



SSEN FLEXIBILITY SERVICES

Flexible Power – Provider User Guide

Version 1.1, 15/08/2025



Scottish & Southern
Electricity Networks



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1. INTRODUCTION

1.1 Purpose of the user guide

This document aims to provide SSEN's Flexibility Service Provider (FSP) users with step-by-step instructions for using the Flexible Power Platform.

1.2 Background

Flexible Power is a platform used by SSEN and other network operators for the scheduling, dispatch and settlement of Flexibility Services. Whilst it is not mandatory for FSPs to onboard to Flexible Power, the majority of SSEN flexibility requirements are dispatched via Flexible Power, and FSPs who have not onboarded may not be used for those services, and may not be allowed to take part in SSEN short term markets.

2. GETTING STARTED

2.1 SSEN Technical Onboarding

FSPs who have signed an Overarching Agreement with SSEN will be contacted by SSEN to begin the technical onboarding process, including Flexible Power onboarding. If the FSP does not yet have an IT system or any operational assets, onboarding may be deferred until a more suitable appropriate time.

FSPs will initially be assigned to a sandbox zone on the production system in order to carry out integration testing.

2.2 Creating User Accounts

SSEN will arrange for the creation of user accounts on flexible power and specific configuration for the FSP. For user accounts, the following company and user details need to be provided to SSEN.

Flexible Power – FSP Account:

- Company Name
- Company Registration Number (Companies House)
- Company VAT Number
- Company Billing Address

Flexible Power - FSP User Account:

- User Name
- User email address

2.3 Setting up a password



Once a user account has been created, an invitation email is sent to the user's email address. Users must click on the link in the email to activate the account. This link is valid for 24 hours; after this period, the user will have to go to the login page, click "Forgot your password" and follow the prompts to generate an email with a new reset password link. The link opens a page which prompts the user to create a new password.

2.4 Two-factor authentication set up (First-time login)

Login to Flexible Power at <https://flexiblepowerportal.co.uk/>. On first time login, you will be directed to the authentication setup page as shown below:

Flexible Power

Set Up 2-Factor Authentication

Please scan the QR code using Google Authenticator, Microsoft Authenticator, or a similar app:

If you have problems scanning the QR code, then you can manually enter this: 2U4T8TUKT3HMCJ2CKV3VR8SU266656H1

The above codes are secret and must not be shared.

Enter the 6 digit code from your Authenticator app to complete 2FA set up:

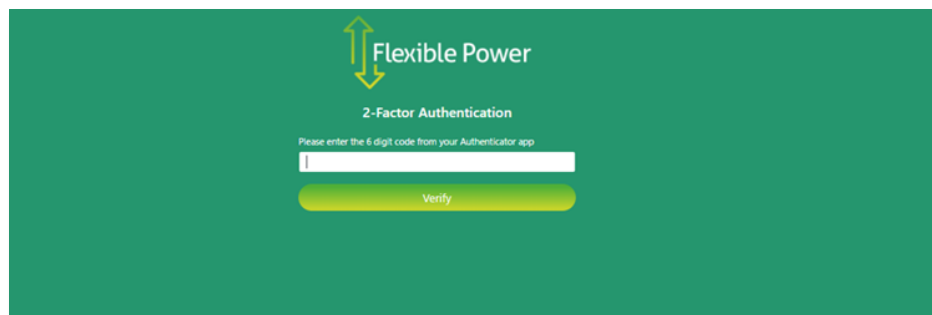
Verify

1. A QR code will be displayed on the page. Open your preferred authentication app (e.g., Google Authenticator, Microsoft Authenticator) on your mobile phone and use the app to scan the QR code.
2. Once the QR code is scanned, your authentication app will generate a six-digit code. Enter the code in the box provided on the page.
3. Click the 'Verify' button after entering the code. Upon successful verification, you will be granted access to your account. If the verification fails, double-check the code and ensure it is entered before it expires (codes are time-sensitive).

2.5 Two-factor authentication (Subsequent logins)

Each subsequent login requires the user to enter the code from their authenticator app.

1. Log in with your user email and password at <https://flexiblepowerportal.co.uk/>.
2. Open your authentication app on your mobile device.
3. Retrieve the code displayed for your account.
4. Enter the code in the box provided on the log in page and click 'Verify'.



If a user deletes the account profile from their authenticator app, they will need to contact FlexibleServices@sse.com to request reset of authentication and will need to complete the two-factor authentication set up again.

3. MAIN FEATURES

3.1 API integration self-service

FSPs are strongly recommended to integrate with the Flexible Power Participant API (V2). The API is used to send advance schedules, start/stop signals, and to collect metering data. Other useful data in the platform, such as accepted availability and invoices/statements are also available via the API.

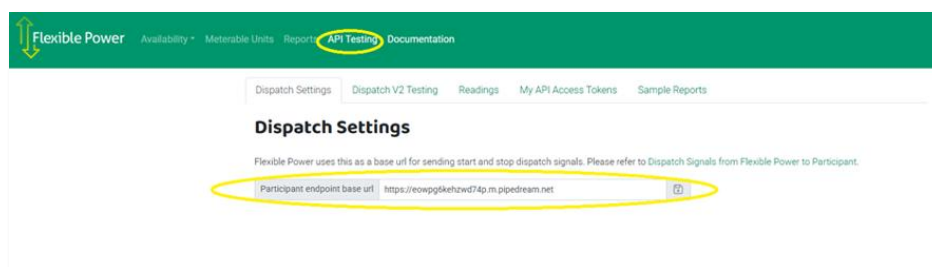
Whilst it is possible to configure Flexible Power for non-API operation (using email dispatch and FSP upload of metering data via CSV files), API integration is more secure, reliable and scalable. If an FSP cannot integrate via API, SSEN may in some circumstances allow non-API operation.

API specifications, including the technical requirements on FSPs, can be found on the Flexible Power portal at <https://flexiblepowerportal.co.uk/docs/public>. Once FSPs have created their API endpoints, the 'API Testing' section in the Flexible Power Portal can be used to test interactions in both directions.

'API Testing' has the following features:

Dispatch Settings:

Click on the 'API Testing' tab at the top. Then, click on 'Dispatch Settings'. Enter the 'Participant endpoint base url'. This is the URL that Flexible Power will send the dispatch signals to and must be configured by the FSP in their system.



Dispatch Testing:

Once the supplier has configured the API endpoint in their systems, this feature is the way to test the dispatch signal using the Flexible Power Platform.



1. Click on the 'API Testing' tab at the top and then click on 'Dispatch V2 Testing'.

2. Enter a test 'Dispatch ID', 'Instruction' type from the drop-down menu, Start and End times, power change and Meterable Unit IDs. The MU IDs for the FSPs assets can be found on the Meterable Units page. You can enter one or more (comma separated) IDs. Then click on 'Send V2 Message'. These signals are sent to the url configured in the 'Dispatch Settings' tab.

3. Once the dispatch signal is sent, a results box appears as shown below. The top line in the black box is the Participant endpoint url (as inputted in the 'Dispatch Settings' tab), the second line are the parameters submitted (Dispatch ID, Dispatch Instruction, Dispatch start and Dispatch Stop Times, Power Change and Meterable Unit IDs) and the next line suggests if the signal was a success or not.

Readings:



This feature enables FSPs to test that readings submitted via the readings API (or CSV upload) are being accepted and stored correctly. Flexible Power supports per-minute power readings (kW) or half hour energy readings (kWh).

1. Click on the 'API Testing' tab at the top and then click on the 'Readings' tab. The table on this page shows the latest 60 readings that the platform has received for each Meterable Unit. This feature can be tested to see if the readings are received 'minute-by-minute' or 'half-hourly' based on the set up. Click on the 'Refresh readings' button to refresh the Meter Readings.

Flexible Power Availability Meterable Units Reports **API Testing** Documentation

Dispatch Settings Dispatch V2 Testing **Readings** My API Access Tokens Sample Reports

Readings

The latest 60 readings are shown below to help test your integration with the metering api. Please refer to Data from Participant to Flexible Power.

Refresh readings **Upload CSV**

Timestamp	Zone	Meterable Unit ID	Power (kW)
2025-02-01T02:00:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:59:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:58:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:57:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:56:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:55:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:54:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99

2. Below the table an example curl command for posting a meter reading is provided, which may be of help to FSPs for testing.
3. FSPs can also test the upload of metering data as CSV files. Example files for per minute power readings or half hourly energy readings can be found at <https://flexiblepowerportal.co.uk/docs/public/faq.html>

Flexible Power Availability Meterable Units Reports **API Testing** Documentation

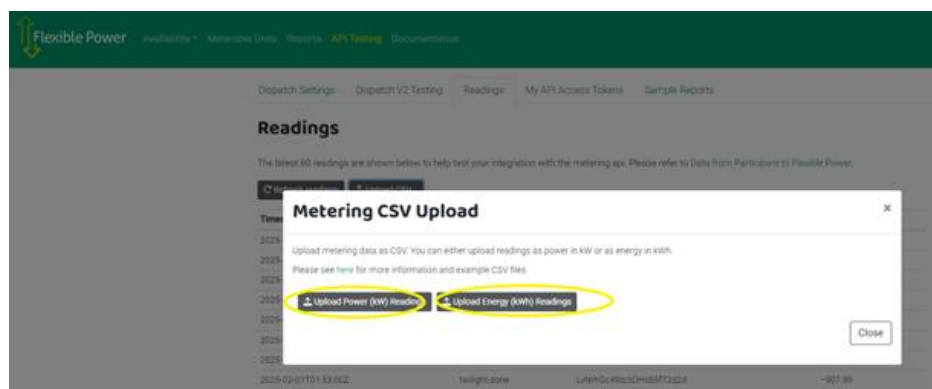
Dispatch Settings Dispatch V2 Testing **Readings** My API Access Tokens Sample Reports

Readings

The latest 60 readings are shown below to help test your integration with the metering api. Please refer to Data from Participant to Flexible Power.

Refresh readings **Upload CSV**

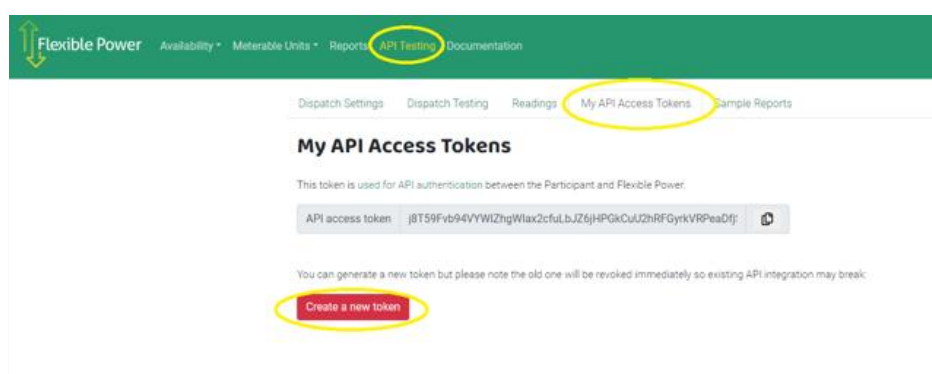
Timestamp	Zone	Meterable Unit ID	Power (kW)
2025-02-01T02:00:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:59:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:58:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:57:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:56:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:55:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:54:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99
2025-02-01T01:53:00Z	twilight-zone	LuHmGc49c30Hsb872q2d	-907.99



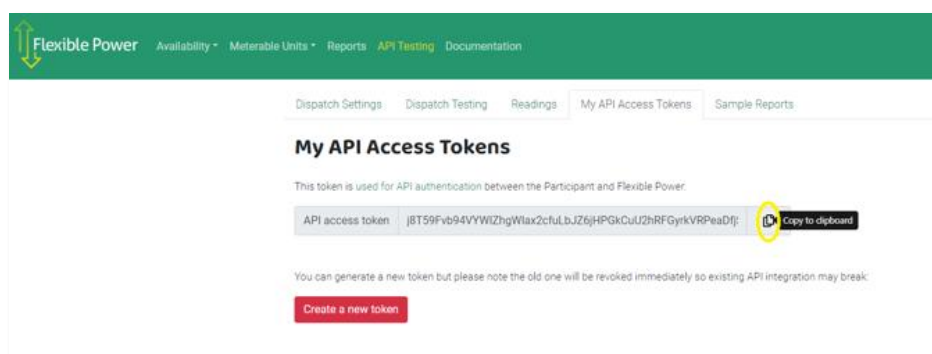
My API Access Tokens:

The token generated here is used by Flexible Power to authenticate API requests from the FSP. You can generate a new token by clicking on 'Create a new token' button but please note the old one will be revoked immediately so any existing API integration may break.

API Tokens must be stored securely by FSPs and not shared.



To copy the token to clipboard, click on the icon on the far right as shown below:



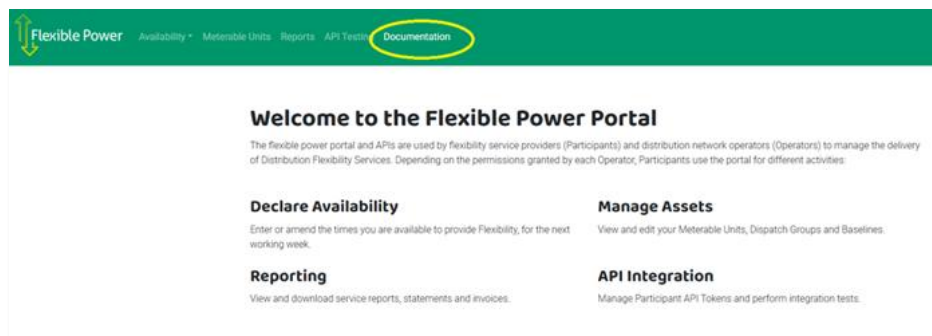
3.2 API documentation

The specification for the FSP API is published on the portal at <https://flexiblepowerportal.co.uk/docs/public>. As well as dispatch and metering, the API supports most of the features in the portal. Certain actions (such as creating availability declarations) are not permitted since SSEN perform these on the FSP's behalf.

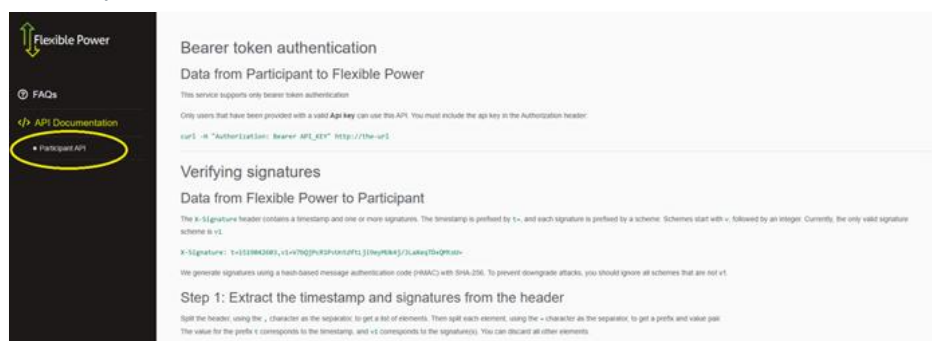


To navigate to the API documentation:

1. Click on the 'Documentation' tab at the top of the page.



2. Click on 'Participant API' under API documentation to access the API documentation.



3.3 View Dispatch Groups and Meterable Units

SSEN configure Meterable Units and Dispatch Groups in Flexible Power on behalf of FSPs, using the information provided by FSPs in the ElectronConnect marketplace asset register.

- Meterable Unit (MU): These are the units of dispatch and metering, and include certain technical operating parameters such as baseline, default flex capacity/direction and runtime.
- Dispatch Groups (DG): These are groupings of meterable units for the purposes of pricing, availability, dispatch and settlement.

For simplicity, SSEN maintain a one-to-one relationship between a dispatch group and a meterable unit. Unique names for DGs and MUs are assigned by SSEN, which match to the DNO Asset Reference in the ElectronConnect asset register.

To view the details:

1. Click on 'Meterable Units' and select the Zone from the drop-down menu. The FSP's dispatch groups and meterable units for the zone are displayed. Details include the unique IDs used in the API.



Flexible Power

Availability

Meterable Units

Reports

API Testing

Documentation

Sign in

Twilight" Zone

Week commencing: 17th February 2025

Dispatch Groups

Zone

Twilight" Zone

API Test

Dispatch Group

05

Power

0 kW change

Min/Max/Weekly runtime: 30 / none / none

Baseline

None this week

Marketplace Units

Prices

Programme	Availability (€/MWh)	Utilisation (€/MWh)	Unit Ceiling (€/MWh)
Sustain	95.55	1.99	
Secure	6.56	7.99	1
Dynamic (auction)	4.55	55.65	1
Dynamic (auction)			
Reserve		3.99	

ATestDV

Dispatch Group

05

Power

0 kW change

Min/Max/Weekly runtime: 60 / 120 / 240

Baseline

None this week

Marketplace Units: 5VTest1

Prices

Programme	Availability (€/MWh)	Utilisation (€/MWh)	Unit Ceiling (€/MWh)
Sustain	50	4	
Secure	2	4	
Secure (auction)			5
Dynamic	2	4	
Dynamic (auction)			5
Reserve	4		5

3.4 View availability declarations

For variable availability products, SSEN request availability from FSPs via email then enter the availability into Flexible Power on behalf of the FSP.

To view the availability declarations:

1. Click on the 'Availability' tab and click on 'Calendar'.

Flexible Power Availability **Meterable Units** Reports API Testing Documentation

"Twilight" Zone
Week commencing: 17th February 2025

Availability declarations for this programme are managed by the Operator

Mon	Tue	Wed	Thu	Fri	Sat	Sun
10th Feb	11th Feb	12th Feb	13th Feb	14th Feb	15th Feb	16th Feb

2. Select the Zone, Programme and DG (Dispatch Group)

Flexible Power Availability **Meterable Units** Reports API Testing Documentation

Electralink Zone 1
Week commencing: 17th February 2025

This week can be edited until 23:59 on Tuesday 11th February 2025

Mon	Tue	Wed	Thu	Fri	Sat	Sun
17th Feb	18th Feb	19th Feb	20th Feb	21st Feb	22nd Feb	23rd Feb

3.5 Baselines

SSEN agree baseline method and values with FSPs via email, and enter them in Flexible Power on behalf of FSPs. Flexible power can also automatically calculate a baseline using rolling historical metering data, if FSPs are able to provide sufficient data.

Users can view:

- Baseline method and agreed values, under 'Meterable Units'.



- A weekly time series baseline chart for each Dispatch Group can be found under the Availability calendar.

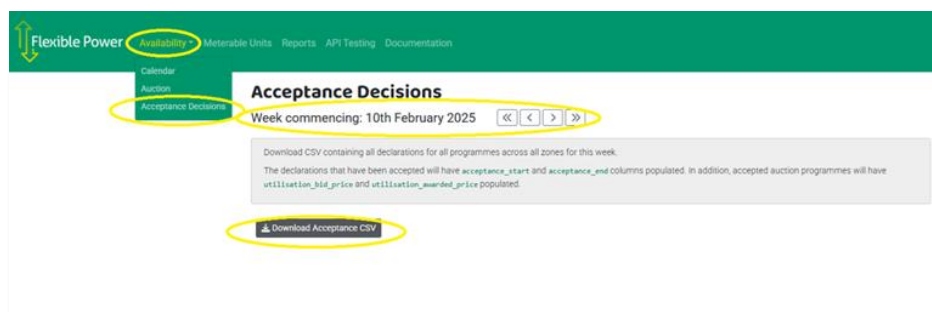
3.6 Download accepted availability

SSEN enter agreed availability in Flexible Power on behalf of FSPs. At certain times as defined by operating policy, availability declarations can no longer be changed and their status becomes “accepted”.

To download accepted availability:

1. Click on ‘Availability’ at the top of the page and select ‘Acceptance Decisions’ from the drop-down menu.
2. Select the week from the week commencing section using the arrows and click on ‘Download Acceptance CSV’ to download the CSV containing all declarations for all programmes across all zones for this week.

Availability declarations that have been accepted will have acceptance_start and acceptance_end columns populated.



3.7 Schedule Notices and Start/Stop Signals

Flexible Power sends schedules and start/stop signals to FSPs at times aligned to SSEN operational processes and the standardised product parameters. FSPs integrating with V2 of the API can benefit from additional schedule notices via API.

Certain products may be dispatched manually by Control Room engineers via phone call, and Flexible Power is not used.

Product	Dispatch Method	V1 dispatch API	V2 dispatch API (in addition to V1)	Non-API options
SU (Long term markets)	Flexible Power	Start signal 15mins before event start.	Week ahead schedule sent Thu@17:00	Opt-in day ahead email sent Daily@08:00
SU (Day ahead markets)		Stop signal at event end.	Configured off	Configured off



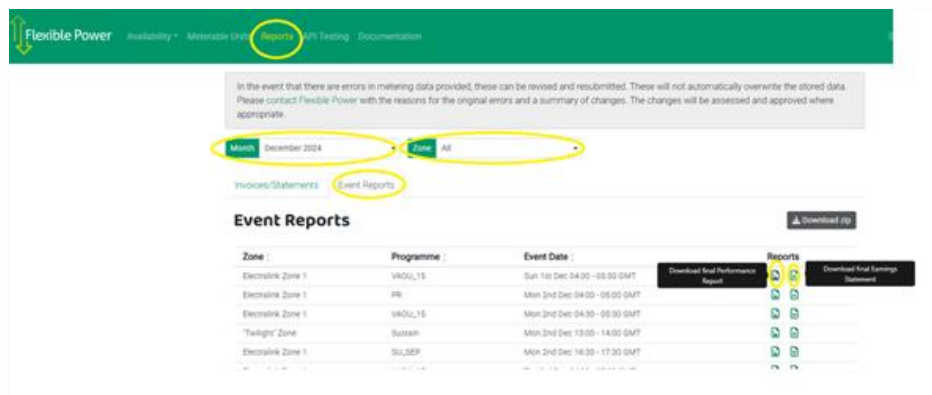
SAOU (Day Ahead Scheduling)			Day ahead schedule Daily@13:30	Opt-in day ahead email Daily@08:00
VAOU (Week ahead Scheduling)			Week ahead schedule sent Thu@17:00	Mandatory week ahead email sent Fri@12:00
VAOU (Day ahead scheduling)	SSEN dispatch manually via phone call or email.			
OU (Real time dispatch)				
Emergency Flex				

Figure# SSEN products and Flexible Power dispatch communications

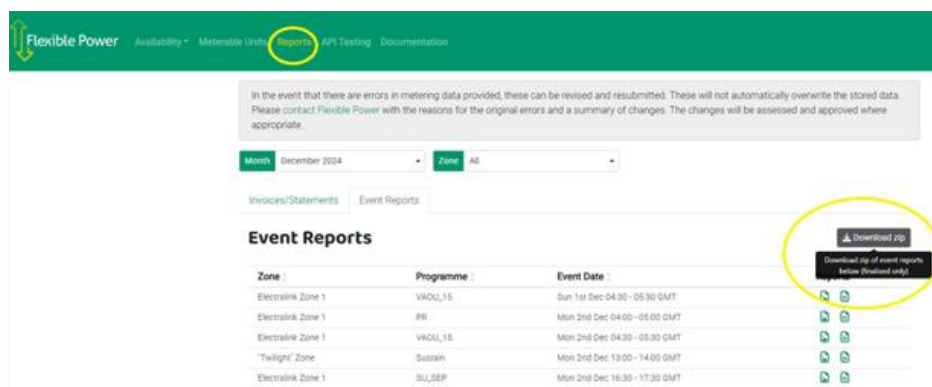
3.8 Download event reports

After the end of each dispatch event a provisional performance report and earnings statement are created on the Flexible Power Operational Portal. This allows FSPs to review results immediately after an event. Performance reports and earnings statements are finalised on the 15th of each month as part of the billing cycle.

1. Click on the 'Reports' at the top. There is a drop-down menu to filter on the month and Zone. Click on the 'Event Reports' to access the Performance and Earning Reports. Click on the green icon to download the 'Performance' or 'Earnings' statements.



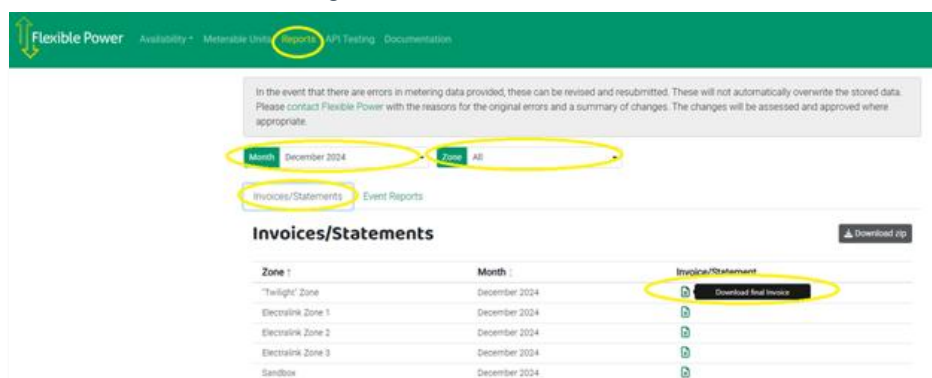
2. Users can download all the finalised event reports in the list by clicking on 'Download zip' as shown below.



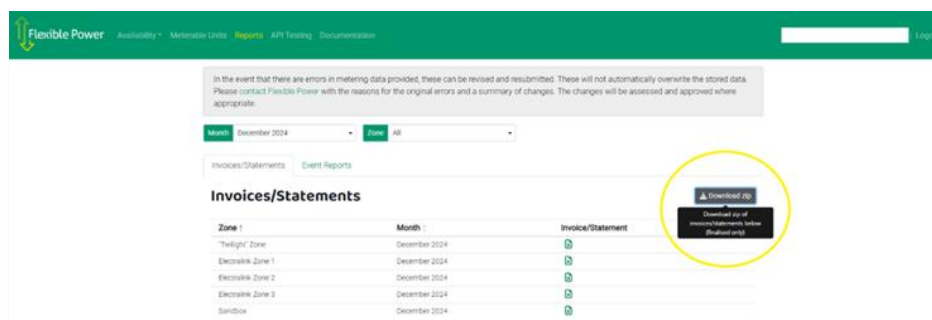
3.9 Download Statements

Based on the metering data submitted by FSPs, Flexible Power calculates the amount owed to the FSP at the end of each billing month. SSSEN refer to this as a monthly Statement, which should be downloaded from the portal and used by FSPs to produce their invoice.

1. Users can download their finalised monthly statement on the 15th of the following month. Provisional statements can be downloaded prior to the 15th for review. Users can download statements by clicking on the 'Reports' tab at the top. Use the drop-down menu to filter on the month and Zone, then click on 'Invoices/Statements'. Click on the green icon as shown below to download the statement.



2. FSPs can download all the finalised statements in the list by clicking on 'Download zip' as shown below.



4.0 Opt-in / opt-out of email notifications

Users can opt-in or out of email notifications as they wish. There are three email notifications:



- Monthly Invoices email – Sent 1st of every month at 04:00. This email summarises the Statements for the previous month, so the FSP have a chance to review and raise any queries or disputes before the Statement is finalised on the 15th.
- Weekly Accepted Declarations email – Sent every Thursday at 12:05. This email summarises any accepted availability declarations for the week ahead.
- Daily Schedules email – Sent every day at 08:00. This email summaries any scheduled dispatches (at the time of email send) for the next 24 hours. Note this is not intended to replace dispatch via API and should not be relied upon as a dispatch signal.

Follow these steps to opt-in to receive the following batch processed emails:

1. Click on your name in the top-right corner of the screen.
2. The email preferences page will be displayed as below. Tick the emails you wish to receive.

The screenshot shows the 'Flexible Power' user account interface. At the top is a green navigation bar with the logo and links for 'Availability', 'Meterable Units', 'Reports', 'API Testing', and 'Documentation'. Below this is a 'User Account' section with a form. The form includes fields for 'Name', 'Email', and 'Roles' (set to 'Participant'). Below these are three rows for email preferences, each with a checkbox labeled 'Opted-Out': 'Monthly Invoices email', 'Weekly Accepted Declarations email', and 'Daily Schedules email'. A yellow oval highlights these three rows. At the bottom right of the form is a 'Save' button.

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3. Click on your name in the top-right corner of the screen.
4. The email preferences page will be displayed as below. Tick the emails you wish to receive.



Name	:
Email	
Roles	Participant
Monthly Invoices email	<input type="checkbox"/> Opted-Out
Weekly Accepted Declarations email	<input type="checkbox"/> Opted-Out
Daily Schedules email	<input type="checkbox"/> Opted-Out
<button>Save</button>	

4. FAQs

What are Zones (Constraint Management Zones)?

This is a geographic region served by an existing network where network requirements related to network security of supply are met using flexible services. Each geographic region that the DNOs cover are divided into Constraint Management Zones.

What are Programmes?

Flexible Power refers to Open Network products and associated configuration as a Programme, which are named following the Open Networks product naming.

What are Meterable Units (MUs)?

Meterable Units are made up of one or more flexibility assets behind a single metering feed. Baselineing is applied at the Meterable Unit level.

What are Dispatch Groups (DGs)?

The higher-level component, made up of one or more Meterable Units (MUs) and is used for pricing, dispatch, and settlement.

What are Baselines?

Baselines are used during settlement to determine the performance of dispatches. The platform supports static and time series nominated baselines, and can also automatically calculate baselines if sufficient meter readings are provided by the flex supplier outside of flex events.



CONTACT

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Scottish & Southern
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