch Phone Country":"United Kingdom",
      "Secondary Despatch Phone Number":"7676567657",
```

```

    "Secondary Despatch Phone Country":"United Kingdom",
    "Fax Despatch Phone Number":"4645654643",
    "Fax Despatch Phone Country":"United Kingdom",
    "Operational Metering Availability":"Yes",
    "MPAN Import":"1001010101010",
    "MPAN Export":"1001010101011",
    "Asset Size":180,
    "Site Contact Name":"Mr Site Contact",
    "Site Contact Number":"6576768768",
    "Site Street Address":"26 Coronation Street",
    "Site City":"Warwick",
    "Site State or County":"Warwickshire",
    "Site Country":"United Kingdom",
    "Postcode":"CV34 6DA"
  }
]
}

```

Response - Success

```

{
  "Transaction ID":"0000000912",
  "Transaction Status":"Load Completed",
  "Transaction Type":"Asset",
  "Action Type":"Create"
}

```

Response - Failure

```

{
  "Transaction ID":"0000000418",
  "Transaction Status":"Load Failed",
  "Transaction Type":"Asset",
  "Action Type":"Create",
  "Assets":[
    {
      "Asset Name":"MyAsset01",
      "Error Message":" Operational Metering Availability: Missing Mandatory
Field"
    },
    {
      "Asset Name":"MyAsset02",
      "Error Message":"Fax Despatch Phone Number: Invalid Format"
    }
  ]
}

```

Notification - Failure

```

{
  "Transaction ID":"0000000123",
  "Transaction Status":"Process Error",
  "Transaction Type":"Asset",
  "Action Type":"Create",
  "Assets": [
    {
      "Asset Name":"MyAsset01",
      "Error Message":"Asset with the same name already exists for this
company"
    },
    ...
  ],

```



```

    {
      "Asset Name": "MyAsset02",
      "Error Message": "Asset with the same name already exists for this
company"
    }
  ]
}

```

Notification - Success

```

{
  "Transaction ID": "0000000418",
  "Transaction Status": "Process Completed",
  "Transaction Type": "Asset",
  "Action Type": "Create",
  "Assets": [
    {
      "Asset Name": "MyAsset01",
      "Asset ID": "0000000636"
    },
    {
      "Asset Name": "MyAsset02",
      "Asset ID": "0000000637"
    }
  ]
}

```

API: Select Asset

Overview

#	Dataflow	Transfer Type	Payload
3.1	Submit Asset Request	Request	
3.2	Transaction Response	Response	<ul style="list-style-type: none"> Transaction ID
3.3	Notification	Request	Asset Transaction JSON file providing: <ul style="list-style-type: none"> JSON file with Asset details

Payload Samples

Notification - Success

```

{
  "Transaction Type": "Asset"
  "Transaction Status": "Success"
  "Action Type": "Select",
  "Assets":
[
  {
    "Asset Name": "MyAsset01",
    "Asset Type": "Generation Unit",
    "Applicable Market": "Balancing Services",
    "Effective From Date": "2023-09-01",
    "Fuel Type": "Batteries",
    "Generation Capacity": 200,
    "Connection Type": "Firm",
    "Connected to DNO": true,
    "DNO": "ESB Networks",
    "Connection Point Voltage": "400",
    "Latitude": "-3.584902",
    "Longitude": "51.707079",
    "GSP": "ABHA_1",
    "GSP Group ID": "Eastern England",
    "Nearest Node": "MyNode",
    "Primary Despatch Phone Number": "7554456564",
    "Primary Despatch Phone Country": "United Kingdom",
    "Secondary Despatch Phone Number": "7676567657",
    "Secondary Despatch Phone Country": "United Kingdom",
    "Fax Despatch Phone Number": "4645654643",
    "Fax Despatch Phone Country": "United Kingdom",
    "Operational Metering Availability": "Yes",
    "MPAN Import": "1001010101010",
    "MPAN Export": "1001010101011",
    "Asset Size": 180,
    "Site Contact Name": "Mr Site Contact",
    "Site Contact Number": "6576768768",
    "Site Street Address": "26 Coronation Street",
    "Site City": "Warwick",
    "Site State or County": "Warwickshire",
    "Site Country": "United Kingdom",
    "Postcode": "CV34 6DA",

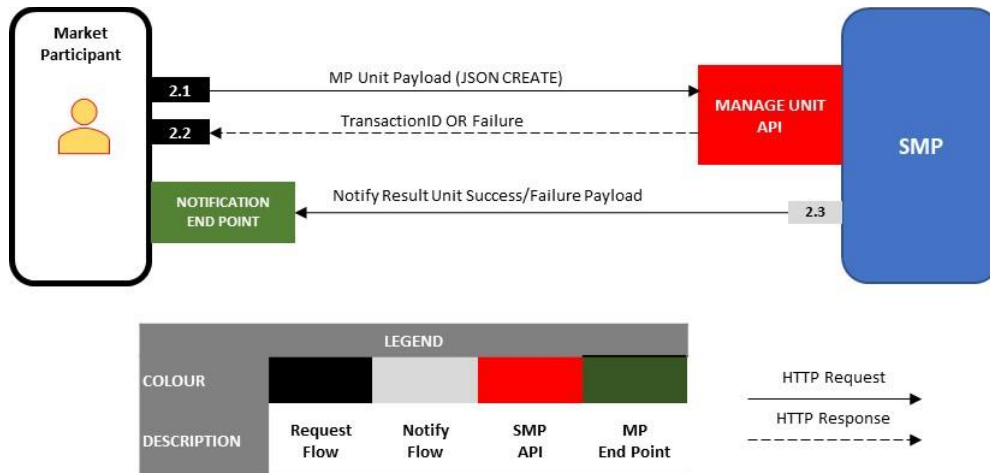
"Asset Status": "Accepted",
"Asset Id": "AST-7875",
"Asset Owner": "123 Limited",
"Asset Agent": "456 Limited"
    },
    }
[
  {
    "Asset Name": "MyAsset02",
    "Asset Type": "Generation Unit",
    "Applicable Market": "Balancing Services",
    "Effective From Date": "2023-09-01",
    "Fuel Type": "Batteries",
    "Generation Capacity": 50,
    "Connection Type": "Firm",
    "Connected to DNO": true,
    "DNO": "ESB Networks",
    "Connection Point Voltage": "400",
    "Latitude": "-3.584902",
    "Longitude": "51.707079",
    "GSP": "ABHA_1",
    "GSP Group ID": "Eastern England",
    "Nearest Node": "MyNode",
    "Primary Despatch Phone Number": "7554456564",
    "Primary Despatch Phone Country": "United Kingdom",
    "Secondary Despatch Phone Number": "7676567657",
    "Secondary Despatch Phone Country": "United Kingdom",

```

```
"Fax Despatch Phone Number":"4645654643",
"Fax Despatch Phone Country":"United Kingdom",
"Operational Metering Availability":"Yes",
"MPAN Import":"1001010101010",
"MPAN Export":"1001010101011",
"Asset Size":180,
"Site Contact Name":"Mr Site Contact",
"Site Contact Number":"6576768768",
"Site Street Address":"26 Coronation Street",
"Site City":"Warwick",
"Site State or County":"Warwickshire",
"Site Country":"United Kingdom",
"Postcode":"CV34 6DA",
"Asset Status":"Accepted",
"Asset Id": "AST-7875",
"Asset Owner": "123 Limited",
"Asset Agent": "456 Limited"
}
]
}
```

API: Create Unit

Overview



#	Dataflow	Transfer Type	Payload
2.1	Submit Unit Transaction	Request	JSON Unit Payload
2.2	Transaction Response	Response	One of: <ul style="list-style-type: none"> Failed Data Validation Transaction ID
2.3	Notification	Request	Unit Transaction JSON file providing: <ul style="list-style-type: none"> Successful records with SMP Unit ID Unsuccessful records with errors

Specification

Request

The request is a simple JSON payload made up of 2 sections:

Key	Value
<pre>{ <Notify Block>, "Unit": { <Create Unit>, "Assets": [<Asset ID>, <Asset ID>, ...] } }</pre>	<p>Information required for SMP API to notify of transaction completion – see “Model – Notify” for key-value pairs contained in <Notify Block></p> <p>Section containing information on the Unit to be loaded into SMP. It will consist of one instance <Create Unit>. See “Model – Create Unit” for key-value pairs.</p> <p>“Complementary to this will be an Array of the Asset IDs which refer to the Assets to be included in the unit. This array does not need to be provided if the Applicable Market is Demand Flexibility Service as the assets will be created automatically.</p>

```
}  
}
```

Response

A successful response is a JSON payload made up of 2 sections

```
{  
  <Transaction Block>,      Information to notify of transaction information – see “Model –  
                             Transaction” for key-value pairs contained in <Transaction Block>  
  
  "Unit":                  Optional Section containing information on the Unit that was to be  
  {                        loaded into SMP. It will consist of one instance <Unit>. See “Model –  
    <Unit>,                Unit” for key-value pairs.  
    "Assets":              Complementary to this will be an Array of the Asset IDs which refer to  
    [                      the Assets included in the unit.  
      <Asset ID>,  
      <Asset ID>,  
      ...  
    ]  
  }  
}
```

Notify

After a Create Unit transaction has completed, the resulting notification will consist of a JSON payload made up of 2 sections

```
{  
  <Transaction Block>,      Information to notify of transaction information – see “Model –  
                             Transaction” for key-value pairs contained in <Transaction Block>  
  
  "Unit":                  Section containing information on the Unit that was to be loaded into  
  {                        SMP. It will consist of one instance <Unit>. See “Model – Unit” for key-  
    <Unit>,  
    "Assets":              value pairs.  
    [                      Complementary to this will be an Array of the Asset IDs which refer to  
      <Asset ID>,  
      <Asset ID>,  
      ...  
    ]  
  }  
}
```

Payload Models

Model – Notify

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
M	Notification Address	Text(255)	https://api.myco.com/SMPNotify/		
O	Notification Username	Text(255)	MyUsername		
O	Notification Password	Text(255)	MyPassword		

Model – Create Unit

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values	Other Validation Rule
M	Unit Name	Text(80)			Must be unique
M	Applicable Market	Picklist	Balancing Services	See Appendix Picklist – Unit Markets	
				See Appendix Picklist – Unit Types	
M	Unit Type	Picklist(Multi-Select)	Demand Unit		If Applicable Market = “Demand Flexibility Service” then must be “Demand Unit”

M	Category	Picklist	Primary BMU	See Appendix Picklist – Categories	If Applicable Market = “Demand Flexibility Service” then must be “Non-BMU”
M	Effective From Date	Date	2025-10-28	YYYY-MM-DD	Must be today or later
M	Fuel Type	Picklist	Batteries	See Appendix Picklist – Fuel Types	If Applicable Market = “Demand Flexibility Service” then must be “Load Response”
O	Generation Capacity	Number(15, 3)	297	XXXXXXXXXXXXXXXXXX.YY	Unit: Mandatory if “Unit Type” = “Generation Unit”. Not applicable If Applicable Market = “Demand Flexibility Service”
O	Demand Capacity	Number(15, 3)	228	XXXXXXXXXXXXXXXXXX.YY	Unit: Mandatory if “Unit Type” = “Demand Unit”. Must be between ‘1’ and ‘100’ if Applicable Market = Demand Flexibility Service
O	Customer Base	Picklist	Domestic	See Appendix Picklist – Customer Base	Only required if Applicable Market = “Demand Flexibility Service”
O	Delivery Method	Text (100)	My Delivery Method		Only required if Applicable Market = “Demand Flexibility Service”

M	Connection Type	Picklist		Flexible	See Appendix Picklist – Connection Type	Not applicable If Applicable Market = “Demand Flexibility Service”
M	Connected to DNO	Picklist		true	See Appendix Picklist – Boolean	If Applicable Market = “Demand Flexibility Service” then must be true
O	DNO	Picklist		SP Energy Networks	See Appendix Picklist - DNO	Mandatory if “Connected to DNO” = true
O	Are you a Supplier of Electricity?	Picklist		Yes, No	See Appendix Picklist – Are you a Supplier of Electricity	Only required if Applicable Market = “Demand Flexibility Service”
O	DFS Initiation Measures	Picklist		Manually instructed	See Appendix Picklist – DFS Initiation Measures	Only required if Applicable Market = “Demand Flexibility Service”
O	DFS Unit Type	Picklist		Domestic	See Appendix Picklist – DFS Unit Type	Only required if Applicable Market = “Demand Flexibility Service”
O	Connection Point Voltage	Picklist	400	See Appendix Picklist – Connection Point Voltage		Unit: KV Mandatory If Applicable Market = “Balancing Services” Not applicable If Applicable Market = “Demand Flexibility Service”

O	Postcode	Text(8)	RG1 2HT		Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	Latitude	Number(2,15)	-3.584902	+/- XXX.XXXXXXXXXXXXXXXXXX	Accepts -90 to +90 Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	Longitude	Number(3,15)	51.707079	+/- XX.XXXXXXXXXXXXXXXXXX	Accepts -180 to +180 Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	Nearest Node	Text(6)	abha		Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	GSP	Picklist (Multi-Select)	ABHA_1	See Appendix Picklist - GSP	Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market =

						“Demand Flexibility Service”
O	Other GSP	Text(10)	New GSP			Mandatory if “GSP” = “Others”
					See Appendix Picklist – GSP Group	Mandatory If Applicable Market = “Balancing Services”
O	GSP Group	Picklist	Eastern England			Not applicable If Applicable Market = “Demand Flexibility Service”
O	Primary Despatch Email Address	Email	<u>hello@email.com</u>			Mandatory if “Applicable Market” = “Demand Flexibility Service”
O	Primary Despatch Phone Country	Picklist	United Kingdom		See Appendix - Picklist Country (Telephone)	
M	Primary Despatch Phone Number	Text(10)	7554456564			
O	Secondary Despatch Email Address	Email	<u>hello@email.com</u>			Mandatory if “Applicable Market” = “Demand Flexibility Service”
O	Secondary Despatch Phone Country	Picklist	United Kingdom		See Appendix - Picklist Country (Telephone)	
O	Secondary Despatch Phone Number	Text(10)	7676567657			
O	Despatch Fax Number Country	Picklist	United Kingdom		See Appendix - Picklist Country (Telephone)	
O	Despatch Fax Number	Text(10)	7554456564			

Model – Unit

This Model includes all fields in Model – Create Unit plus the following:

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload.

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
O	Account Name	Text(255)	My Company		
O	Error Message	Long Text		O	Error Message

Model – Transaction

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values	Other Validation Rule
O	Transaction ID	Text(10)	0000000418		Will be null if payload fails basic validation
M	Transaction Status	Text(10)	Process Completed	See Transaction State Diagram	
M	Transaction Type	Text(10)	Asset	“Asset”, “Unit”	
M	Action Type	Text(10)	Create	“Create”	

Payload Samples

Request

```
{
  "Notification Address":"https://api.mycompany.com/SMPNotification",
  "Notification Username":"MyUsername",
  "Notification Password":"MyPassword",
  "Action Type":"Create",
  "Unit":
  {
    "Unit Name":"MyUnit-01",
    "Applicable Market":"Balancing Services",
    "Unit Type":"Generation Unit",
    "Category":"Primary BMU",
    "Effective From Date":"2023-03-01",
    "Fuel Type":"Batteries",
    "Generation Capacity":297,
    "Connection Type":"Flexible",
    "Connected to DNO":true,
    "DNO":"Electricity North West",
    "Connection Point Voltage":"400",
    "Postcode":"CV34 6DA",
    "Longitude":"-3.584902",
    "Latitude":"51.707079",
    "Nearest Node":"abha",
    "GSP":"ABHA_1",
    "GSP Group":"Eastern England",
    "Primary Despatch Phone Number":"7554456564",
    "Primary Despatch Phone Number Country":"United Kingdom",
    "Secondary Despatch Phone Number":"7676567657",
    "Secondary Despatch Phone Number Country":"United Kingdom",
    "Despatch Fax Number":"4645654643",
    "Despatch Fax Number Country":"United Kingdom",
    "Assets":[7294652834, "8273624319", "6244855231"]
  }
}
```

Response - Success

```
{
  "Transaction ID":"0000000843",
  "Transaction Status":"Load Completed",
  "Transaction Type":"Unit",
  "Action Type":"Create"
}
```

Response - Failure

```
{
  "Transaction ID":null,
  "Transaction Status":"Load Failed",
  "Transaction Type":"Unit",
  "Action Type":"Create",
  "Unit":
  {
    "Unit Name":"MyUnit-01",
    "Error Message":"Postcode: Missing Mandatory Field"
  }
}
```

Notification - Failure

```
{
  "Transaction ID":"0000063923",
  "Transaction Status":"Process Error",
  "Transaction Type":"Unit",
  "Action Type":"Create",
  "Unit":
  {
    "Unit Name":"MyUnit-01",
    "Unit ID":"ABCD-03",
    "Error Message":"Postcode: Missing Mandatory Field",
    "Account Name":"MyAccount",
    "Applicable Market":"Balancing Services",
    "Category":"Primary BMU",
  }
}
```

```
"Unit Type":"Generation Unit",
"Effective From Date":"2023-03-01",
"Fuel Type":"Batteries",
"Generation Capacity":297,
"Connection Type":"Flexible",
"Connected to DNO":True,
"DNO":"Electricity North West",
"Connection Point Voltage":"400",
"Postcode":"",
"Longitude":"-3.584902",
"Latitude":"51.707079",
"Nearest Node":"abha",
"GSP":"ABHA_1",
"GSP Group Id":"Eastern England",
"Primary Despatch Phone Number":"7554456564",
"Primary Despatch Phone Number Country":"United Kingdom",
"Secondary Despatch Phone Number":7676567657,
"Secondary Despatch Phone Number Country":"United Kingdom",
"Despatch Fax Number":4645654643,
"Despatch Fax Number Country":"United Kingdom",
"Assets":[7294652834,8273624319,6244855231]
}
}
```

Notification - Success

```
{
  "Transaction ID":"0000029643",
  "Transaction Status":"Process Completed",
  "Transaction Type":"Unit",
  "Action Type":"Create",
  "Unit":
  {
    "Unit Name":"MyUnit-01",
    "Unit ID":"ABCD-03",
    "Account Name":"MyAccount",
    "Applicable Market":"Balancing Services",
    "Unit Type":"Generation Unit",
    "Effective From Date":"2023-03-01",
    "Fuel Type":"Batteries",
```

```

    "Generation Capacity":297,
    "Connection Type":"Flexible",
    "Connected to DNO":True,
    "DNO":"Electricity North West",
    "Connection Point Voltage":"400",
    "Post Code":"CV34 6DA",
    "Longitude":"-3.584902",
    "Latitude":"51.707079",
    "Nearest Node":"abha",
    "GSP":"ABHA_1",
    "GSP Group Id":"Eastern England",
    "Primary Despatch Phone Number":7554456564,
    "Primary Despatch Phone Number Country":"United Kingdom",
    "Secondary Despatch Phone Number":7676567657,
    "Secondary Despatch Phone Number Country":"United Kingdom",
    "Despatch Fax Number":4645654643,
    "Despatch Fax Number Country":"United Kingdom",
    "Assets": [7294652834,8273624319,6244855231]
  }
}

```

API: Select Unit

Overview

#	Dataflow	Transfer Type	Payload
3.1	Submit Unit Request	Request	
3.2	Transaction Response	Response	<ul style="list-style-type: none"> Transaction ID

3.3 Notification

Request

Asset Transaction JSON file providing:

- JSON file with Unit details
-

Payload Samples

Notification - Success

```
{
  "Transaction Type": "Unit"
  "Transaction Status": "Success"
  "Action Type": "Select",
  "Units":
[
  {
    "Unit Name": "MyUnit-01",
    "Unit Key": "230000000000110",
    "Account Name": "MyAccount",
    "Applicable Market": "Balancing Services",
    "Category": "Primary BMU",
    "Unit Type": "Generation Unit",
    "Effective From Date": "2023-03-01",
    "Fuel Type": "Batteries",
    "Generation Capacity": 297,
    "Connection Type": "Flexible",
    "Connected to DNO": true,
    "DNO": "Electricity North West",
    "Connection Point Voltage": "400",
    "Postcode": "",
    "Longitude": "-3.584902",
    "Latitude": "51.707079",
    "Nearest Node": "abha",
    "GSP": "ABHA_1",
    "GSP Group Id": "Eastern England",
    "Primary Despatch Phone Number": "7554456564",
    "Primary Despatch Phone Number Country": "United Kingdom",
    "Secondary Despatch Phone Number": 7676567657,
    "Secondary Despatch Phone Number Country": "United Kingdom",
```



```
"Despatch Fax Number":4645654643,
"Despatch Fax Number Country":"United Kingdom",

"Assets":[7294652834,8273624319,6244855231],
"Are you a Supplier of Electricity?": "",
"DFS Initiation Measures": "",
"DFS Unit Type": "",
"Unit Status": "Accepted"
}

{
  "Unit Name":"MyUnit-02",
  "Unit Key":" 230000000000111",
  "Account Name":"MyAccount",
  "Applicable Market":"Demand Flexibility Service",
  "Category":"Primary BMU",
  "Unit Type":"Generation Unit",
  "Effective From Date":"2023-03-01",
  "Fuel Type":"Batteries",
  "Generation Capacity":297,
  "Connection Type":"Flexible",
  "Connected to DNO":True,
  "DNO":"Electricity North West",
  "Connection Point Voltage":"400",
  "Postcode":"",
  "Longitude":"-3.584902",
  "Latitude":"51.707079",
  "Nearest Node":"abha",
  "GSP":"ABHA_1",
  "GSP Group Id":"Eastern England",
  "Primary Despatch Phone Number":"7554456564",
  "Primary Despatch Phone Number Country":"United Kingdom",
  "Secondary Despatch Phone Number":7676567657,
  "Secondary Despatch Phone Number Country":"United Kingdom",
  "Despatch Fax Number":4645654643,
  "Despatch Fax Number Country":"United Kingdom",

  "Assets":[7294652834,8273624319,6244855231],
  "Are you a Supplier of Electricity?": "Yes",
  "DFS Initiation Measures": "Manually Instructed",
  "DFS Unit Type": "Domestic",
  "Unit Status": "Draft"
```

```

}

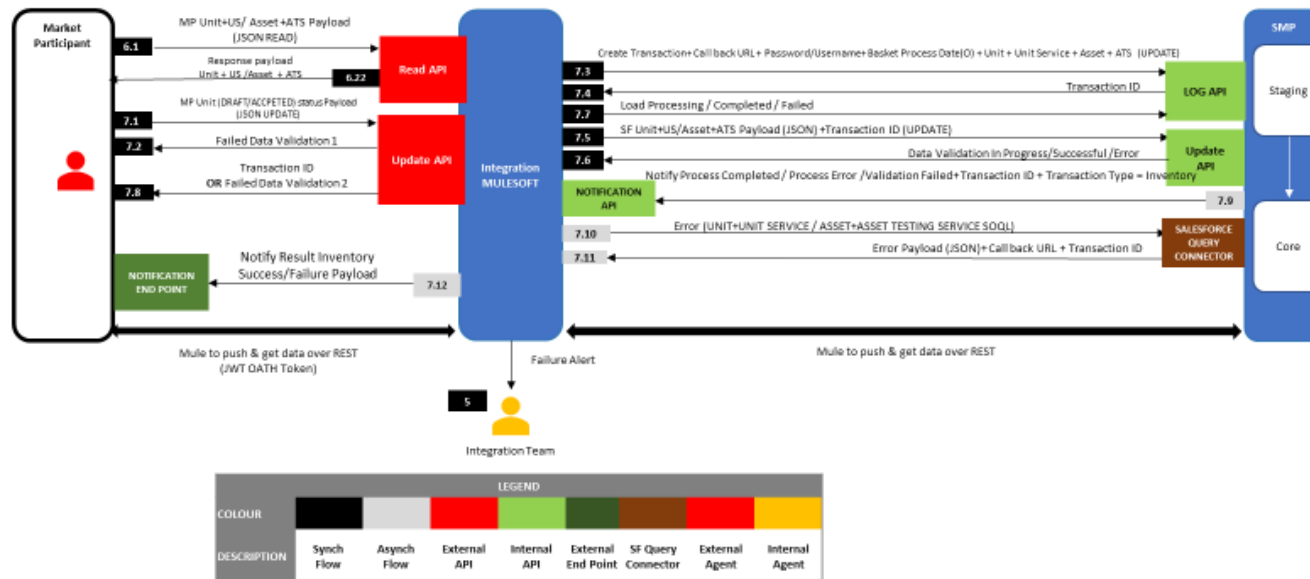
]

}

```

API: Update Inventory

Overview



#	Dataflow	Transfer Type	Payload
6.1	Submit Select Unit/Asset Request	Request	
6.22	Response Payload	Response	Asset Transaction JSON file providing: JSON file with Unit/Asset details
7.1	Submit Unit Transaction	Request	JSON Unit Payload
7.3	Transaction Response	Response	One of: <ul style="list-style-type: none"> Failed Data Validation Transaction ID
7.12	Notification	Request	Unit Transaction JSON file providing: <ul style="list-style-type: none"> Successful records with SMP Unit ID Unsuccessful records with errors

Specification

Request

The request is a simple JSON payload made up of 2 sections:

Key	Value
{ <Notify Block>,	Information required for SMP API to notify of transaction completion – see “Model – Notify” for key-value pairs contained in <Notify Block>

Asset Testing Service	Date Approved by ITE	Date	23/06/2022	DD/MM/YYYY
Asset Testing Service	Tested Capacity	Number(16,2)	50	XXXXXXXXXXXXXXXXXX.XX

If no change is detected in the payload compared to the pre-existing properties of the above fields, the transaction will be rejected with a status of 'Validation Failed'. If the changes made require manual approval by the NESO Registrations team and these are rejected, the transaction will also be rejected with a status of 'Validation Failed'.

Response

A successful response is a JSON payload made up of 2 sections

```
{
  <Transaction Block>,
  "Unit":
  {
    <Unit>,
    "Assets":
    [
      <Asset ID>,
      <Asset ID>,
      ...
    ]
  }
}
```

Information to notify of transaction information – see “Model – Transaction” for key-value pairs contained in <Transaction Block>

Optional Section containing information on the Unit that was to be updated into SMP. It will consist of one instance <Unit>. See “Model – Unit” for key-value pairs.

Complementary to this will be an Array of the Asset IDs which refer to the Assets included in the unit.

Notify

After an Update Inventory transaction has completed, the resulting notification will consist of a JSON payload made up of 1 section

Information to notify of transaction information – see “Model – Transaction” for key-value pairs contained in <Transaction Block>

Payload Models

Model – Notify

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
M	Notification Address	Text(255)	https://api.myco.com/SMPNotify/		
O	Notification Username	Text(255)	MyUsername		
O	Notification Password	Text(255)	MyPassword		
M	Action Type	Text (10)	“Update”	“Update”	
O	Basket Effective From Date	Date(YYYY-MM-DD)	“2030-07-01”	YYYY-MM-DD	Mandatory if Unit Status = “Accepted”. Not required if Unit Status = “Draft” or “Submitted”. Date value given must be \geq Today + 10. This will be the date updates to records in the payload will take effect from.
O	hasMore	Boolean	True	true, false	If selected as “true”, User will be able to submit another payload as part of the same transaction

Model – Update Unit

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values	Other Validation Rule
M	Unit Key	Number(15,0)	230000000000110		Must be associated with a Unit owned by the User's account
M	Unit Status	Picklist	Draft	Draft, Submitted, Accepted	If 'Submitted' is selected the Unit will be locked for editing prior to Approval by the NESO Registration team. Units where status = "Accepted" cannot be included in payloads with Units with other statuses
M	Assets	Array	0000106116	Comma Separated Values	Must be associated with the User's account
M	Applicable Market	Picklist	Balancing Services	See Appendix Picklist – Asset Markets	
M	Unit Name	Text(80)	Test_Unit111	Obtainable through Select Unit API	
O	Company Unique Identifier	Number	10007818	Obtainable through Select Unit API	
O	Unit ID	Text	ABCD-123	Obtainable through Select Unit API	
O	Account Name	Text	Test Limited	Obtainable through Select Unit API	
O	Company ID	Text(30)	08211691	Obtainable through Select Unit API	
M	Unit Type	Picklist(Multi-Select)	Demand Unit	See Appendix Picklist – Unit Types	If Applicable Market = "Demand Flexibility Service" then must be "Demand Unit"

M	Category	Picklist	Primary BMU	See Appendix Picklist – Categories	If Applicable Market = “Demand Flexibility Service” then must be “Non-BMU”
M	Effective From Date	Date	2025-10-28	YYYY-MM-DD	Must be today or later
O	Effective To Date	Date	2025-10-28	YYYY-MM-DD	Must be today or later
M	Fuel Type	Picklist	Batteries	See Appendix Picklist – Fuel Types	If Applicable Market = “Demand Flexibility Service” then must be “Load Response”
O	Other Fuel Type	Text(255)	My Fuel Type		Mandatory if Fuel Type = Other
O	Generation Capacity	Number(15, 3)	297	XXXXXXXXXXXXXXXXXX.YY	Unit: Mandatory if “Unit Type” = “Generation Unit”. Not applicable If Applicable Market = “Demand Flexibility Service”
O	Demand Capacity	Number(15, 3)	228	XXXXXXXXXXXXXXXXXX.YY	Unit: Mandatory if “Unit Type” = “Demand Unit”. Must be between ‘1’ and ‘100’ if Applicable Market = Demand Flexibility Service
O	Customer Base	Picklist	Domestic	See Appendix Picklist – Customer Base	Only required if Applicable Market = “Demand Flexibility Service”
O	Delivery Method	Text (100)	My Delivery Method		Only required if Applicable Market = “Demand Flexibility Service”
M	Connection Type	Picklist	Flexible	See Appendix Picklist – Connection Type	Not applicable If Applicable Market = “Demand Flexibility Service”
M	Connected to DNO	Picklist	true	See Appendix Picklist – Boolean	If Applicable Market = “Demand Flexibility Service” then must be true
O	DNO	Picklist	SP Energy Networks	See Appendix Picklist - DNO	Mandatory if “Connected to DNO” = true

O	Supplier of Electricity	Picklist	Yes, No	See Appendix Picklist – Are you a Supplier of Electricity	Only required if Applicable Market = "Demand Flexibility Service"
O	Connection Point Voltage	Picklist	400	See Appendix Picklist – Connection Point Voltage	Unit: KV Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	Other Connection Point Voltage	Number(16, 2)	100	XXXXXXXXXXXXXXXXXX.YY	Unit: KV Mandatory if "Connection Point Voltage" = "Other"
O	Postcode	Text(8)	RG1 2HT		Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	Latitude	Number(2,15)	-3.584902	+/- XXX.XXXXXXXXXXXXXXXXXX	Accepts -90 to +90 Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	Longitude	Number(3,15)	51.707079	+/- XX.XXXXXXXXXXXXXXXXXX	Accepts -180 to +180 Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	Nearest Node	Text(6)	abha		Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	GSP	Picklist (Multi-Select)	ABHA_1	See Appendix Picklist - GSP	Mandatory If Applicable Market = "Balancing Services" Not applicable If Applicable Market = "Demand Flexibility Service"
O	Other GSP	Text(10)	New GSP		Mandatory if "GSP" = "Others"

O	GSP Group	Picklist	Eastern England	See Appendix Picklist – GSP Group	Mandatory If Applicable Market = “Balancing Services” Not applicable If Applicable Market = “Demand Flexibility Service”
O	Primary Despatch Email Address	Email	hello@email.com		Mandatory if “Applicable Market” = “Demand Flexibility Service”
M	Primary Despatch Phone Country	Picklist	United Kingdom	See Appendix - Picklist Country (Telephone)	
M	Primary Despatch Phone Number	Text(10)	7554456564		
O	Secondary Despatch Email Address	Email	hello@email.com		Mandatory if “Applicable Market” = “Demand Flexibility Service”
M	Secondary Despatch Phone Country	Picklist	United Kingdom	See Appendix - Picklist Country (Telephone)	
M	Secondary Despatch Phone Number	Text(10)	7676567657		
O	Despatch Fax Number Country	Picklist	United Kingdom	See Appendix - Picklist Country (Telephone)	
O	Despatch Fax Number	Text(10)	7554456564		

Model – Unit Service

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
O	Active Network Management	Picklist	Yes	Yes; No	
M	Allocated Volume	Number (16, 2)	12	XXXXXXXXXXXXXXXXXX.XX	Must be ≥ the value of the Service Minimum Threshold of the relevant Service
O	Cease Time	Number (2, 0)	20	xx	
O	Time to Full Delivery (in mins)	Number (17, 1)	15	XXXXXXXXXXXXXXXXXXXX.X	
O	Maximum Utilisation Period	Number (2, 0)	5	XX	

O	Minimum Non Zero Time	Number (3, 0)	5	XXX
O	Operational Metering Available	Picklist	Yes	Yes; No
O	Ramp Down Rate	Number (16, 2)	20	XXXXXXXXXXXXXXXXXX.XX
O	Ramp Up Rate	Number (16, 2)	20	XXXXXXXXXXXXXXXXXX.XX
O	Recovery Period	Number (3, 0)	12	XXX
O	Response Time	Number (2, 0)	12	XX
O	Service End Date	Datetime	2032-02-01T00:00:00Z	YYYY-MM-DDTHH:MM:SSZ
O	Service Start Date	Datetime	2032-02-01T00:00:00Z	YYYY-MM-DDTHH:MM:SSZ
O	Service Status	Picklist	Approved	(Draft; Approved; Rejected; Withdrawn; Suspended; Incomplete; Submitted; Signature in progress; Acknowledged)
O	Unit of Measurement	Picklist	MW	(MW; MVAR)
O	Telephony Available from	Picklist	00:30;	See Appendix – Telephony Available From/To
O	Telephony Available to	Picklist	03:30;	See Appendix – Telephony Available From/To
O	Service Provision	Picklist	Generator	(Generator; Supplier; Through Zero)
O	Service Name	Picklist	Dynamic Containment HF	Values available from the Select Service Catalog API response - 'Ancillary Service Name' payload tag
O	Service Code	Text (3)	DCH	Values available from the Select Service Catalog API response - 'Service Code' payload tag
O	First Authorised Signatory	Text (20)	Smith Jones	
O	Second Authorised Signatory	Text (20)	Smith Jones	
O	Third Authorised Signatory	Text (20)	Smith Jones	

Model – Unit

This Model includes all fields in Model – Update Unit plus the following:

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload.

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
O	Account Name	Text(255)	My Company		
O	Error Message	Long Text		O	Error Message

Model – Transaction

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values	Other Validation Rule
O	Transaction ID	Text(10)	0000000418		Will be null if payload fails basic validation
M	Transaction Status	Text(10)	Process Completed	See Transaction State Diagram	
M	Transaction Type	Text(10)	Unit	“Unit”	
M	Action Type	Text(10)	Update	“Unit”	

Payload Samples

Request

Example 1: Unit in Draft Status

```
{
  "Notification Address": "https://api.mycompany.com/SMPNotification",
  "Notification Username": "MyUsername",
  "Notification Password": "MyPassword",
  "Action Type": "Update",
  "Units":
  {
    "Assets": [
      "0000106116"
    ],
    "Unit Key": 230000000000110,
    "Unit Status": "Draft",
    "Unit Type": "Generation Unit;Demand Unit",
    "Effective From Date": "2024-06-19",
    "Fuel Type": "Batteries",
    "Other Fuel Type": "ABC",
    "Generation Capacity": 297,
    "Demand Capacity": 200,
    "Customer Base": "Domestic",
    "Delivery Method": "Manually instructed",
    "Connection Type": "Flexible",
    "Connected to DNO": true,
    "DNO": "Electricity North West",
    "Connection Point Voltage": "Other",
    "Other Connection Point Voltage": 40.2,
    "Postcode": "RG1 7QE",
    "Longitude": "-3.584902",
    "Latitude": "51.707079",
    "Nearest Node": "abha",
    "GSP": "ABHA_1",
    "Other GSP": "",
    "GSP Group": "Eastern England",
    "Primary Despatch Email Address": "Contact1@xyztestenergy.co.uk",
    "Primary Despatch Phone Country": "United Kingdom",
    "Primary Despatch Phone Number": "7554456564",
    "Secondary Despatch Email Address": "Contact2@xyztestenergy.co.uk",
    "Secondary Despatch Phone Country": "United Kingdom",
    "Secondary Despatch Phone Number": "7676567657",
    "Despatch Fax Number Country": "United Kingdom",
    "Despatch Fax Number": "4645654643",
    "Category": "Primary BMU",
  }
}
```

Example 2: Unit in Accepted Status

```
{
  "Notification Address": "https://api.mycompany.com/SMPNotification",
  "Notification Username": "MyUsername",
  "Notification Password": "MyPassword",
  "Action Type": "Update",
  "hasMore": false,
```

```
"Basket Effective From Date": "2030-07-01"
"Units": [{
  "Unit Name": "My unit 1",
  "Account Name": "ABC LTD",
  "Company ID": "13390812",
  "Company Unique Identifier": "10007733",
  "Unit ID": "22222",
  "Applicable Market": "Balancing Services",
  "Unit Type": "Demand Unit",
  "Unit Status": "Accepted",
  "Effective From Date": "2024-03-29",
  "Effective To Date": null,
  "Fuel Type": "Biomass",
  "Other Fuel Type": null,
  "Generation Capacity": 0,
  "Demand Capacity": 123456719012345.33,
  "Customer Base": null,
  "Delivery Method": null,
  "Connection Type": "Firm",
  "Connected to DNO": false,
  "DNO": null,
  "Connection Point Voltage": "275",
  "Other Connection Point Voltage": null,
  "Postcode": "11111111",
  "Longitude": "-3.584902",
  "Latitude": "51.707079",
  "Nearest Node": "ABC",
  "GSP": "ABHA_1",
  "Other GSP": null,
  "GSP Group": "Eastern England",
  "Primary Despatch Email Address": null,
  "Secondary Despatch Email Address": null,
  "Primary Despatch Phone Number": "1111111111",
  "Primary Despatch Phone Country": "United Kingdom",
  "Secondary Despatch Phone Number": "1111111111",
  "Secondary Despatch Phone Country": "United Kingdom",
  "Despatch Fax Number Country": null,
  "Despatch Fax Number": "United Kingdom",
  "Category": "Primary BMU",
  "Supplier of Electricity": null,
  "Unit Key": "200000000000333",
  "Assets": [
    "0000106753"
  ],
  "Unit Services": [
    {
      "Active Network Management": "Yes",
      "Allocated Volume": 122,
      "Cease Time": 11,
      "Time to Full Delivery (in mins)": 1,
      "Maximum Utilisation Period": 11,
      "Minimum Non Zero Time": 11,
      "Operational Metering Available": "Yes",
      "Ramp Down Rate": null,
      "Ramp Up Rate": 0,
      "Recovery Period": 11,
      "Response Time": 1,
      "Service End Date": "2032-12-21 01:00:00",
      "Service Start Date": "2022-12-21 07:00:00",
      "Service Status": "Approved",
      "Unit of Measurement": "MW",
      "Telephony Available from": "00:30",
      "Telephony Available to": "00:30",
      "Service Provision": "Generator",
      "Service Name": "Negative Balancing Reserve",
      "Service Code": "NBR",
      "First Authorised Signatory": "Smith Jones",
```

```

                "Second Authorised Signatory": null,
                "Third Authorised Signatory": null
            }
        ]
    },
    {
        "Unit Name": "Secondary Unit 12",
        "Name": "JAQUARD LTD",
        "Company ID": "11012159",
        "Company Unique Identifier": "10007725",
        "Unit ID": "AG-02C",
        "Applicable Market": "Balancing Services",
        "Unit Type": "Generation Unit;Demand Unit",
        "Unit Status": "Accepted",
        "Effective From Date": "2024-03-30",
        "Effective To Date": null,
        "Fuel Type": "Biomass",
        "Other Fuel Type": null,
        "Generation Capacity": 80,
        "Demand Capacity": 80,
        "Customer Base": null,
        "Delivery Method": null,
        "Connection Type": "Firm",
        "Connected to DNO": false,
        "DNO": null,
        "Connection Point Voltage": null,
        "Other Connection Point Voltage": null,
        "Postcode": null,
        "Longitude": "-3.5904902",
        "Latitude": "4.5904902",
        "Nearest Node": null,
        "GSP": "ABHA_1",
        "Other GSP": null,
        "GSP Group": "London",
        "Primary Despatch Email Address": null,
        "Secondary Despatch Email Address": null,
        "Primary Despatch Phone Country": "United Kingdom",
        "Primary Despatch Phone Number": "9876543210",
        "Secondary Despatch Phone Country": "United Kingdom",
        "Secondary Despatch Phone Number": "9876543210",
        "Despatch Fax Number Country": null,
        "Despatch Fax Number": null,
        "Category": "Secondary BMU",
        "Supplier of Electricity": null,
        "Unit Key": "200000000000444",
        "Assets": [
            "0000106758"
        ],
        "Unit Services": [
            {
                "Active Network Management": null,
                "Allocated Volume": 90,
                "Cease Time": 90,
                "Time to Full Delivery (in mins)":1,
                "Maximum Utilisation Period": 90,
                "Minimum Non Zero Time": 90,
                "Operational Metering Available": "Yes",
                "Ramp Down Rate": 90,
                "Ramp Up Rate": 90,
                "Recovery Period": 90,
                "Response Time": 90,
                "Service End Date": "2032-02-01 02:00:00",
                "Service Start Date": "2022-02-01 07:00:00",
                "Service Status": "Submitted",
                "Unit of Measurement": "MW",
                "Telephony Available from": null,
                "Telephony Available to": null,
            }
        ]
    }
}

```

```

        "Service Provision": null,
        "Service Name": "Dynamic Regulation HF",
        "Service Code": "DRH",
        "First Authorised Signatory": null,
        "Second Authorised Signatory": null,
        "Third Authorised Signatory": "Steve J"
    }
]
},
{
    "Unit Name": "New unit 4567",
    "Account Name": "JAQUARD LTD",
    "Company ID": "11012159",
    "Company Unique Identifier": "10007725",
    "Unit ID": "AG-01B",
    "Applicable Market": "Balancing Services",
    "Unit Type": "Generation Unit;Demand Unit",
    "Unit Status": "Accepted",
    "Effective From Date": "2024-03-30",
    "Effective To Date": null,
    "Fuel Type": "Multi Fuel type",
    "Other Fuel Type": null,
    "Generation Capacity": 150,
    "Demand Capacity": 150,
    "Customer Base": null,
    "Delivery Method": null,
    "Connection Type": "Firm",
    "Connected to DNO": false,
    "DNO": null,
    "Connection Point Voltage": null,
    "Other Connection Point Voltage": null,
    "Postcode": null,
    "Longitude": null,
    "Latitude": null,
    "Nearest Node": null,
    "GSP": "ABHA_1",
    "Other GSP": null,
    "GSP Group": "East Midlands",
    "Primary Despatch Email Address": null,
    "Secondary Despatch Email Address": null,
    "Primary Despatch Phone Country": "Algeria",
    "Primary Despatch Phone Number": "9876543210",
    "Secondary Despatch Phone Country": "Afghanistan",
    "Secondary Despatch Phone Number": "9876543210",
    "Despatch Fax Number Country": null,
    "Despatch Fax Number": null,
    "Category": "Secondary BMU",
    "Supplier of Electricity": null,
    "Unit Key": "200000000000555",
    "Assets": [
        "0000106758",
        "0000106759"
    ],
    "Unit Services": [
        {
            "Active Network Management": "Yes",
            "Allocated Volume": 70,
            "Cease Time": null,
            "Time to Full Delivery (in mins)":1,
            "Maximum Utilisation Period": null,
            "Minimum Non Zero Time": null,
            "Operational Metering Available": "Yes",
            "Ramp Down Rate": null,
            "Ramp Up Rate": 0,
            "Recovery Period": null,
            "Response Time": null,
            "Service End Date": "2032-01-27 08:00:00",
        }
    ]
}

```



```

        "Service Start Date": "2023-01-27 02:00:00",
        "Service Status": "Submitted",
        "Unit of Measurement": "MW",
        "Telephony Available from": null,
        "Telephony Available to": null,
        "Service Provision": null,
        "Service Name": "Static FFR",
        "Service Code": "SFR",
        "First Authorised Signatory": null,
        "Second Authorised Signatory": "Smith Jones",
        "Third Authorised Signatory": null
    },
    {
        "Active Network Management": null,
        "Allocated Volume": 80,
        "Cease Time": 80,
        "Time to Full Delivery (in mins)":1,
        "Maximum Utilisation Period": 80,
        "Minimum Non Zero Time": 80,
        "Operational Metering Available": "No",
        "Ramp Down Rate": 80,
        "Ramp Up Rate": 80,
        "Recovery Period": 80,
        "Response Time": 80,
        "Service End Date": "2032-02-01 01:00:00",
        "Service Start Date": "2022-02-01 02:00:00",
        "Service Status": "Submitted",
        "Unit of Measurement": "MW",
        "Telephony Available from": null,
        "Telephony Available to": null,
        "Service Provision": null,
        "Service Name": "Dynamic Regulation HF",
        "Service Code": "DRH",
        "First Authorised Signatory": "John Smith",
        "Second Authorised Signatory": null,
        "Third Authorised Signatory": null
    }
]
},
"Assets":
[
    {
        "Asset Id": "0000106721",
        "Asset Name": "BS Test Asset 3",
        "Asset Owner Name": "PPSU LTD",
        "Asset Owner Account Unique Identifier": "10011725",
        "Asset Owner Company ID": "91019159",
        "Asset Agent Name": null,
        "Asset Agent Company ID": null,
        "Asset Agent Account Unique Identifier ": "10048332",
        "Asset Type": "Generation Unit",
        "Asset Status": "Versioned",
        "Applicable Market": "Balancing Services",
        "Effective From Date": "2024-03-05",
        "Effective To Date": "2024-04-03",
        "Fuel Type": "Biomass",
        "Other Fuel Type": null,
        "Generation Capacity": 60,
        "Demand Capacity": null,
        "Connection Type": "Firm",
        "Connected to DNO": false,
        "DNO": null,
        "DNO Unique Reference Number": null,
        "Connection Point Voltage": null,
        "Other Connection Point Voltage kV": null,
        "Connection Method": null,
    }
]

```

```
"Postcode": "12345",
"Longitude": 73.01,
"Latitude": 72.01,
"Nearest Node": "sdf",
"GSP": "ABHA_1",
"Other GSP": null,
"GSP Group ID": "East Midlands",
"Primary Despatch Phone Country": "United Kingdom",
"Primary Despatch Phone Number": "3333333333",
"Secondary Despatch Phone Country": "United Kingdom",
"Secondary Despatch Phone Number": "4444444444",
"Fax Despatch Phone Country": null,
"Fax Despatch Phone Number": null,
"Operational Metering Availability": "Yes",
"MPAN Import": "44444444444444",
"MPAN Export": null,
"Additional MPAN Import": null,
"Additional MPAN Export": null,
"Asset Size": null,
"Site Contact Name": null,
"Site Contact Number": null,
"Site Street Address": "St",
"Site City": "qw",
"Site State or County": "qwe",
"Site Country": "qw",
"Agent or Applicant Operational Email": null,
"Agent or Applicant Operational Phone": null,
"Asset Testing Service": null
},
{
  "Asset Id": "0000106721",
  "Asset Name": "BS Test Asset 3",
  "Asset Owner Name": "TEST LTD",
  "Asset Owner Account Unique Identifier": "105897125",
  "Asset Owner Company ID": "88012159",
  "Asset Agent Name": "N LIMITED",
  "Asset Agent Company ID": "88012158",
  "Asset Agent Account Unique Identifier": "10048311",
  "Asset Type": "Generation Unit",
  "Asset Status": "Accepted",
  "Applicable Market": "Balancing Services",
  "Effective From Date": "2024-04-04",
  "Effective To Date": "2024-04-05",
  "Fuel Type": "Biomass",
  "Other Fuel Type": null,
  "Generation Capacity": 60,
  "Demand Capacity": null,
  "Connection Type": "Firm",
  "Connected to DNO": false,
  "DNO": null,
  "DNO Unique Reference Number": null,
  "Connection Point Voltage": null,
  "Other Connection Point Voltage kV": null,
  "Connection Method": null,
  "Postcode": "12345",
  "Longitude": 73.01,
  "Latitude": 72.01,
  "Nearest Node": "sdf",
  "GSP": "ABHA_1",
  "Other GSP": null,
  "GSP Group ID": "East Midlands",
  "Primary Despatch Phone Country": "United Kingdom",
  "Primary Despatch Phone Number": "3333333333",
  "Secondary Despatch Phone Country": "United Kingdom",
  "Secondary Despatch Phone Number": "4444444444",
  "Fax Despatch Phone Country": null,
  "Fax Despatch Phone Number": null,
```

```
"Operational Metering Availability": "Yes",
"MPAN Import": "44444444444444",
"MPAN Export": null,
"Additional MPAN Import": null,
"Additional MPAN Export": null,
"Asset Size": null,
"Site Contact Name": null,
"Site Contact Number": null,
"Site Street Address": "St",
"Site City": "qw",
"Site State or County": "qwe",
"Site Country": "qw",
"Agent or Applicant Operational Email": null,
"Agent or Applicant Operational Phone": null,
"Asset Testing Service": null
},
{
"Asset Id": "0000106759",
"Asset Name": "Asset 2 29 Mar",
"Asset Owner Name": "JAQUARD LTD",
"Asset Owner Account Unique Identifier": "80007725",
"Asset Owner Company ID": 811012159,
"Asset Agent Name": null,
"Asset Agent Company ID": null,
"Asset Agent Account Unique Identifier": "10048234",
"Asset Type": "Generation Unit;Demand Unit",
"Asset Status": "Accepted",
"Applicable Market": "Balancing Services",
"Effective From Date": "2024-03-29",
"Effective To Date": null,
"Fuel Type": "CCGT",
"Other Fuel Type": null,
"Generation Capacity": 70,
"Demand Capacity": 70,
"Connection Type": "Firm",
"Connected to DNO": false,
"DNO": null,
"DNO Unique Reference Number": null,
"Connection Point Voltage": null,
"Other Connection Point Voltage kV": null,
"Connection Method": null,
"Postcode": "70",
"Longitude": 70,
"Latitude": 70,
"Nearest Node": "70",
"GSP": "ABTH_1",
"Other GSP": null,
"GSP Group ID": "East Midlands",
"Primary Despatch Phone Country": "United Kingdom",
"Primary Despatch Phone Number": "9876543210",
"Secondary Despatch Phone Country": "United Kingdom",
"Secondary Despatch Phone Number": "9876543210",
"Fax Despatch Phone Country": null,
"Fax Despatch Phone Number": null,
"Operational Metering Availability": "Yes",
"MPAN Import": "77777777777777",
"MPAN Export": null,
"Additional MPAN Import": null,
"Additional MPAN Export": null,
"Asset Size": null,
"Site Contact Name": null,
"Site Contact Number": null,
"Site Street Address": "70",
"Site City": "70",
"Site State or County": "70",
"Site Country": "70",
"Agent or Applicant Operational Email": null,
```

```

    "Agent or Applicant Operational Phone": null,
    "Asset Testing Service": [
      {
        "Date Approved by ITE": "2024-03-30",
        "Service Name": "Dynamic Regulation HF",
        "Service Code": "DRH",
        "Tested Capacity": 90,
        "Unit of Measurement": "MW"
      },
      {
        "Date Approved by ITE": "2024-03-30",
        "Service Name": "Static FFR",
        "Service Code": "SFR",
        "Tested Capacity": 80,
        "Unit of Measurement": "MW"
      }
    ]
  }
}

```

Response - Success

```

{
  "Transaction ID":"0000000843",
  "Transaction Status":"Load Completed",
  "Transaction Type":"Inventory",

  "Action Type":"Update"
}

```

Response - Failure

```

{
  "Transaction ID":null,
  "Transaction Status":"Load Failed",
  "Transaction Type":"Inventory",

  "Action Type":"Update",
  "Unit":
  {
    "Error Message":"Postcode: Missing Mandatory Field"
  }
}

```

Notification - Failure

```

{
  {
    "Transaction Type": "Inventory",
    "Transaction ID":"0000063923",
    "Transaction Status":"Process Error",
    "Action Type":"Update",
  }
}

```

```

"Units":
  [
    {
      "Unit Key": "2000000000000333",
      "Error Message": "Unit Name: Missing Mandatory Field",
      "Unit Service":
        [
          {
            "Unit Service Name": "MyUnitService01",
            "Error Message": "Unit Service Name: Missing Mandatory Field"
          }
        ]
    }
  ],
  "Assets": [
    {
      "Asset Id": "0000106721",
      "Error Message": "Operational Metering Availability: Missing Mandatory Field",
      "Asset Testing Services":
        [
          {
            "Asset Testing Service Name": "MyUnitService01",
            "Error Message": "Asset Testing Service Name: Missing Mandatory Field"
          }
        ]
    }
  ]
}

```

Notification - Success

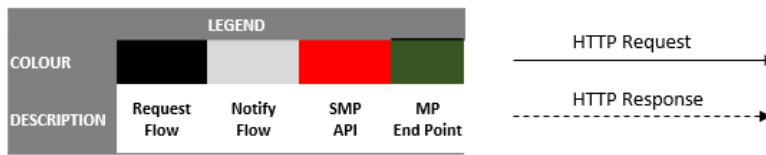
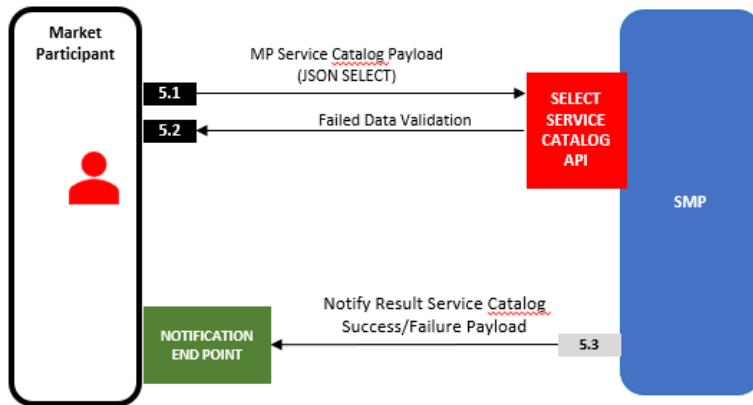
```

{
  "Transaction Type": "Inventory",
  "Transaction ID": "0000029643",
  "Transaction Status": "Process Completed",
  "Action Type": "Update"
}

```

API: Select Service Catalog

Overview



#	Dataflow	Transfer Type	Payload
5.1	Submit Service Catalog Request	Request	
5.2	Transaction Response	Response	<ul style="list-style-type: none"> Transaction ID
5.3	Notification	Request	Service Catalog Transaction JSON file providing: <ul style="list-style-type: none"> JSON file with Service Catalog details

Payload Samples

Notification - Success

```

{
  "Transaction Type": "Service Catalog",
  "Transaction Status": "Success",
  "Action Type": "Select",
  "Service Catalog": [
    {
      "Ancillary Service Name": "RDP MW Dispatch",
      "Service Effective From": "2022-12-21",
      "Service Effective To": "2032-12-21",
      "Service Type": "Reserve",
      "Service Code": "RDP"
    }
  ],
  "Ancillary Service Name": "Dynamic Moderation HF",
  "Service Effective From": "2022-12-21",
}
  
```

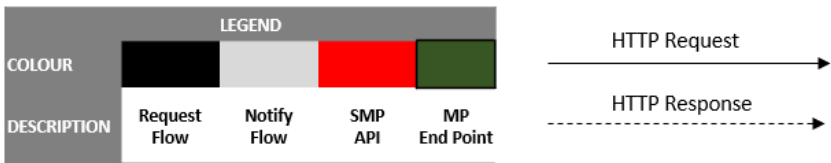
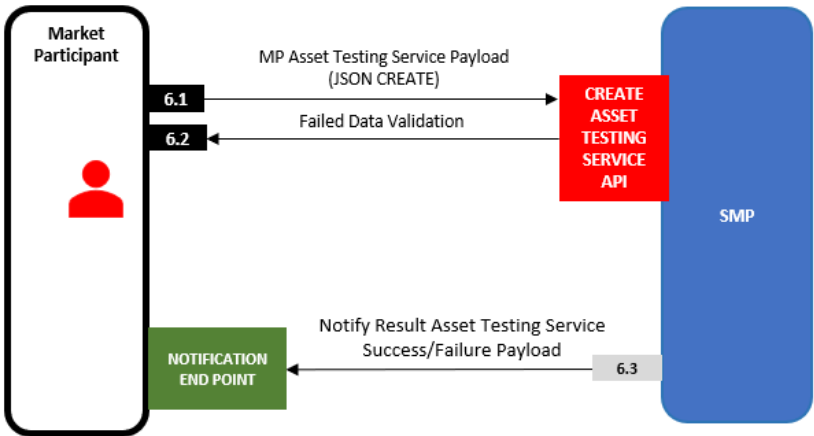
```

    "Service Effective To": "2022-12-21",
    "Service Type": "Response",
    "Service Code": "DMH"
  }
]
}

```

API: Create Asset Testing Service

Overview



#	Dataflow	Transfer Type	Payload
6.1	Submit Asset Testing Service Transaction	Request	JSON Asset Payload
6.2	Transaction Response	Response	One of: <ul style="list-style-type: none"> Failed Data Validation Transaction ID

		Asset Testing Service Transaction JSON file providing:
6.3	Notification Request	<ul style="list-style-type: none"> • Successful records with SMP Asset Testing Service ID • Unsuccessful records with errors

Specification

Request

The request is a simple JSON payload made up of 2 sections:

Key	Value
<pre>{ <Notify Block>, "Asset Testing Services": [{<Create Asset Testing Service>}, {<Create Asset Testing Service >}] }</pre>	<p>Information required for SMP API to notify of transaction completion – see “Model – Notify” for key-value pairs contained in <Notify Block> Section containing information on the Assets to be loaded into SMP. It will consist of one or more instance of <Create Asset Testing Service >. See “Model – Create Asset Testing Service” for key-value pairs.</p>

Response

A successful response is a JSON payload made up of 2 sections

<pre>{ <Transaction Block>, "Asset Testing Services": [{<Asset Testing Service Block>}, {<Asset Testing Service Block>}] }</pre>	<p>Information to notify of transaction information – see “Model – Transaction” for key-value pairs contained in <Transaction Block></p> <p>Optional Section containing information on the Asset Testing Services to be loaded into SMP. It will consist of one or more instance of <Asset Testing Service Block>. See “Model – Create Asset” for key-value pairs.</p>
---	--

Notify

After a Create Asset Testing Service transaction has completed, the resulting notification will consist of a JSON payload made up of 2 sections

<pre>{ <Transaction Block>, "Asset Testing Services": [{<Asset Testing Service Block>}, {<Asset Testing Service Block>}] }</pre>	<p>Information to notify of transaction information – see “Model – Transaction” for key-value pairs contained in <Transaction Block> Section containing information on the Asset Testing Services to be loaded into SMP. It will consist of one or more instance of <Asset Testing Service Block>. See “Model – Asset” for key-value pairs.</p>
---	---

}

Payload Models

Model – Notify

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
M	Notification Address	Text(255)	https://api.myco.com/SMPNotify/		
O	Notification Username	Text(255)	MyUsername		
O	Notification Password	Text(255)	MyPassword		

Model – Create Asset Testing Service

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values / Pattern	Other Validation Rule
M	Asset Id	Text(10)	7294652834		
M	Date				
M	ApprovedDate by ITE		23/06/2022	DD/MM/YYYY	
M	Service Name	Text (255)	Dynamic Containment LF	Obtainable through 'Select Service Catalog' API	
M	Tested Capacity	Number(16,2)	156.2		

Model – Transaction

INDEX: M/O specifies if it is Mandatory or Optional to provide value in the Payload

M/O	Tag	Data Type	Example	Allowed Values	Other Validation Rule
-----	-----	-----------	---------	----------------	-----------------------

O	Transaction ID	Text(10)	0000000418	Will be null if payload fails basic validation
M	Transaction Status	Text(10)	Process Completed	See Transaction State Diagram
M	Transaction Type	Text(10)	Asset Testing Service	"Asset", "Unit", "Asset Testing Service"
M	Action Type	Text(10)	Create	"Create"

Payload Samples

Request

```
{
  "Notification Address":"https://api.mycompany.com/SMPNotification",
  "Notification Username":"MyUsername",
  "Notification Password":"MyPassword",
  "Action Type":"Create",
```

```

"Asset Testing Service": [{
  "Asset ID": "0000101618",
  "Tested Capacity": "5",
  "Date Approved by ITE": "2023-05-10",
  "Service Name": "Dynamic Containment LF"
},{
  "Asset ID": "0000101619",
  "Tested Capacity": "90",
  "Date Approved by ITE": "2023-03-01",
  "Service Name": "Dynamic Moderation LF"
},{
  "Asset ID": "0000101638",
  "Tested Capacity": "50",
  "Date Approved by ITE": "2023-01-30",
  "Service Name": "Dynamic Regulation HF"
}]
}

```

Response - Success

```

{
  "Transaction ID":"0000000912",
  "Transaction Status":"Load Completed",
  "Transaction Type":"Asset Testing Service",
  "Action Type":"Create"
}

```

Response - Failure

```

{
  "Transaction ID":"0000000418",
  "Transaction Status":"Load Failed",
  "Transaction Type":"Asset Testing Service",
  "Action Type":"Create",
  "Asset Testing Service":[
    {
      "Asset ID": "0000101618",
      "Service Name":"Dynamic Containment LF",
      "Error Message":"Service Name: Missing Mandatory Field"
    },
    {
      "Asset ID": "0000101619",
      "Service Name":"Dynamic Moderation LF",
      "Error Message":"Service Name: Missing Mandatory Field"
    }
  ]
}

```

Notification - Failure

```

{
  "Transaction ID":"0000000418",
  "Transaction Status":"Process Completed",
  "Transaction Type":"Asset Testing Service",
  "Action Type":"Create",
  "Asset Testing Services":
  {
    "Asset ID": "0000101618",
    "Tested Capacity": "5",
    "Date Approved by ITE": "2023-05-10",
    "Service Name": "Dynamic Containment LF",
    "Error Message":"Service Name: Missing Mandatory Field"
  }
}

```

Notification - Success

```
"Transaction ID": "0000000418",
"Transaction Status": "Process Completed",
"Transaction Type": "Asset Testing Service",
"Action Type": "Create",
"Asset Testing Service": [
  {
    "Asset ID": "0000101618",
    "Tested Capacity": "5",
    "Date Approved by ITE": "2023-05-10",
    "Service Name": "Dynamic Containment LF"
  }
  {
    "Asset ID": "0000101619",
    "Tested Capacity": "90",
    "Date Approved by ITE": "2023-03-01",
    "Service Name": "Dynamic Moderation LF"
  }
]
}
```

Appendix A: Picklist Tables

Boolean

Allowed Values
true, false

Operational Metering Availability

Allowed Values
Yes, No

Asset Markets

Allowed Values
Balancing Services, RDP MW Dispatch

Unit Markets

Allowed Values
Balancing Services, Demand Flexibility Service

Unit Types

Allowed Values
Generation Unit, Demand Unit

Customer Base

Allowed Values
Domestic, I & C (Microbusiness), Both, Other

Fuel Type

Allowed Values

Batteries, Batteries, Biomass, BM (SVA/VLP/Battery), CCGT, Coal, Diesel, DSF: Distributed generation (export), DSF: Distributed generation (on-site), DSF: Storage (export), DSF: Storage (on-site), Gas Reciprocating Engines, Interconnector, Load Response, Multi Fuel type, Non-Pump Storage Hydro, Nuclear, OCGT, Pump Storage, Solar, Wind, Other

Categories

Allowed Values

Primary BMU, Secondary BMU, Additional Supplier BMU, Non-BMU

DFS Unit Type

Allowed Values

Domestic, Industrial and Commercial, Hybrid

DFS Initiation Measures

Allowed Values

Manually instructed, Directly instructable, Both

Are you a Supplier of Electricity

Allowed Values

Yes, No

Connection Type

Allowed Values

Firm, Flexible

Connection Method

Allowed Values

Distribution, Private Lines, Transmission

DNO

Allowed Values

Electricity North West, ESB Networks, Northern Ireland Electricity Networks, Northern Powergrid, SP Energy Networks, Scottish and Southern Electricity Networks, UK Power Networks, National Grid Electricity Distribution

Connection Point Voltage

Allowed Values

400, 275, 132, 33, 11, 6.6, 3.3, Other

GSP

Allowed Values

ABHA_1, ABNE_3, ABTH_1, ALDW_31, ALDW_32, ALNE_3, ALVE_1, AMEM_1, ARBR_3, ARMO_3, AXMI_1, AYRR_3, BAGA_3, BAIN_3, BARK_3, BEAU_3, BEDD_1, BERW_3, BESW_1, BICF_1, BIRK_1, BISW_1, BLYT_6, BOAG_3, BOLN_1, BONN_3, BOTW_1, BPGR_3, BRAC_3, BRAI_1, BRAP_3, BRAW_1, BRED_1, BRFO_1, BRID_3, BRIM_1, BRKI_1, BRLI_1, BRL3_1, BRLE_2, BROA_3, BROR_3, BROX_3, BRWA_1, BUMU_3, BURW_1, BUSH_1, BUST_1, CAAD_3, CAML_6, CANT_1, CAPE_1, CARI_1, CARE_1, CARR_12, CASK_3, CASS_3, CATY_3, CEAN_5, CELL_1, CHAP_3, CHAR_3, CHAS_3, CHIC_1, CHS2_1, CHS3_1, CHTE_1, CITR_1, CLAC_5, CLAY_3, CLYM_3, COAT_3, COCK_3, COUA_3, COVE_1, COWL_1, COYL_3, CRAI_3, CREB_1, CROO_3, CULJ_3, CUMB_3, CUPA_3, CURR_5, DEES_1, DEVM_3, DEVO_3, DEWP_3, DOUN_3, DRAK_1, DRAX_1, DRCR_3, DRUM_3, DUBE_3, DUDH_3, DUGR_3, DUMF_3, DUMF_5, DUNB_3, DUNF_3, DUNO_3, DYCE_3, EALI_6, EASO_1, ECCL_3, ECLA_1, EERH_3, EKIL_3, EKIS_3, ELDE_3, ELGI_3, ELLA_1, ELS2_1, ELSA_1, ENDE_1, ERSK_3, EXET_1, FASN_3, FAUG_3, FAWL_1, FECK_6, FERB_1, FERB_6, FIDD_3, FIDF_1, FLEE_1, FRAS_3, FROD_1, FWIL_3, GALA_3, GIFF_3, GLAG_3, GLLU_3, GLNI_3, GLOU_1, GLRO_3, GORG_3, GOVA_3, GRAN_6,

GREN_1, GRIW_1, GRMO_3, GRTO_6, GRUB_3, HACK_6, HAGR_3,
HARI_1, HARK_13, HARM_6, HAWI_3, HAWP_6, HCKI_1, HELE_3, HEYS_1,
HUNF_3, HURS_1, HUTT_1, IMPP_3, INCE_1, INDQ_1, INKE_3, INNE_3,
IROA_1, IRON_1, IVER_1, IVER_6, JOHN_3, JORD_3, KAIM_3, KEAD_1,
KEAR_1, KEAR_3, KEIT_3, KEMI_1, KIBY_1, KIER_3, KIIN_3, KILB_3, KILB_5,
KILO_3, KILS_3, KILT_3, KILW_3, KINO_1, KINT_3, KIRK_1, KITW_1, LACK_6,
LAIR_3, LALE_1, LAND_1, LEGA_1, LEMR_1, LEVE_3, LING_3, LINM_3,
LINT_6, LISD_1, LITT_1, LODR_6, LOVE_1, LUNA_3, LYND_3, MACC_2,
MACD_3, MANN_1, MAYB_3, MEAD_1, MELK_1, MILC_3, MILH_1, MITY_1,
MOSW_3, MYBS_3, NAIR_3, NEAR_3, NECH_11, NECH_12, NEEP_3,
NETS_3, NEWI_1, NEWX_6, NFLE_1, NHYD_6, NINF_1, NORL_3, NORT_2,
NORW_1, NURS_1, OCKH_1, OFFE_3, OLDB_1, OSBA_1, PADI_1, PAIS_3,
PART_3, PEHG_3, PEHS_5, PELH_1, PEMB_1, PENE_1, PENN_1, PENT_1,
PENW_1, PERS_3, PITS_31, PITS_32, POOB_3, POPP_3, PORA_3, PORD_3,
PYLE_1, RAIN_1, RANN_3, RASS_1, RATS_1, RAVE_3, RAYL_1, REBR_3,
REDH_3, REDM_3, RICH_1, ROCH_1, ROCK_1, RUGE_1, RYEH_1, SACO_3,
SALH_1, SANX_3, SEAB_1, SELI_1, SELL_1, SFEG_5, SFEM_5, SFIL_3,
SHEC_3, SHEET, SHIN_5, SHRE_1, SHRU_3, SIGH_3, SJOW_1, SKLG_1,
SLOY_5, SMAN_1, SPAV_3, SPEN_1, SSSI_3, STAH_1, STAL_1, STAY_1,
STEW_1, STHA_3, STIR_3, STLE_3, STMO_1, STOB_1, STRI_3, SUND_1,
SWAN_1, SYDI_1, TARL_3, TAUN_1, TAYN_3, TELR_3, TEMP_3, THOM_6,
THSO_3, THUR_6, TILB_11, TILB_12, TINP_31, TINP_32, TODP_6, TONG_5,
TOTT_1, TRAW_1, TREM_3, TUMB_3, TYNE_1, TYNE_5, UPPB_1, UPPB_3,
USKM_1, USKM_3, WALP_1, WARL_1, WASF_1, WATS_1, WBOL_6, WBUR_1,
WFIE_3, WGEO_3, WHAM_1, WHGA_1, WHHO_3, WHSO_2, WHTL_3,
WIBA_3, WIEN_1, WILL_1, WILT_6, WIM2_1, WIMB_11, WIOW_3, WISD_1,
WISD_6, WISH_3, WMEL_1, WOHI_3, WTHU_3, WWEY_1, WYLF_1,
WYMO_1, Others

GSP Group

Allowed Values

Eastern England, East Midlands, London, Merseyside and Northern
Wales, West Midlands, North Eastern England, North Western England,
Northern Scotland, Southern Scotland, South Eastern England,
Southern England, Southern Wales, South Western England, Yorkshire

Country (Telephone)

Allowed Values

United Kingdom, Afghanistan, Albania, Algeria, American Samoa, Andorra, Angola, Anguilla, Antarctica, Antigua and Barbuda, Argentina, Armenia, Aruba, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Belize, Benin, Bermuda, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, British Indian Ocean Territory, British Virgin Islands, Brunei, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Canada, Cape Verde, Cayman Islands, Central African Republic, Chad, Chile, China, Christmas Island, Cocos Islands, Colombia, Comoros, Cook Islands, Costa Rica, Croatia, Cuba, Curacao, Cyprus, Czech Republic, Democratic Republic of the Congo, Denmark, Djibouti, Dominica, Dominican Republic (+1809), Dominican Republic (+1829), Dominican Republic (+1849), East Timor, Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Falkland Islands, Faroe Islands, Fiji, Finland, France, French Polynesia, Gabon, Gambia, Georgia, Germany, Ghana, Gibraltar, Greece, Greenland, Grenada, Guam, Guatemala, Guernsey, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hong Kong, Hungary, Iceland, India, Indonesia, Iran, Iraq, Ireland, Isle of Man, Israel, Italy, Ivory Coast, Jamaica, Japan, Jersey, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo, Kuwait, Kyrgyzstan, Laos, Latvia, Lebanon, Lesotho, Liberia, Libya, Liechtenstein, Lithuania, Luxembourg, Macao, Macedonia, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Marshall Islands, Mauritania, Mauritius, Mayotte, Mexico, Micronesia, Moldova, Monaco, Mongolia, Montenegro, Montserrat, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, Netherlands, Netherlands Antilles, New Caledonia, New Zealand, Nicaragua, Niger, Nigeria, Niue, North Korea, Northern Mariana Islands, Norway, Oman, Pakistan, Palau, Palestine, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Pitcairn, Poland, Portugal, Puerto Rico (+1787), Puerto Rico (+1939), Qatar, Republic of the Congo, Reunion, Romania, Russia, Rwanda, Saint Barthelemy, Saint Helena, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Pierre and Miquelon, Saint Vincent and the Grenadines, Samoa, San Marino, Sao Tome and Principe, Saudi Arabia, Senegal, Serbia, Seychelles, Sierra Leone, Singapore, Sint Maarten, Slovakia, Slovenia, Solomon

Islands, Somalia, South Africa, South Korea, South Sudan, Spain, Sri Lanka, Sudan, Suriname, Svalbard and Jan Mayen, Swaziland, Sweden, Switzerland, Syria, Taiwan, Tajikistan, Tanzania, Thailand, Togo, Tokelau, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Turks and Caicos Islands, Tuvalu, U.S. Virgin Islands, Uganda, Ukraine, United Arab Emirates, United States, Uzbekistan, Vanuatu, Vatican, Venezuela, Vietnam, Wallis and Futuna, Western Sahara, Yemen, Zambia, Zimbabwe

Telephone Available From/To

Allowed Values

Appendix B: General Errors

When errors are encountered in an API request, a technical error payload will be sent. The table below includes the list of error codes, descriptions and details which can be received.

HTTPS Error Code	Issue	Details
401 Unauthorized	Invalid token	<p>The token has failed validation. This may be for one of the following reasons:</p> <ul style="list-style-type: none">• Token was not generated by NESO• Token has been modified so the signature fails validation• Token has expired• Token is incomplete
400 Bad Request	Invalid Grant	<p>The token provided does not have a valid grant for this application. This may be because you haven't been granted access privileges for this API. Or Username or password Incorrect</p>
400 Bad Request	Bad Request	<p>If there is issue with the Payload, e.g. Mandatory fields are missing or wrong, e.g.</p> <ul style="list-style-type: none">• Invalid datatype• Parameter has invalid length/format
404 Not Found	Not Found	<p>Wrong URL used</p>
500 Internal Server Error	Internal Server Error	<p>An unknown error has occurred within the API Endpoint. If this recurs, please contact support</p>

Appendix C: Version History

Version	Date	Scope of Change
1.00	25 th Nov 2022	First External Release
1.00a	1 st Dec 2022	Update to Diagram Keys
1.01	6 th Jan 2023	Minor updates
1.01a	24 th Jan 2023	Updates to Data Models and Payload Samples
1.02	20 th Jun 2023	New APIs for Select Service Catalog and Create Asset Testing Services
1.03	8 th Apr 2024	New APIs for Select Asset and Unit
1.04	29 th Jul 2024	New API for Update Inventory
1.05	19 th Sep 2024	Rebranded for NESO