

Flex In Five

An Overview of Flexibility

Version 1.1

March 2024

DSO

nationalgrid
electricity distribution

About This Document

This document has been designed to give a brief overview of Flexibility, and to give a clear and easy view of how we procure Flexibility Services at National Grid Electricity Distribution. It is aimed at Flexible Service Providers and all Stakeholders.

For more comprehensive detail, please view our in depth document;
[Guidance for Electricity Distribution Flexibility Service Providers](#)

Contents

| | |
|-------------------------------------|----|
| Introduction, Contents and Contacts | 2 |
| About Flexibility Services | 3 |
| Where We Buy Flexibility | 4 |
| What Flexibility We Buy | 5 |
| When we Buy Flexibility | 6 |
| How We Buy Flexibility | 7 |
| How We Calculate Earnings | 8 |
| Baselines | 9 |
| Answers to Common Questions | 10 |

Contact

For any questions, please contact the National Grid Flexible Power Commercial Team at; nged.flexiblepower@nationalgrid.co.uk

Meet the Team

The Flexible Power Team are on hand to offer support, help and guidance throughout the process, to make the journey to participation as easy as possible

| | | | |
|---|--|--|--|
| Helen Sawdon | Daria Wosko | Luke Boucher | Sarah Manning-Benson |
| Flexibility Commercial Manager | Flexible Power Commercial Officer | Flexible Power Commercial Officer | Flexible Power Team Support |

About Flexibility Services

Flexibility is about reducing loads on the network by using customers' ability to change their usage patterns by either reducing consumption, changing their electricity habits, or (at a larger commercial scale) switching on generators.

Why we need Flexibility;

Managing peak load helps reduce costs to all customers because it means we don't have to invest in a permanent network upgrade to meet a temporary spike in demand.

Flexibility allows us to manage the network when we need to, and make the most of the assets we already have. This will help us deliver a reliable and affordable network as we support the transition to renewables and low carbon generation/technology (Heat Pumps, Electric Vehicles etc.) to hit the UK's net zero targets.

Who can participate;

Where there are known constraints on the electricity distribution network, National Grid wish to enter into contract with Flexible Service Providers (FSP's) which will allow us to utilise demand and generate flexibility in return for financial payment.

We work with a number of different FSPs. Examples include;

1. Residential demand response through assets such as EV charge points and heat pumps through energy Suppliers and Aggregators.
2. Industrial and commercial sites who can reduce their demand, switch to back-up generation or generate energy to the grid.
3. Owners and operators of storage and generation such as battery energy storage site, gas turbines peaking assets and biomass.

Where We Buy Flexibility

National Grid highlight areas of requirement (Constraint Management Zones, CMZ's) where we want additional capacity on the network. We publish all our requirements data on National Grid's [Connected Data Portal](#) (CDP)

Links to Data Sets on CDP;

| Dataset | Low Voltage Zones | High Voltage Zones |
|--|----------------------------|----------------------------|
| Postcode and polygon data; to match your assets to our Zones | Click here | Click here |
| Ceiling prices; maximum price you can bid to | Click here | Click here |
| Requirement volumes; how much we need | | Click here |
| Requirement profiles; when we need it | | Click here |

In addition, we also publish;

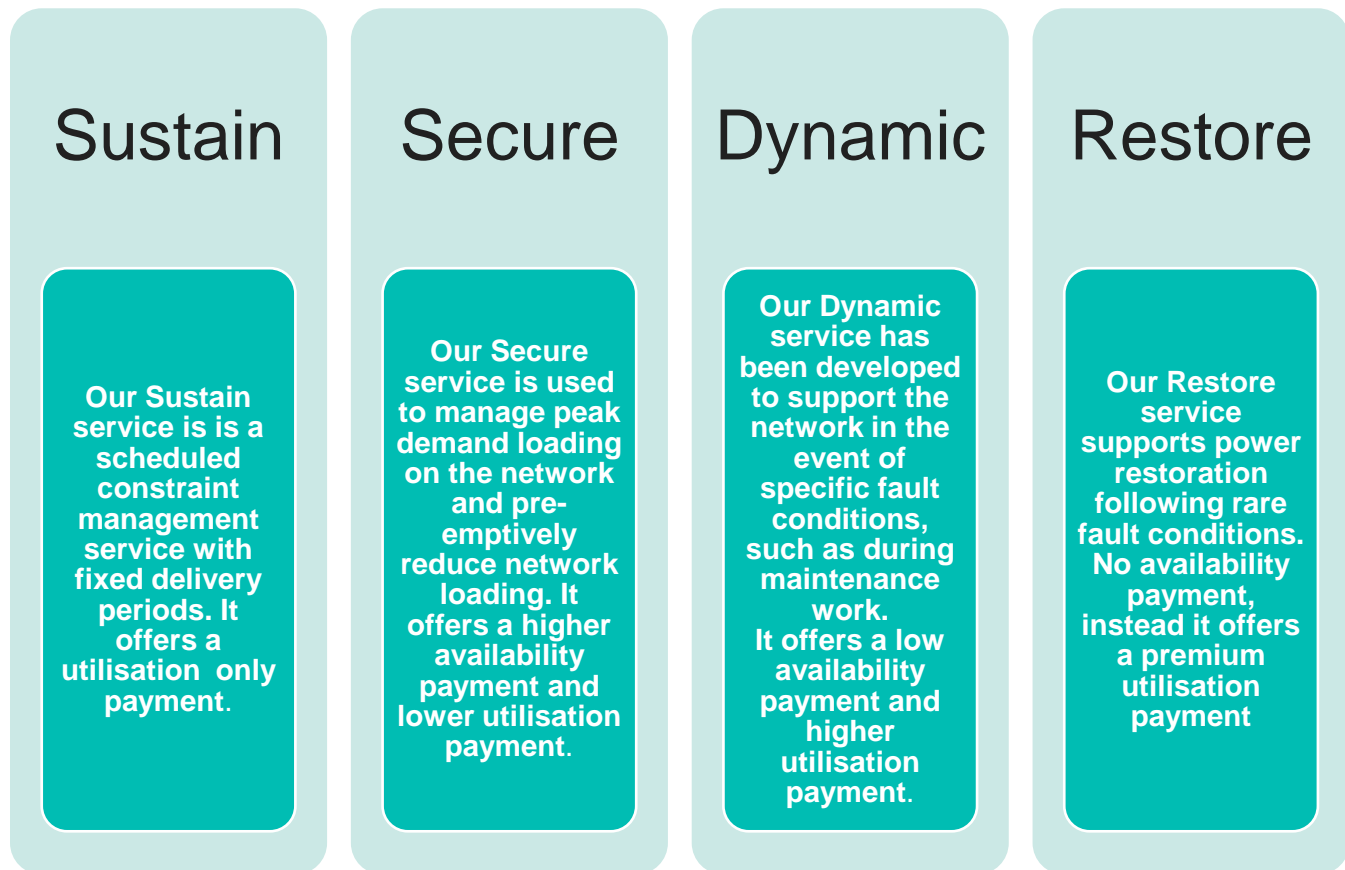
An [Interactive Map](#) of the flexibility locations that are currently open for procurement

An [Interactive Signposting Map](#) that shows all locations where we may seek flexibility in the future

A [postcode checker](#) which will give an indication of if a site is within a flexibility location

What Flexibility We Buy

National Grid is procuring flexibility across four products, each product has a specific use case,



Ceiling Prices and Average Earnings;

We publish the ceiling prices associated with our flexibility requirements on our [Connected Data Portal](#). Below are some examples of the ceiling prices we procured against in 2023/24

| Product | Ceiling Price | Average | Fixed Price |
|---------|--------------------------|------------------------|-------------|
| Secure | £3005/MWh | £1045/MWh | |
| Dynamic | £8584/MWh | £2936/MWh | |
| Sustain | £1079/kW/delivery period | £68/kW/delivery period | |
| Restore | N/A | N/A | £1200/MWh |

When We Buy Flexibility

We procure flexibility across two timeframes, Short Term and Long Term.

Short Term Opportunities;

These are procured a week ahead for delivery the following week.

| | |
|-------------------------------|---|
| Every Thursday From midday | Short Term Trade Opportunities for FSPs open for bids |
| Every Tuesday By midnight | Deadline for Trade Responses |
| Every Thursday By midday | Trade Awards announced for delivery from the next Monday |

Long Term Opportunities;

These are procured once a year, for delivery over a 12 month period.

| | |
|--|--|
| In August (exact date announced via our Engagement and Procurement Timetable) | Publish flexibility locations and requirements for; <ul style="list-style-type: none"> - Long Term Dynamic - Long Term Secure - Sustain - Restore to the Connected Data Portal |
| +4 weeks | Trade Opportunities for FSPs open on the Market Gateway |
| +6 weeks | Deadline for Trade Responses. Launch date +6 weeks |
| +4 weeks | Trade Awards announced |

Please see our [Engagement and Procurement Timetable](#) for full details

How We Buy Flexibility

National Grid procures through its online portal, [Market Gateway](#). To provide Flexibility FSP's will need to register and complete pre-qualification to allow entry into Trades.

There are four steps to the Trade process, which are outlined below;



Following on from [Market Gateway](#) registration and qualification, FSP's will then be given access to the [Flexible Power Portal](#), which facilitates;

1. **Trades** (Submitting and viewing trades)
2. **Operation** (receiving stop/start signals and submitting event metering)
3. **Settlement** (view performance and earning statements and view and approve invoices)

How We Calculate Earnings

The delivery of Flexibility Services is settled monthly. Self-billing invoices, along with and performance and earning statements for every delivery event are produced in the Flexible Power Portal for flexibility providers to review.

Payments are split into two separate parts: Availability and Utilisation. Availability Payments are paid for every Accepted Availability Window. Utilisation Payments are made for every instance of Utilisation

Availability

Availability represents a “payment of readiness”. This means that payments are made for being ready to respond to a dispatch instruction requesting delivery. Availability payments can be recovered should the delivered capacity be lower than the contracted capacity.

Utilisation

Utilisation is a payment made for delivery of flexibility after the dispatch instruction. The response to a dispatch instruction is expected within 15 minutes. Payments for Utilisation are subject to a grace factor and an under delivery penalisation multiplier for every 1% of delivery below the grace factor.

Secure and Dynamic services are subject to both Availability Payments and Utilisation Payments.

Sustain and Restore services are subject to the Utilisation Payment only.

| Attribute | Dynamic | Secure | Sustain | Restore |
|-------------------------|---------|--------|---------|--|
| Grace Factor | 5% | 5% | 5% | 10% |
| Penalisation Multiplier | 3 | 3 | 3 | 1 for delivery between 80% and 100% and 2 for delivery under 80% |
| Payable Over Delivery | 0% | 0% | 0% | 10% |

For more information on our Payment Mechanic, you can read our published document [here](#)

Baselines

Baselines are fundamental to the delivery of flexibility services, they;

- set the level of delivery expectation
- set the level for delivery verification
- allow delivery quantification enable settlement of services

The FSP must register its assets through the [Market Gateway](#) and receive confirmation of their validity before their applicable baseline option(s) is confirmed. We reserve the right to update the baseline options and the methodology for the calculations.

There are four types of baseline currently available;

1. Zero
2. Asset capacity
3. Self-nominated based on historic demand
4. Based on planning profiles.

Please see our [Baselines Values Spreadsheet](#) for further detail

| Asset Scale | Response Type | Metering Location | Baseline |
|--------------------------|---------------|---------------------|--|
| Industrial OR Commercial | Generation | Any | Zero |
| Industrial OR Commercial | Stored Energy | Any | Asset Capacity |
| Industrial OR Commercial | Demand | Any | Self-Nominated |
| Domestic | Demand | Any | Baseline calculated by NGED based on Planning Profiles. Calculated Baselines=Capacity |
| Domestic | Stored Energy | Any | Baseline calculated by NGED based on Planning Profiles. Calculated Baselines=Capacity |
| Domestic | Generation | DER Level | Zero |
| Domestic | Generation | Point of Connection | Baseline calculated by NGED based on Planning Profiles. Calculated Baselines=Capacity |

Answers to Common Questions

Below are a series of common questions with answers surrounding Flexibility.

| Question | Answer |
|--|--|
| Are there any specific technology types that NGED contract with? | We work with any technology that can provide a response, either through demand reduction or generation turn up |
| Are there minimum or maximum asset sizes that can participate? | No, we will work with assets of any size |
| Are distribution level flexibility services stackable? | We do not impose any exclusivity on our services so where other services allow, you can stack. Improving service stacking is a subject of ongoing work across the industry, see our recent work on this here |
| Is it possible to participate in both Long Term and Short Term Trades? | Yes, but the same asset cannot be entered into Trades for the same delivery period |
| How long do you expect zones to operate flexibility? | Flex zones will operate for a minimum of 1 year, in most cases they will go onto operate for multiple years. We signpost the length of the requirements here |
| Can I participate through an aggregator or third party? | Yes, providers can contract with <u>DNOs directly</u> or via a third party. In either instances the contracting party must be registered and qualify to tender via each DNOs procurement process |
| How do I contract to provide flexibility services? | As outlined on page 7, start by registering on our Market Gateway |

Useful links;

[Market Gateway](#) – Registration, Qualification, Contract and Asset Registration

[Flexible Power Portal](#) – Trades, Operation and Settlement, API Documentation

[Flexible Power Website](#) – Guidance Documents

[Connected Data Portal](#) (CDP) – Flexibility Requirements, Trade Results and Data

For any further questions or information, please contact the Flexible Power Commercial Team at; nged.flexiblepower@nationalgrid.co.uk

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