

A nighttime photograph of a city street with light trails from cars and buildings in the background. The image is partially obscured by a dark blue diagonal overlay on the left side.

**Electricity  
Distribution**

# **Flexibility Services**

**A Guide for Local Authorities**

**September 2024**

Version 0.3

**nationalgrid** DSO

# What is Flexibility?

The decarbonisation of heat, transport and buildings means electricity demand is growing. We need to build more network so electricity can continue to be delivered safely to our customer's homes and businesses.

'Flexibility' is an important tool that supports us in the energy transition; it helps to manage increases in electricity use while we expand our existing network of underground cables and overhead lines. This helps to keep costs lower for everyone and helps to meet our [Net Zero](#) goals.

Flexibility products and markets incentivise customers to change their energy use patterns at times when there is high demand on the electricity network. Depending on the needs of the network, customers may be asked to turn their energy usage up or down in return for payment. For example, a domestic customer might change when they charge their Electric Vehicle, or a commercial site might turn a generator on when the network needs it.

Local authorities, domestic customers and other energy users can participate in flexibility markets for a financial reward.

To find out more, we publish a range of information on our [Flexible Power Website](#).

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\*There is an important difference between Flexibility Services and Flexible Connections, the latter of which are associated with new Connection requests. There may be instances where we cannot provide the full required connection characteristics at all times without undertaking significant reinforcement works. To mitigate the costs or timescales associated with those works, we may offer a [Flexible Connection](#) solution to meet your needs, either on a temporary basis or as a more enduring solution.

For more information on Flexible Connections please visit our [webpage](#).

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## Who can participate?

Once we identify where on our network there is a need for flexibility, we will offer these opportunities out to customers through a procurement process. We currently offer flexibility to a variety of customers, which include:

1. Residential and domestic customers (through use of EV charge points and heat pumps). These are facilitated through Energy Suppliers, third party Aggregators and Smart Energy management platforms.
2. Industrial and commercial sites who can reduce their demand at peak times.
3. Owners and operators of storage and generation such as battery energy storage site, gas turbines, peaking assets and biomass.

## How can a Local Authority get involved?

### 1. As a Provider of Flexibility

If local authorities own or operate assets, such as batteries, solar or EV chargers that are already connected to the network, and also have the ability to respond to signals to change their consumption or generation patterns, then participation is possible either directly with DSO's or through a third party aggregator. Participation is in exchange for financial incentives.

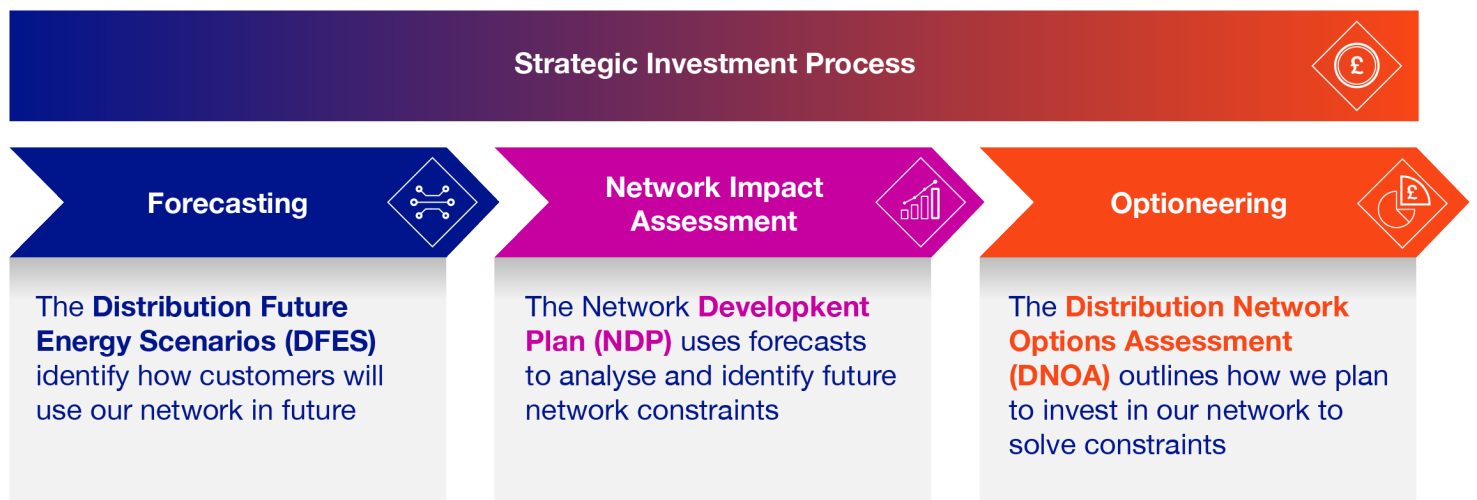
### 2. As a Promoter of Flexibility

Local authorities can also help by promoting flexibility to their community, residents and local businesses by encouraging them to speak with their electricity suppliers, or third party aggregators on how they can participate. They can then start getting involved in flexibility in exchange for financial incentives.

# How we decide where we buy Flexibility

Our network planning processes identifies where we need flexibility services, and we publish this in our [Distribution Network Options Assessment](#) (DNOA).

This sets out in detail the specific requirements including the locations and volumes needed and feeds into our flexibility procurement activities.



Local authorities can also help to inform where we might need flexibility in the future by sharing Local Area Energy Plans (LAEPs) with us.

These plans help us know where and when to proactively invest in our distribution network, ensuring that it meets future need and supports local and national Net Zero ambitions.

The information from the LAEP's help feed into the [Distribution Future Energy Scenarios](#) (DFES). Authorities can submit LAEP's to us [here](#).

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## Where we buy Flexibility

To date we have sought flexibility in over 2,000 locations in our network. We publish all our requirements on National Grid's [Connected Data Portal](#) (CDP)

In addition, we also publish:

An [Interactive Map](#) that shows all locations where we are currently seeking flexibility and future signposting

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

## 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.

### **Long Term Opportunities;**

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

Please see our [Engagement and Procurement Timetable](#) for full details on procurement dates.

# How much we pay for Flexibility

Flexibility payments can vary across locations. We assign a ceiling price, (which is the maximum payment for Flexibility provided in a certain location). The ceiling prices also vary across location and depend on the voltage level the asset is participating at. We publish our data on ceiling prices, requirement volumes and profiles to our [Connected Data Portal](#) (CDP) and quick links can be found below.

Dataset	Low Voltage Zones	High Voltage Zones
Ceiling prices; maximum price you can bid to		<a href="#">Click here</a>
Requirement Volumes; how much we need	<a href="#">Click here</a>	<a href="#">Click here</a>
Requirement profiles; when we need it		<a href="#">Click here</a>

## Use Cases

The below use cases are representative and given only as examples of potential earnings over a six-month Winter period. Potential earnings vary from zone to zone, as does the Availability and Utilisation prices.

Example below of a domestic scenario, where you have control of 150 7kW EV chargers:

Aggregated Domestic EV Chargers x 150	Flexibility Zone: St David's Primary
Installed Capacity (150 x 7kW)	1.05 MW
At peak timings, the DSO models that each charger would be using 0.83kW, based on the Winter <a href="#">Baseline Values</a> (150 x 0.83)	0.0125 MW
You are confident you can turn all EV's to zero and deliver the full Flexible Capacity	0.0125 MW (Flexible Capacity)
Utilisation - You are scheduled to deliver your Flexible Capacity for 129 hours	£2910.16 (Utilisation Payments)
<b>Total revenue</b>	<b>£2910.16</b>

Calculations based on SU\_SEP product, Utilisation only, in Winter Short Term trades from October 2023 – March 2024  
Utilisation MW/H £1812

Example of a commercial scenario, where you have control of a battery storage asset with a capacity of 0.5MW:

<b>Battery Storage = 0.5MW</b>	<b>Flexibility Zone: Morwenstow</b>
Installed Capacity of the battery	0.5 MW
At peak timings, the DSO models that the battery would be importing at full capacity	0.5 MW
You are confident you can reduce the import to zero	0.5 MW (Flexible Capacity)
Awarded Availability – Your Flexible Capacity is contracted to deliver, if called upon, for 228 hours	£2,440.80 (Availability Payments)
Utilisation - You are called upon to deliver your Flexible Capacity for 18 hours	£9,158.13 (Utilisation Payments)
<b>Total Revenue</b>	<b>£11,598.93</b>

Calculations based on SAOU\_DA product, in Winter Short Term trades from October 2023 – March 2024  
Availability MW/H £16.95 Utilisation MW/H £1017.57

## Next Steps

We encourage potential Flexibility Service Providers (FSP's) to register onto our [Market Gateway](#) platform, which has been developed to facilitate direct participation with us. We have also published a [User Guide](#) to help you through the process. If local authority participation is through a third party, they will advise you of their next steps. You can also read our [Participation Journey Diagram](#) which outlines all aspects of participation through all stages.

## Contact Us

Our Flexible Power Commercial Team are always more than happy to advise and help where possible. For any further questions or information, please contact the Flexible Power Commercial Team at: [nged.flexiblepower@nationalgrid.co.uk](mailto:nged.flexiblepower@nationalgrid.co.uk)

# 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 <a href="#">here</a> .
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 one year, in most cases they will go onto operate for multiple years. We signpost the length of the requirements <a href="#">here</a> .
Can I participate through an aggregator or third party?	Yes, providers can contract with <u>DNOs</u> <u>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.

## Useful links;

Sign up to our [Mailing List](#) to be kept up to date with information and opportunities  
[Market Gateway](#) – Registration, Qualification, Contract and Asset Registration  
[Flexible Power Portal](#) – Trades, Operation, Settlement and API Documentation  
[Flexible Power Website](#) – Guidance Documents  
[Connected Data Portal](#) (CDP) – Flexibility Requirements, Trade Results and Data



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