



### Introduction

#### Who We Are:

SP Energy Networks (SPEN) is responsible for the electricity transmission and distribution network across central and southern Scotland, as well as parts of North Wales, Merseyside, Cheshire, and North Shropshire. We ensure that electricity gets to homes and businesses safely and reliably.

### **Why Flexibility Matters**

As we move towards a cleaner, greener energy system, the way we use electricity is changing. More people are generating their own power through technologies like solar panels, and more of us are using electricity for heating and transport. This puts new demands on the electricity network, which needs to be more flexible to keep everything running smoothly.

Flexibility means being able to adjust how and when electricity is used or produced. For example, using less electricity at busy times or supplying extra power when the grid needs it. This helps avoid power cuts, reduces the need for expensive upgrades, and supports the use of renewable energy.

#### Communities' Role

Community Energy Groups are in a great position to help. Many are already running local energy projects and understand the needs of their communities. By getting involved in flexibility, these groups can support the wider energy system, earn income for their projects, and help make their communities more resilient and sustainable.

Our Goal >











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### Our goal:

At SP Energy Networks, we want to make it easier for Community Energy Groups to take part in flexibility services. Our goal is to raise awareness, provide clear guidance, and build strong partnerships with local groups. Together, we can create a smarter, more responsive electricity network that works for everyone.







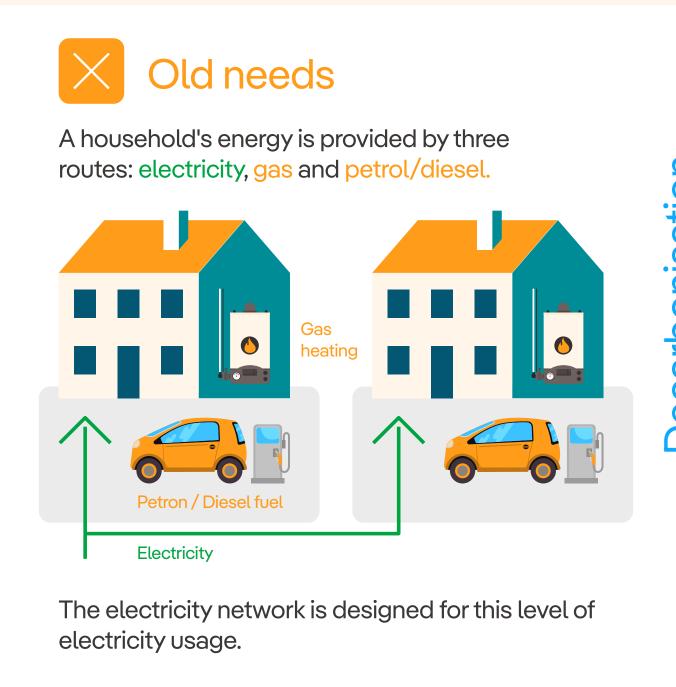


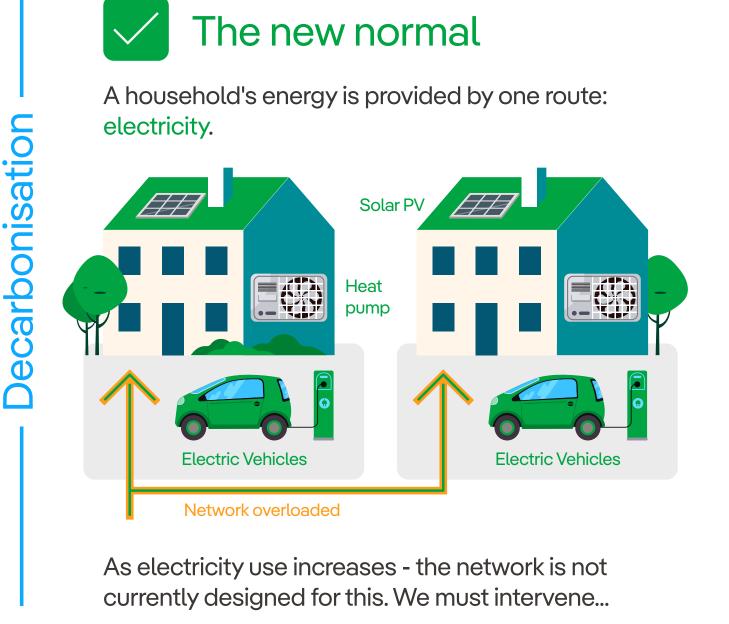
### What is Flexibility?

Flexibility is when we ask customers to turn up or down their use or generation of electricity in return for an incentive so we can ensure customers have a continuous and reliable electricity supply.

For example, electric vehicle owners may be asked to charge at a specific time of day or factories may be asked to operate at a specific time. We also work with power generators to use flexibility as a back-up during works on the network to minimise the risk of power outages for customers.

### Why is Flexibility needed?







Such flexibility services have value to us as they help us keep our distribution network within existing network limits, so avoiding capacity constraints. They will play a key role in helping us accommodate Net Zero growth as they can be deployed more quickly than most types of reinforcement and can help manage uncertainty. They provide an agile, smart means of managing our network and can help democratise and bring competition to the energy sector.







# How Community Energy Groups Can Get Involved

### Who Can Participate?

Flexibility is open to a wide range of community-led organisations. You might be able to take part if you are:



A Community Energy Co-operative, Community Interest Company (CIC), or Charity involved in local energy projects.



Running or planning a project that includes **electricity generation** (like solar or wind), energy storage (like batteries), or flexible demand (like smart heating systems).



Managing or have access to controllable assets—these are devices that can be turned on or off or adjusted remotely, such as:

- Electric vehicle (EV) chargers
- Heat pumps
- Smart appliances

If you're not sure whether your group qualifies, don't worry—this guide will help you explore your options and understand what's possible.









#### Who Can Page 1

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#### **Examples of Participation**

Here are some real-world examples of how community groups can contribute:

- Battery Storage Discharging During Peak Times
  - If your group has a battery system, you can release stored electricity back to the grid when demand is high. This helps reduce pressure on the network and supports local energy needs.
- Solar PV Adjusting Output Based on Grid Needs

Solar panels can be set up to either increase or reduce the amount of electricity they send to the grid depending on what the network needs at that time. This helps keep the system balanced.

- Community Buildings Reducing Demand During High-Use Periods
- Community centres, schools, or other shared buildings can reduce their electricity use during busy times—for example, by turning off nonessential equipment or shifting usage to quieter periods.

These actions might seem small, but when combined across many groups, they can make a big difference.





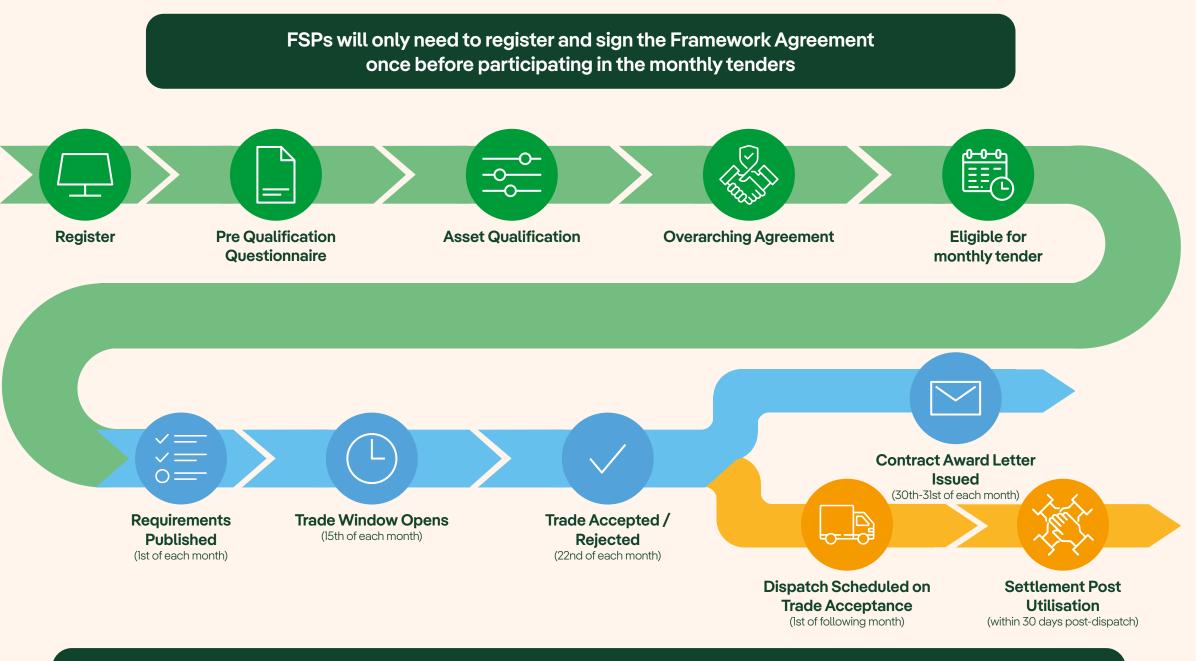




# The Flexibility Services Process – Step by Step

SPEN follows a clear process to identify, procure, and use flexibility services. We allow all types of assets both from the demand and generation side to participate in our competitions with no minimum requirements for capacity offered to us.

We procure all our flexibility requirements on the same platform and have an end to end process which allows providers to have a seamless journey from the moment they register to getting paid after a flexibility event. The below graph highlights this process:



\*Only operational assets will be eligible to participate in active monthly tenders. Any asset in development can be uploaded to the Piclo platform and qualify for active participation once the asset has attained commercial operation.

The technical requirements are manageable with the right support. In the Pre-Qualification stage, you simply need to make an account on the Piclo Platform with your business details, upload your asset onto the platform through a simple excel sheet, and register to participate in SPEN's month ahead market.

Once a competition comes up you have two weeks to assess the hours and requirements, and make a decision on what price you want to bid at that makes the most sense for your asset and financial planning.

On bidding day, you simply provide us with a price and capacity, and a few days later we accept or reject your bids. Once that is complete, you will then be given dispatch instructions and it will then be your responsibility to ensure you provide us with the dispatch you are contracted for.

At the end of the flex event, you simply upload how many MWs your asset dispatched and that is assessed against a Zero baseline for generation assets, asset capacity for BESS, and a fixed reference for most demand assets. These ensure you get the fairest baseline that will allow you to be settled for the true amount of Flexibility your provided for us.

All of this can be done manually on Piclo, or through APIs. We have providers who do this all themselves, or who utilise third parties to manage this for them. We are happy to discuss with you which of the two ways make more sense.

#### **Participation Made Simple**

Getting involved in flexibility services might sound technical, but with the right support, it's very achievable. Here's a breakdown of what's needed to participate, and how your group can approach it—either on your own or with help from partners.

**Pre-Qualification >** 

**Metering >** 

**Communication >** 

Key Considerations for Groups >







We procure all our flexibility requirement allows providers to have a seamless j flexibility event. The below graph high







### **Pre-Qualification**

Before you can take part, your group will need to register and provide some basic information about your project. This helps SP Energy Networks understand what your site can offer.

#### • What's involved:

- Registering your organisation and project.
- Sharing simple technical details (e.g. type of technology, size of system, location).
- Confirming who owns or operates the equipment.

#### • Who can help:

If you work with a third-party aggregator or technology provider, they can often handle this step for you. If you manage your own assets, you may need to gather this information yourself—but support is available.



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**Key Considerations** 

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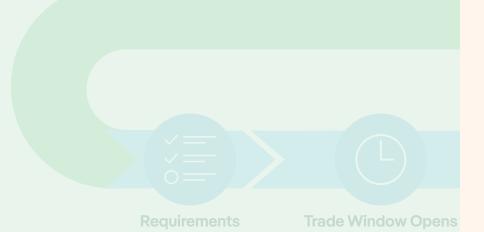
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### Metering

To take part in flexibility, you need to be able to measure how much electricity you're using or generating. This is important so SPEN can see the impact of your actions and settle payments fairly.

#### • What's needed:

- A meter that can record your electricity use or generation in real time or near real time.
- The ability to share this data with SPEN or a flexibility platform.

#### • Options:

- Some smart meters may be suitable
- Larger systems may need more advanced metering.
- Your installer or technology provider can advise on what's required.



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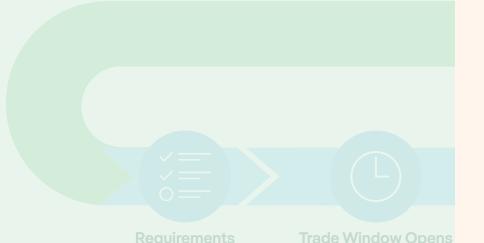
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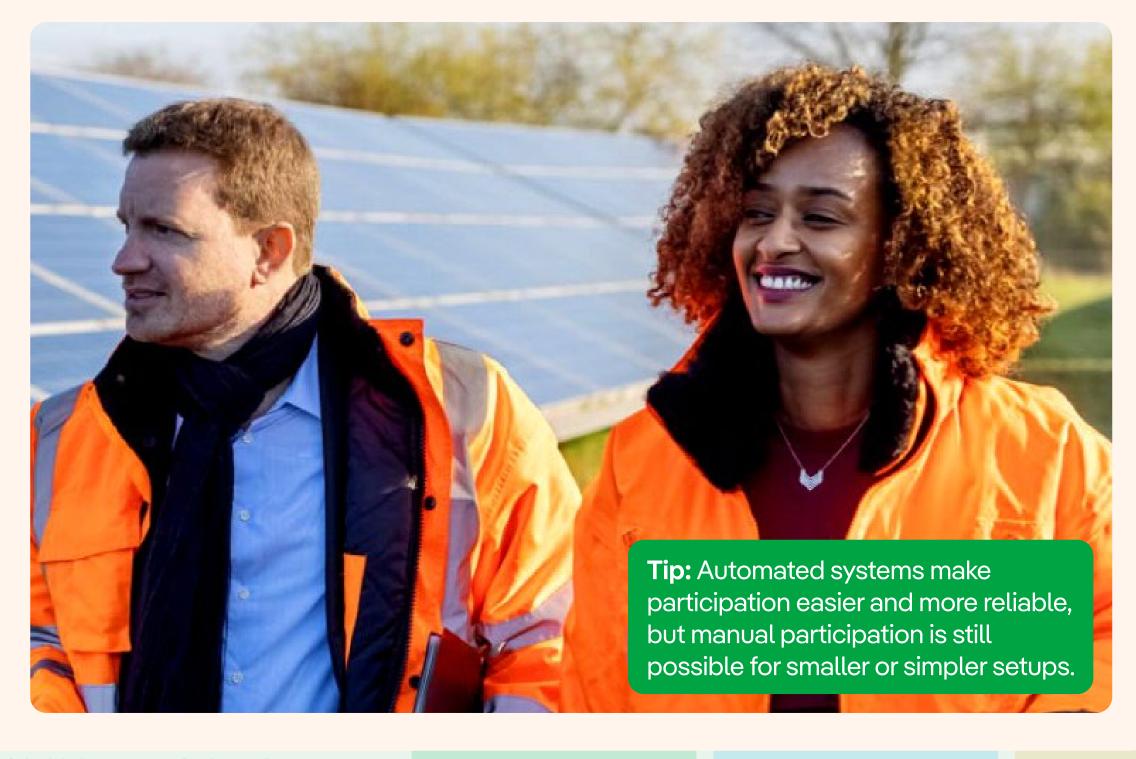


#### Communication

To respond to flexibility events, your system needs to receive a signal—this could be a manual instruction (e.g. an email or phone call) or an automated signal sent to your equipment.

#### • What this means:

- You'll need a way to receive and act on requests to change your energy use or generation.
- This can be done manually by someone in your group, or automatically through a control system.



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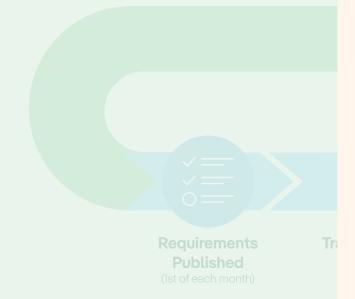






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### **Key Considerations for Groups**

Whether you're managing your own system or working with a partner, here are a few things to think about:

#### • Who manages the asset?

If your group owns and operates the equipment, you'll need to handle the technical steps—or work with someone who can. If a third party manages it, they may take care of most of the process.

#### • Pricing:

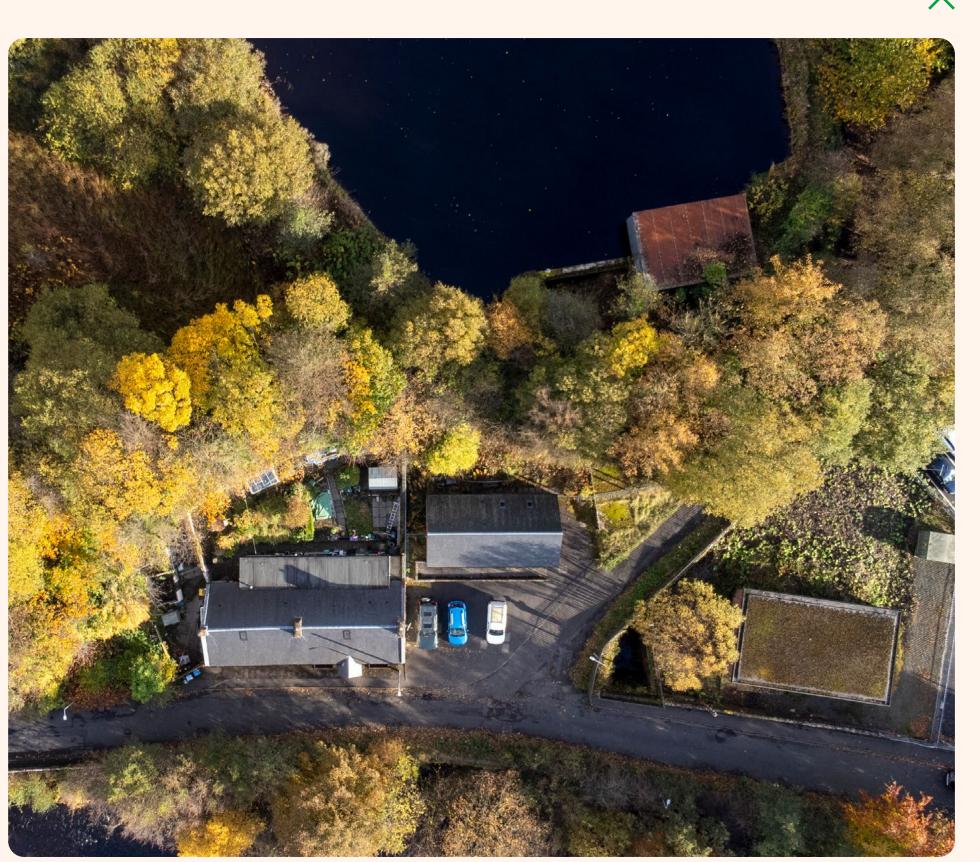
Flexibility services can generate income. Prices vary depending on location, time of day, and how much flexibility you can offer. You can set your own price or accept market rates.

#### • Dispatch and Settlement:

"Dispatch" means being called on to act—like reducing demand or exporting power. "Settlement" is the process of confirming what happened and arranging payment. This is usually handled by the platform or aggregator you work with.

#### • Support is Available:

You don't have to do this alone. SPEN and other partners can help guide you through the process, and there are tools and services designed to make participation easier.



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# Types of Flexibility Services You Can Offer

Here at SPEN we procure a wide range of ENA standard flexibility products. We procure Scheduled Utilisation, Operational Utilisation, Scheduled Availability, and Variable Availability products to help us address different types of network needs. Here is a short explanation of what each of those means and why we use it

#### **Scheduled Utilisation**

This product is a guaranteed utilisation product meaning that when you secured an SU contract with us, you are guaranteed and are guaranteeing that you will be dispatching on the hours and with the MWs you have been contracted for. We use this product to address our reinforcement deferral needs as it allows us to know exactly where and when we will reduce demand on our network.

#### **Operational Utilisation**

This product is used for our planned outage products and means that utilisation is called upon if and when our control room requires it to manage with a fault in our network. Due to this having varying degrees of likelihood for dispatch, the £/Mwh for utilisation are higher.

#### **Scheduled Availability**

This is used concurrently with Operational Utilisation and sets out terms for which the capacity of your asset can be made available to us. You will get paid £x per MW available per hour you have it available for us during these planned outages. This allows you to still receive a payment for your services even if you don't get utilised as we will always pay the availability fee when we have utilised a scheduled availability product.

#### **Variable Availability**

This is a slightly newer product for us and is to be used for unforeseen events such as storms and unplanned outages. What this means is that your assets availability can be requested days/hours before the unforeseen event and only at that time the availability payment kicks in. Due to this being a highly variable product, the £/Mwh are high.









### Tools and Platforms You'll Use

Digital tools make it easier to register, bid, and deliver services. We have two key tools that we use to allow you to participate in our Flex Markets and to have all the data you require to make informed decisions about your assets.

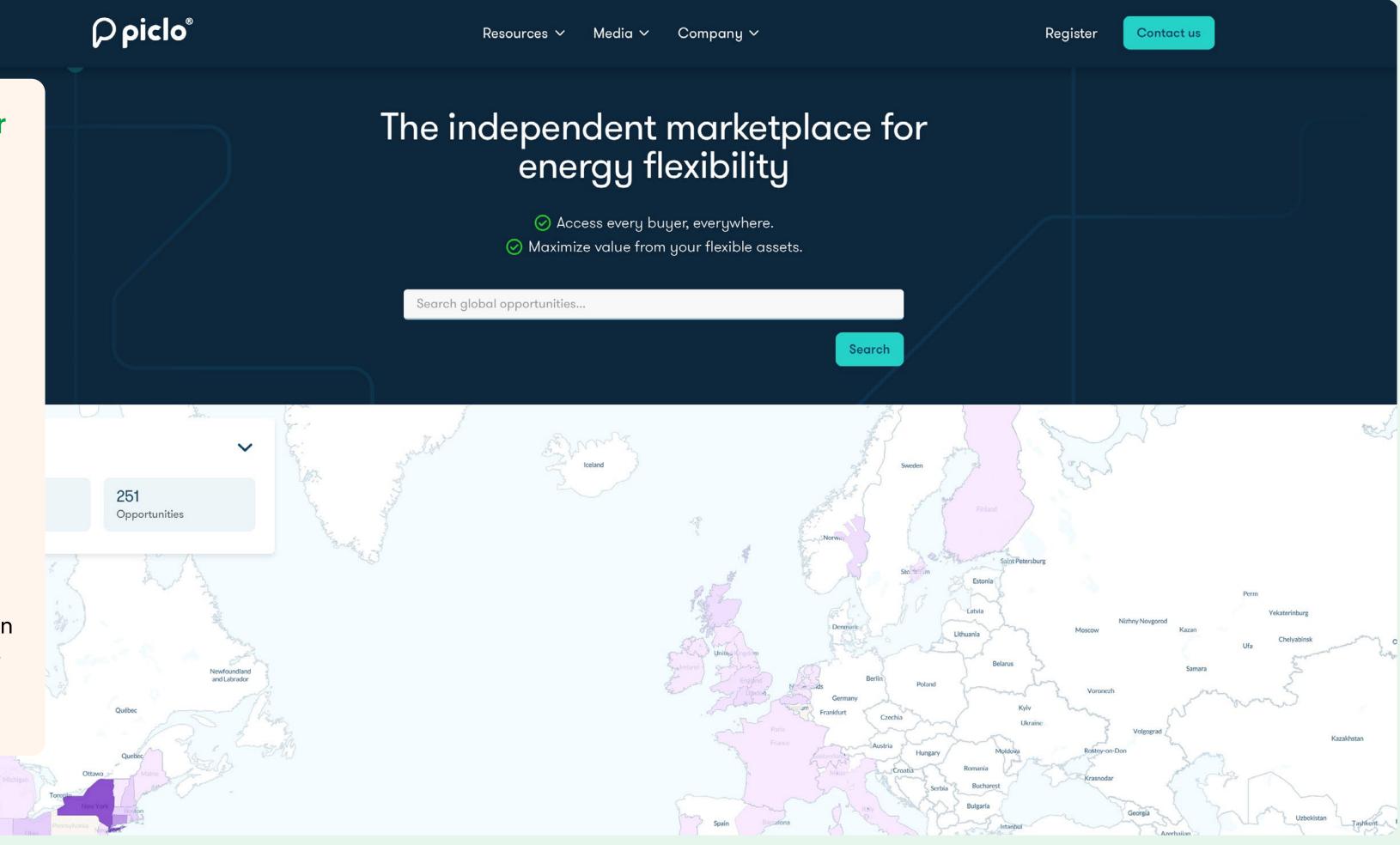
#### **Key Tools:**

#### Piclo MAX

Piclo Max is a platform designed for Flexibility Service Providers (FSPs), enabling them to access and participate in multiple electricity markets through one interface. Here you will be able to see where we require flexibility, upload your assets, place bids, manage dispatch and settlement, and communicate with the Piclo team for any customer service requirements.

#### SPEN ODS Platform

SP Energy Networks Open Data Portal provides access to data on our Distribution and Transmission networks. Here you can access tools such as our heat maps, see asset maps, view long term flex opportunities, and get an overview of past competition results.









# Benefits for Community Energy Projects

By taking part in flexibility services, your group can unlock a range of benefits that align with your mission and values.

Whether you're focused on financial sustainability, environmental impact, or community wellbeing, flexibility can support your goals.

#### 1. Building Energy Independence and Local Community Resilience

Flexibility Services encourage and empower communities to take control of their local energy system. By managing flexible demand and generation locally we can become less reliant on the wider grid for stability which will increase energy security and resilience in your local communities.

#### 2. Environmental Impact & Net Zero Communities:

Flexibility will aid the integration of more renewable energy connecting to the grid network by managing the intermittency caused by increased number of Low Carbon Technologies connecting to the grid. This directly supports your communities' decarbonization goals and community energy flexibility's collective impact can lead the way in reaching our national Net Zero targets.

#### 3. Community Empowerment and Ownership:

Flexibility is an opportunity for community energy groups to actively participate in the energy transition, beyond just generating clean energy. You can become proactive players in grid management and have a fair chance of participating alongside some of the biggest players in the energy industry.

**Key benefits >** 



#### 4. Local benefit for a wider Just Transition:

By participating in SPENs DSO Flexibility Market, community energy projects will receive flexibility payments which can generate an additional revenue stream that stays within the local community the project serves. Flexibility payments for community energy projects not only has the direct impact of then having revenue that supports local initiatives but also the flexibility payments that SPEN provide in return for less constraints on our network saves wider consumer bills as more flexibility means that we can run the network more efficiently and reduces pressure on the network's assets and therefore reduces costs of early network reinforcement which costs consumers more on their bills. Reducing energy bills for members but also for all consumers making your local benefit also benefitting consumer bills elsewhere as well.







### **Bid Assessment**

To provide the capacity in the optimal way, we fairly, impartially and economically assess different types and combinations of interventions (e.g. flexibility, smart, reinforcement), and how they could be co-ordinated with other interventions to reduce customer cost and disruption.

Prior to opening the bidding window we will have performed an assessment of the technical and financial parameters for each constraint location that we can reasonably accept. The optioneering assessment will compare solutions for each individual constraint location on a likefor-like basis and impartially identify optimal interventions, or combination and sequence of interventions. We will also identify ceiling prices for each location that will consider the maximum bid price offers that we can financially accept.

Once the bidding window has closed, we will assess all bids received against our bid criteria. For each bid submitted, we will assess: the overall value of the service offered; the technical parameters; and competing bids. We will consider all bids that

meet the technical and operational requirements, regardless of their pricing signal range. If we receive multiple bids for a constraint location, we will accept the bid that meets full capacity at a higher price over one that does not meet full capacity at a lower price, provided the higher bid is still below the identified ceiling price for that location. This approach ensures the best cost for our end customers by meeting full flexibility requirements and providing the optimal deferred reinforcement benefits.

We will introduce changes to our requirements if the parameters have altered after the acceptance of monthly bids to ensure we are continuously utilising optimal solutions that offer the best value for our customers.





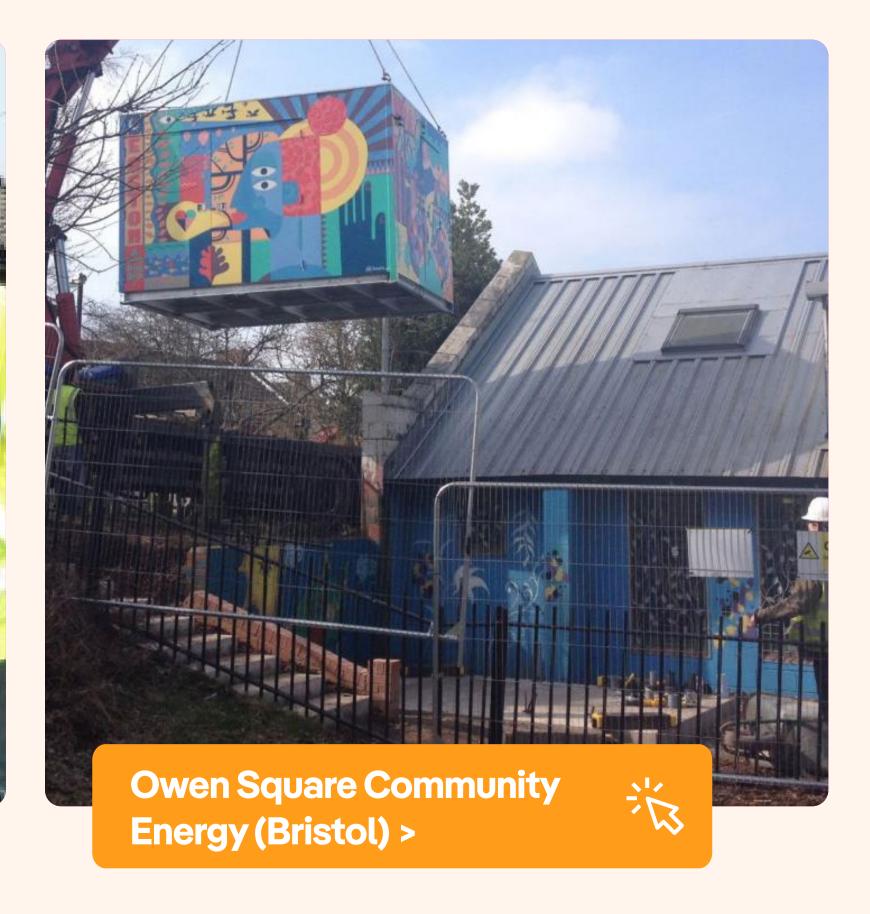




### Community Case Studies and Success Stories













### **Applecross Community** Company (Scotland)

#### What they did:

Applecross, a remote community in the Highlands, developed a local microgrid powered by hydro and solar energy. The system helps manage local electricity supply and demand, reducing reliance on the national grid.

#### Flexibility:

By balancing local generation and use, the community can respond to grid needs and improve energy resilience.

#### **Key takeaway:**

Even in rural areas, community-led systems can deliver flexibility and energy independence.



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### **Barnsley Domestic Demand Side Response** (England)

#### What they did:

In Barnsley, a group of homes was equipped with solar panels and battery storage. These homes were able to reduce or shift their electricity use in response to signals from the grid.

#### Flexibility:

The project showed how everyday households can contribute to flexibility by storing energy and using it at the right times.

#### **Key takeaway:**

Company (Scotland) -

Flexibility isn't just for big systems—individual homes and small communities can play a role too..



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### Community Case Studies and Success Stories

# Owen Square Community Energy (Bristol)

#### What they did:

This urban project combined rooftop solar panels, battery storage, and a local energy supply system to serve a block of flats and community buildings.

#### Flexibility:

The system can respond to grid signals by adjusting when energy is used or stored, helping to balance supply and demand locally.

#### **Key takeaway:**

Integrated systems that combine generation, storage, and smart controls can unlock powerful flexibility opportunities in urban settings.

Company (Scotland)

Side Kesponse (England)

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# Future Opportunities and How to Stay Involved

Flexibility is a growing space with evolving opportunities. We are increasingly looking for new ways to stimulate the flexibility market, including through changing how we structure contracts, developing new market opportunities in conjunction with our customers and stakeholders, and understanding what data and information flexibility providers require from us.

Given the role that flexibility services play in facilitating Net Zero, it's vital that we transparently demonstrate our estimated forecast on both long- and short-term flexibility requirements to enhance stimulation of the UK DSO flexibility market. Our Flexibility Market Prospectus is a great tool to give you an overview of the opportunities and value of our flex markets.

#### Ways to Stay Involved:

- Subscribe to SPEN updates and Piclo Flex alerts.
- Join community energy networks and forums.
- Explore new technologies and funding opportunities.
- Join our webinars.
- Get in touch with us at <a href="mailto:flexibility@spenergynetworks.co.uk">flexibility@spenergynetworks.co.uk</a>.





### Glossary of Key Terms

A simple glossary to help you understand the language of flexibility.

Name	<b>Definition</b>
Active Network Management (ANM)	The use of distributed control systems to continually monitor network limits, along with systems that provide signals to DER to modify outputs in line with these limits.
Aggregator	Third party intermediaries specialising in coordinating or aggregating demand response from individual consumers to better meet industry parties' technical requirements for specific routes to market.
Availability Rate	This defines the maximum number of hours that we may seek flexible services from the provider.
Availability Window	This defines the likely time periods when we expect to seek flexible services support from the provider.
Baseline	The point from which any delivery of flexibility is measured.
Common Evaluation Methodology	and Tool (CEM) Standardised tool allowing DNOs to compare the cost of flexibility or other solutions e.g. energy efficiency against traditional network reinforcement.
Department for Business, Energy and	Industrial Strategy (BEIS) Brings together responsibilities for business, industrial strategy, science, innovation, energy and climate change.
Dynamic Purchasing System (DPS)	An online process for contracting flexible services on PicloFlex; DNOs advertise long term requirements and flex providers sign up to the DPS to demonstrate eligibility e.g. financial stability and technical ability, before proceeding to the competition/bidding stages.
Demand Side Response (DSR)	The ability of sources of demand (for example, an industrial process) to increase or decrease their net demand in response to signals (sometimes price-signal) in order to support system or network management.
Distributed Energy Resource (DER)	Small-scale power generation and storage such as solar, wind and electric vehicles that operate locally and are connected to a larger power grid at the distribution level.
Distribution Future Electricity	Scenarios (DFES) Annual report detailing Electricity North West's view of the region's future electricity requirements.
Network Development Plan (NDP)	Annual report detailing where on the network new connections are suitable and where flexibility services may be advantageous and how we intend to create capacity over the next ten years.
Distribution Network Operator (DNO) The owner and operator of a distribution network	licensed by the Gas and Electricity Markets Authority.
Distribution System Operation (DSO)	The systems and processes to operate energy networks in the net zero carbon future, balancing capacity on the network for new connections and existing customers.







### Glossary of Key Terms cont.

Name	<b>Definition</b>
Distribution Network Operator (DNO) The owner and operator of a distribution network	licensed by the Gas and Electricity Markets Authority.
Distribution System Operation (DSO)	The systems and processes to operate energy networks in the net zero carbon future, balancing capacity on the network for new connections and existing customers.
Energy Networks Association (ENA)	The ENA is the industry body funded by UK gas and electricity transmission and distribution licence holders.
ENA Open Networks Project	Brings together the nine electricity grid operators in the UK and Ireland to work together to standardise customer experiences and align processes to make connecting to the networks as easy as possible.
Extra High Voltage (EHV)	Voltages greater than 22kV in Electricity North West's distribution network.
Feeding Area	The geographic area that is supplied electricity by the cables and/or overhead lines connected to the local substation.
Firm Capacity	The amount of energy that must be guaranteed to be available at a given time on the network.
Flexibility Market	The arena of commercial dealings between buyers and sellers of flexible services.
Flexible Resource	Resources like generators, consumers, and Electricity Storage connected to the distribution network.
Flexible Services	DERs connected to our networks can increase exports (generate more) or reduce imports (consume less) when instructed by the network and receive payment in return.
Flexible Service Provider (FSP)	The company providing the Flexible Service.
High Voltage (HV)	The voltages of 6.6kV or 11kV in Electricity North West's distribution network.
Low Voltage (LV)	The voltages of 400V / 230V in Electricity North West's distribution network.
Distribution System Operation (DSO)	The systems and processes to operate energy networks in the net zero carbon future, balancing capacity on the network for new connections and existing customers.

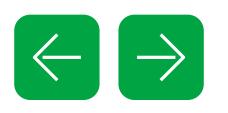






### Glossary of Key Terms cont.

Name	<b>Definition</b>
Market Liquidity	The ability for large numbers of electricity buyers and sellers to transact at all times, without causing a major change in its price and without incurring significant transaction costs.
National Grid Electricity System	Operator (ESO) National Grid moves high voltage electricity from where it's generated, such as a wind farm, through the energy system. Across Great Britain. They convert it into a more manageable voltage that's suited for domestic use.
Network Capacity	The amount of electricity flows that the network is able to accommodate.
Network Management System (NMS) A system that will allow us to manage the energy in the	North West in real time, operating as a smart network allowing supply to meet demand, facilitating a low carbon, sustainable and reliable electricity network.
Neutral Market Facilitator (NMF)	A transparent, neutral market for flexible services, providing attractive opportunities for customers of all scales to respond to requests for flexibility, allowing existing and new renewables to be fully utilised.
Peer to Peer Trading	Consumers trading electricity without an intermediary, at their agreed price. It makes renewable energy more accessible and allows consumers to make better use of their energy resources.
Piclo Flex platform	The independent marketplace for trading energy flexibility online. View active competitions, upload your assets and submit bids.
RIIO- ED2	Ofgem regulates the prices of companies that run the gas and electricity networks in Great Britain. RIIO- ED2 is the next price control period from 2023- 2028.
Remote Terminal Unit (RTU)	Used to reconfigure and collect data about the performance of our network, so we can intervene when necessary to keep supplies safe and reliable.
Transmission System Operator (TSO)	TSOs own, operate and maintain the transmission networks. There are 3 licensed TSOs in Britain, and each is responsible for a regional transmission services area.
Utilisation Rate	This defines the maximum number of hours that we expect to seek flexible services from the provider.
Whole System	In context of Open Networks, Whole System means making optimal network investment and operational decisions for the whole electricity system, not just the transmission or distribution networks in isolation from all the equipment connected to the network.
Low Voltage (LV)	The voltages of 400V / 230V in Electricity North West's distribution network.
Distribution System Operation (DSO)	The systems and processes to operate energy networks in the net zero carbon future, balancing capacity on the network for new connections and existing customers.









### Community Energy

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