Flexibility Strategy





Foreword

I am delighted we are publishing our refreshed flexibility strategy. Your feedback has guided us to produce this document, you've asked us to clarify how, why, and when we leverage flexibility within our distribution network. This document is set up to do just this and explain how flexibility is helping us contribute to a fair, net zero North West.

Flexibility plays a crucial role in daily network balancing, achieved through collaboration with stakeholders and utilisation of our network assets. In recent years, we have worked diligently to establish systems that foster an inclusive and efficient flexibility marketplace. This enables us to manage our network cost-effectively, ensuring value for consumers and helping us deliver our Social DSO ambitions.

This year, we have celebrated several milestones which have set us up with the mechanisms to support you in working with us to deliver a flexible energy system:

- The launch of our market platform and Active Network Management, giving us the ability to dispatch flexibility optimally across our network.
- Extensive engagement with stakeholders, incorporating your feedback to streamline processes across all flexibility types.
- Industry-wide collaboration, sharing data and insights to drive holistic improvements in flexibility across the energy system.
- Support for community and local energy and the allocation of £83,658 to six projects to support community level action through our Powering our Communities fund.

With these mechanisms deployed and tested, we want to get more of you involved in flexibility, so we can continue to drive down consumer costs, accelerate connections, enable a greener electricity mix and provide you with opportunities for new revenue streams.

This strategy outlines our achievements to date on our flexibility journey, informed by your needs, and invites you to participate in shaping our future initiatives. We value your feedback, which can be shared via our email: <u>flexible.contracts@enwl.co.uk</u>



Ben Grunfeld Strategy and Growth Director

GG This year, we have celebrated several milestones which have set us up with the mechanisms to support you in working with us to deliver a flexible energy system...



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About ENWL: Our role, flexibility, and purpose of this document

We operate the distribution electricity network in the North West, transporting electricity to 2.4 million homes and businesses

Electricity North West is one of 14 distribution network operators in the UK regulated by Ofgem. We operate the local electricity network and distribute electricity, mainly from the National Grid, to 2.4 million homes and businesses in the North West.

We are responsible for maintaining and upgrading 13,000 km of overhead power lines and more than 44,000 km of underground electricity cables and much more.

Our network in the North West is one of the most reliable in the country and by the end of our current regulatory period, we will have invested £1.9bn in our network to ensure we continue to deliver an excellent, safe and affordable service to all our customers.

As part of our DSO role, we are contributing to facilitating net zero

As the North West's electricity distribution network operator, it is essential that we facilitate the decarbonisation of transport, heat, and our energy system, at the lowest cost to our customers while maintaining high levels of network reliability.

Distribution System Operation (DSO) is providing the systems and processes needed to transition and operate energy networks in the net zero carbon future through three core functions. An overarching objective is transparent use and sharing of Data and Information.

This document is designed to give flexibility stakeholders a view of what we do and how they can be involved

This document aims to give you, our customers and stakeholders, a clear view of how and why we are using third party flexibility to deliver stability and a future proofed network.

We are seeking feedback from propositions in this document to feed into our next steps and ED3 planning.

This strategy focuses on Flexible Connections, Services and System Co-ordination, because that's where you can get involved

This document is aimed at stakeholders and customers involved in flexibility provision, therefore 'third party' flexibility is most relevant.

If you want to find out more about flexible assets and how we use them, you could read our ODFM (linked below), one of the key documents we have in our suite.

Where to get involved

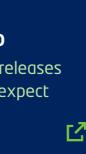






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Other documents which may be relevant to you: PDF **Distribution Network** Data Roadmap **Our Social DSO Strategy Options Assessment (DNOA)** Summary of the key data releases Vision of our forward-looking which stakeholders can expect Summary of our evaluation method for focus for DSO. network investment decisions. from us. \mathbb{Z} Γ PDF DSO DNO DFES **DSO Performance Governance Framework** Scenario-based forecasts published Panel Submission Principles, responsibilities, and by us, outlining how local energy Our summary to Ofgem of our key DSO processes for transitioning into our demand and generation may achievements each financial year. DSO role whilst fulfilling the role evolve over time. of the DNO at the same time. SLC31E Report Long Term Development and Statement Statement Our regulated report and statement of tendered, contracted and Our long-term vision for network evolution and investment priorities. dispatched flexibility across \mathbb{C} each reporting year.



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Operational **Decision-Making Framework**

PDF

Technical summary of how we ensure safe, efficient, and regulatorycompliant network operations.

Network **Development Plan**

Outline of planned investments and upgrades to the distribution network to meet future demand and flexibility needs.

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How we use flexibility across our network

We use Network and Third-Party flexibility across the distribution network for different reasons

Definition:

Third Party Flexibility: Third-party flexibility refers to the capability of external parties, not directly affiliated with the distribution network operators, behave flexibly on the distribution network e.g. through flexible services, connecting via flexible connections agreement.

High voltages Low voltages

Different types of flexibility are used at various voltage levels on our network. You may recognize these key points where voltage changes across the network: Grid Supply Point (GSP): The boundary between transmission and distribution networks. Bulk Supply Point (BSP): A major substation that steps down extra high-voltage electricity before feeding primary substations. Primary Substation (PSS): Steps down voltage further for distribution to multiple secondary substations. Secondary Substation (SSS): The final step-down from high-voltage to low-voltage before the electricity is supplied to homes and businesses. These are strategically located near customer premises.

Flexibility type	Pillar	What	Why	Where	When
	Flexibility services and procurement	When the demand for electricity in an area is greater than the amount that we can provide, we can utilise companies or individual customers known as Distributed Energy Resources (DERs) to help us manage network constraints. In return for providing Flexibility Services, DERs will receive payment.	 Reduce need for reinforcement investment Manage uncertainty in future load growth forecasts Manage network faults or outages Speed up connections 	 High and low voltages 	Year ahead, Months ahead, Week ahead, Day ahead
Third Party Flexibility	Flexible connections	Connections to the network which are made with constraints to their terms. These constraints can relate to time limits or system abnormalities	Speed up connections for customersManage fault and outage risks	Higher voltages	Year and Months ahead
	Co-ordination	Customers of the distribution network also respond to wholesale market signals and provide NESO flexibility services. Therefore part of enabling flexibility is working in a co-ordinated manner across the whole system.	Whole system efficiencyManage system constraints	All levels of the network	Year ahead, Months ahead, Week ahead, Day ahead Within Day?
Network Flexibility	Flexible assets	Flexible assets are items of plant or equipment, owned and operated by Electricity North West, which can be controlled in order to modify the network topology. Some examples of the types of assets which can be utilised as flexible assets include tap changers, capacitors, reactors, circuit breakers, and switches.	 Network optimisation and the capability to unlock greater network capacity whilst also improving network stability and security Restore the network after outages 	 All levels of the network 	Assets which are deployed



Introduction

A range of reforms are underway that will shape our role in flexibility management

The UK is undergoing the biggest transformation in electricity networks ever seen. A wide range of policy changes are underway which could shape how flexibility is harnessed on the distribution network in the future:

Reform	Impact on flexibility
Clean Power 2030 (CP30) and GB Energy's Local Power Plan	CP30 highlights the need for a 5-fold increase in flexibility, which requires DNOs and NESO to build a system to facilitate this effic CP30 plan and Great British Energy's Local Power Plan mean £3B+ in funding for community energy, unlocking local renewable po DNOs have a unique role to play in supporting this development, being able to de-risk investment for communities through providing data and expertise.
Regional Energy Strategic Plans (RESPs)	Regional Energy Strategic Plans (RESPs) will have a role informing when and where system capacity is required, and the extent to flexibility potential of low carbon technologies will (or will not) mitigate network impacts.
Elexon as the market facilitator	Elexon's evolving role as a market facilitator will drive further standardization, alignment across markets, and potentially deliver a re coordinating scheduling and dispatch across markets and levels of the system.
Flexibility Market Asset Register (FMAR)	FMAR, being led by Ofgem, aiming to create a common digital infrastructure for registering distributed flexibility assets. This infrastructure for registering distributed flexibility assets. This infrastructure does not be collected once, stored as a single source of tracessed by multiple users, including the NESO and DSOs. FMAR is currently in the consultation and design phase, with Ofgem strong industry stakeholders to refine the proposals and ensure effective implementation.
Market-wide Half Hourly Settlement (MHHS) Programme	Market Half-Hourly Settlement (MHHS) is a reform that requires electricity suppliers to settle customer energy usage based on act hourly consumption data, improving accuracy, efficiency, and integration of flexible energy resources to the energy system – the m due to conclude by October 2026.
RIIO-ED3	The RIIO-ED3 framework consultation signals a need for rapid expansion of network capacity, However, we still believe that flexibil distribution level has a key role in enabling the deliverability of this capacity, including managing constraints and outages to facilita and that the DSO has a key role in facilitating and enabling distributed flexibility to participate in wider system support.

Co-ordination

Where to get involved



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DSO flexibility must prioritise cost efficiency, helping consumers avoid higher bills while maintaining a reliable, lowcarbon energy supply. With rapid change and shared responsibility for Net Zero, we are ready to adapt and align with the evolving market - but this strategy is focused on what we can do next to support the above, broader initiatives.

Flexibility Services

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Flexible Connections

Our future need for flexibility services and why your involvement matters

There is a growing demand for flexibility

The volume of flexibility services we need is set to grow significantly over the coming years, as evidenced by our Distribution Future Energy Scenarios which show a vast increase in the potential for flexibility services moving forward.

Value from flexibility services for DSOs depends on the needs they are helping us meet

Flexibility services enable us to mitigate or defer upgrades to the grid infrastructure, manage uncertainty in load growth, deal with planned and unplanned network events and to release capacity to enable connections. Flexibility services are valued based on which of these needs they are helping us meet, and ultimately how much this saves consumer money which would otherwise be spent on alternative actions. Flexibility services can help to manage energy bills, for instance where they reduce peak demand, and they can provide direct revenues to providers. In this way they help us contribute to our broader Social DSO strategy by providing value to consumers across our network.

Increasing market liquidity will likely make prices more competitive

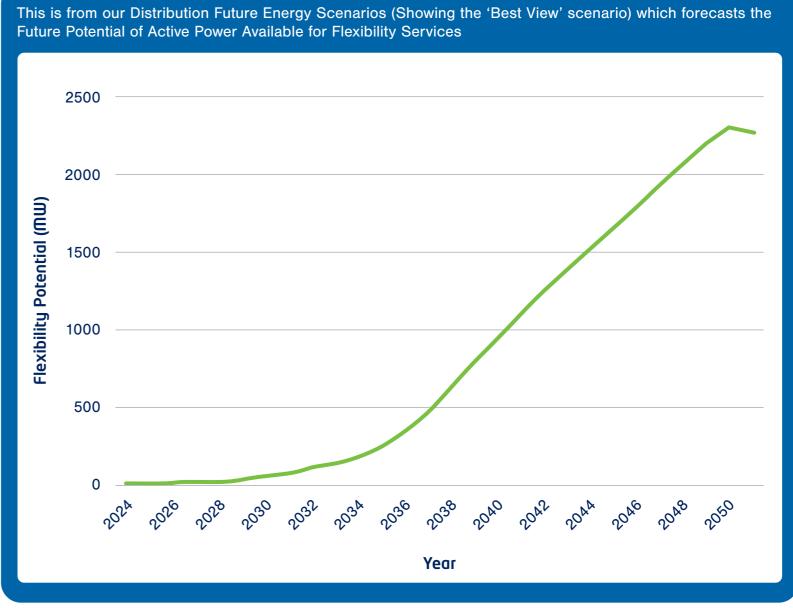
As more distributed energy resources connect to our network and stakeholders gain a better understanding of the value of flexibility, the resulting growth in market liquidity will naturally drive more competitive pricing.

To meet increasing flexibility needs and support fair pricing, we are working closely with our customers and stakeholders to establish a successful market. For example, we tendered for LV flexibility for the first time this year, and plan to expand LV flexibility volumes in the coming years. These steps will help us secure the flexibility we need while delivering benefits to all our customers.

The following section of the strategy is most relevant to our Flexibility Service Provider stakeholder group or those stakeholders who may look to become flexibility service providers.

Go to our website: <u>Flexibility Hub</u> to see where our flexibility needs are now and where they will be in the future.

Our view of growth in flexibility potential





Flexibility services and how we use them

We use Flexibility Services to address a range of network needs

- We tender for flexibility services from Flexibility Service Providers (FSPs) to help manage network constraints, avoid or defer network reinforcement, help restore the network post-fault, manage planned outages, and release capacity to enable new connections
- The majority of our flexibility service requirements to date focus on managing thermal constraints within the network, when there are peaks in electricity demand. There are also increasingly more Low Carbon Technologies connected to the distribution network, which can cause more intermittent demand and generation (such as electric vehicles, heat pumps, solar panels)

In collaboration with the ENA and other DNOs, under the Open Networks project, we have been working to refine standardised flexibility services, we offer all of the below products:

Product	Response details	Use cose	Provider decision timescole	ENWL decision timescale	Payment structure	What level of the network
Peak Reduction	Reduction in peak power utilised over time.	Reduce a site's electricity consumption during peak times e.g. via energy efficiency measures	Reduce a site's electricity consumption during peak times e.g. via energy efficiency measures	At trade utilisation timing	Utilisation only	
Scheduled Utilisation	Flexibility is delivered which is pre-agreed with the provider.	Manage seasonal peak demands and defer network reinforcement	At least month ahead (During Tendering / Bidding)	At trade utilisation timing	Utilisation only	All flexibility
Operational Utilisation	Amount of flexibility delivered is agreed nearer to real time. This can be utilised to facilitate a change in demand profile from FSPs based on network conditions close to real-time.	Restore network supplies following an unplanned outage/ fault	Real time	Real time utilisation timing	Utilisation only	connected at, or below, the level of the constraint can participate
Operational Utilisation and Variable Availability	This product allows for DNOs and the NESO to procure a level of contracted capacity, but then refine the requirements in terms of availability closer to the event. The assets will then be dispatched for the required level of service that is required.	Flexible service procurement based upon long range forecasting of network constraints.	Week ahead availability adjustment	Real time utilisation timing Week ahead availability refinement	Availability and Utilisation	

Examples of different uses of the flexibility products

(Operational Utilisation and Variable Availability) A supermarket is looking to provide demand turn down by reducing their energy usage at peak times.



(Peak Reduction) A warehouse that uses a lot of energy, is looking to provide Peak Reduction via implementing energy efficiency measures.



See more detail and examples here: Flexible Services case studies Γ?

Celectricity DSC

The existing flexibility service provider journey

				Flexibility Service Provider Journey	
	Awareness	Qualification	Tendering	Scheduling and dispatch	
age in 9 journey	Ahead of bidding in tenders our flexibility map visualises current and future flex requirements so FSPs can understand the location and type of our needs. We also conduct targeted engagement with stakeholders.	To partake as an FSP, providers must register an account on ElectronConnect and complete a Commercial Pre-Qualification which includes technical qualification. Once approved, the FSP's commercial qualification remains valid for future tends.	We run Spring and Autumn tenders for flexibility requirements up to four years ahead of need. The procurement rounds take place on ElectronConnect. FSPs can visit the platform at any time to confirm participation in competitions and submit bids.	 For scheduled services (Operational Utilisation & Variable Avail providers must be available to alter their demand or supply at agreed schedule, which will be refined ahead of time. Dispatchable services (Scheduled Utilisation, Peak Reduction measures), will be dispatched as part of a pre-defined schedul self-dispatch the agreed capacity at the agreed time. Where Energy Efficiency measures (Peak Reduction) are utilise command issued; Providers are expected to provide an enduring particularly at the pre-agreed peak times. Our services are dispatched based on a dynamic "merit order based on the most economic, efficient, fair and transparent was Dispatch instructions are sent via the ElectronConnect platform 	all tir (excl le an ed, th ing re " list ay.
mmary what have place support u rough the irney	 Offering real-time The platform also Customers seeking We work one-to-or understand the scale To participate in our Have an asset in Be capable of ad 15 minutes of record 	e visibility of progress of ten o gives us improved operation ng to repeat in the process ne with flexibility service p ope of DSO flexibility prod r flexibility service tenders, one of the requirement area	onal efficiency and data integ of tendering, will be able to providers to ensure they ducts and how to participat customers must: as y is consumed or generated	The track changes throughout the process. Sprity by automating processes, this reduces manual errors and in without re-doing registration on ElectronConnect We produce bi-annual tenders including for forecasted flexibility 4 years ahead of need • We are now able to tender for a range of needs, including constraint management,	mpro Elec give pro • P av al • W
inicy		e able to provide a minimun	1 50 minutes response	gator seen previously	

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	Settlement	Repeat Contracting
bility, and Operational Utilisation), times in accordance with a pre-		
ccl. via energy efficiency and as such the Provider should	Settlement of flexibility contracts is calculated in	We will support customers in repeating the cycle
, there will be no dispatch reduction in demand,	ElectronConnect, we conduct payments to our	to bid for further flexibility after the first cycle
st generated by our systems	providers directly	

roves accuracy of data, accelerating our processing times.

ectronConnect, coupled with our integrated network software, ves stakeholders access to data about their services provision, and ovides close to real time dispatch for decision making

Proactive management of assets is supported -we can make FSPs aware of a need, or lack of a need, for dispatch, close to real time, allowing them to make informed trading decisions

We leave the third party to calculate and manage settlement – they are a completely neutral party which avoids any risk of unfair payment

rent stakeholders under some examples of services here: Flexible Services case studies

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How we are evolving our use of flexibility services

We have engaged with flexibility service providers and stakeholders to define needs of flexibility service providers and used this to define our current and future activities

What we've already done:

What do our flexibility service providers and stakeholders need from us when engaging with flexibility services?

- Guidance and support: To aid understanding how flexibility service products are relevant to you and to understand the FSP role
- **Options:** Products available which cater for a range of customer and business types
- Adaptability: You have your own requirements; legally, financially and socially. Sometimes you require amendments to standardised terms to ensure contracts can be mutually agreeable
- Market access: Make it easy to participate in DSO flexibility services, and in other energy markets
- Efficiency: Short lead times between interest in becoming an FSP to activation
- **Data:** Access to flexibility market data that enables you to accurately forecast, supporting development of trading strategies and operational plans
- Inclusivity: A route to entry for all qualifying stakeholders and the ability to maximise value from flexibility, including from energy efficiency

	Implemented capabilities to support the full range of flexibility products, and mobilised market engagement	Expand the diversit
Guidance and support	 We conduct bilateral, strategic engagement which has been expanded to focus more on government bodies, Local Authorities and Large Energy Users 	We will be continuing more types of provide
A range of products	 We tender for all available distribution service products, including providing extra options for you by facilitating combinations of products e.g. Peak Reduction and Operational Utilisation 	 We will continue to ter Continued evolution of We will be exploring the of revenues from energy
Easy to contract with	 We have successfully contracted with a range of providers, in line with stakeholder feedback we are adhering to industry standards, yet diverging where required for unique provider needs - driving participation 	 Based on your feedba the length of the tende
Ability to participate in multiple markets	 We have the ability to provide notice of dispatch and availability at week ahead, giving more options to use your volumes if it's not needed by us 	 We are establishing a NESO, pending sched We will use our platfo giving you more optio We will continue to exfindings from our inno
Ease and efficiency of market access	 We use an end-to-end flexibility platform (from pre- qualification to settlement) We have been tendering for current needs but also for needs predicted to occur within the next 4 years in order to prime you for our future needs 	 We will be adopting the standardisation across platform with little imp Our platform will also end-to-end process standardisation
Data	 We share our flexibility needs via an interactive map and have the ability to generate and have the ability to share short term forecasts for dispatch with you 	 We will use live networn needs forecasts We will share further of transparency
Inclusivity	 We work with stakeholders and in innovation projects to drive participation 	 In line with our Social more participation fro

What we're looking to do next: ity and number of FSPs, by providing the best customer journey and driving co-ordination

our strategic engagement aiming to build our flexibility volumes across ers

- ender for our range of products bi-annually in Spring and Autumn
- of products and relevant primacy/stackability changes in line with ON-P
- the findings from RetroMeter to see if it could help facilitate pass through ergy efficiency to domestic customers via our service products

back as to how we could make contracting easier, we are aiming to reduce dering cycle by streamlining contracting and qualification processes

- an Inter-Control Centre-Communications Protocol (ICCP) link with the eduled works by the NESO in 2026.
- orm to notify of dispatch and availability at close to real time dispatch, ons with your capacity
- explore enabling secondary trading of curtailment obligations, using novation project, BiTrader
- the standard ENA API between our platform and the FSPs, to allow for ss the industry and give us the ability to seamlessly amend the market pact to FSPs
- o soon be capable of handling payments to your accounts making the span all the way to payment in one software
- ork data gathered from our ANM software to improve reliability of flexibility
- detail on operational dispatch and decision making to ensure you have full

al DSO strategy and refreshed community energy support we will to drive om all sectors in flexibility services see page 20 for further details



Flexible connections



Why we use flexible connections and the options available for our customers

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We now offer 5 types of flexible connection which help our customers connect to the network faster

- We used to offer flexible connections mainly to manage the export of power from sites with generation equipment
- Now, we can also utilise flexible connections which have demand import restrictions to avoid network constraints at certain periods of the year and during certain abnormal network running arrangements.
- We offer curtailable and system normal connections which both usually can be offered under our Active Network Management(ANM) scheme which controls the connection
- The connections offers can be used by the customer until the required network reinforcement has occurred or the constraint can be managed via alternative methods e.g. utilising Flexibility Services; or for the lifetime of the connection

Flexible connection type	Summary	Customer benefit	Network benefits	Custor respor
Curtailable	A connection which can be disconnected or constrained when there are network overloads or restrictions affecting the network supplying the customer whilst the network is operating in an intact, system normal state.	Lower upfront connection cost Faster connection	ENWL have ability to curtail asset when network is constrained, minimises risks of constraint problems	Allows reinfore a risk o networ
System Normal	A system normal connection can be disconnected or constrained when there is an abnormal network operating condition affecting the network supplying the customer e.g. circuits, switchgear, etc. This type of connection cannot be curtailed under system normal conditions.	More stable access with limited constraints	Ability to disconnect when there is a fault (fault risk and associated penalties minimised)	Custon discon betwee reliabili
Export Limiting	A connection where the installed generation equipment has a greater export capability than that which has been agreed to be exported onto the Electricity North West distribution system.	Enables larger generation to connect without grid reinforcement – e.g. where customers net off generation within their own site they can install a larger generator	Delay or negate need for reinforcement	Custon avoids and ex
Import Limiting	A connection where the installed equipment has a greater import capability than that which has been agreed to be imported from the Electricity North West distribution system.	Reduced connection costs for high demand users – e.g. where customers have a potentially higher demand capability than they are actually likely to utilise or where they can net off demand using generation/storage	Managing supply and demand, assurance import limits will not be breeched	Custom avoids
Timed	A connection arrangement where connection capacity is subject to restrictions within specific time periods.	Enables grid access during off peak hours	Reduces peak loading on network	It is the custom export

omer limitations and onsibilities

is access to the grid without preement but comes with of curtailment when the pork is constrained.

omer will face onnections – balance een cost of connection vs wility of supply / export

omer must limit export, s delays to connections expensive upgrades

omer must limit import, Is delays to connections

he responsibility of the omer to limit their import/ rt during these periods.

What does this look like for connectees?

A utility wants to connect a new pumping station in an area where the electricity network is reaching peak capacity. Rather than paying expensive fees, it accepts a **timed agreement** where it will reduce energy usage during certain times.



A battery developer wants to connect to the grid in a constrained area, they accept a **System Normal** connection, taking the risk on being disconnected because they need a fast connection.

A community energy group wants to connect a new solar array in an area where the electricity network is reaching peak capacity. Rather than paying expensive fees, it accepts a **curtailable agreement** where it will be curtailed by ENWL ANM when the network is constrained.



The connections journey for flexible access arrangements

We provide the necessary support and guidance to enable our flexible connections customers a streamlined, transparent and fair journey from awareness to the point they have a live connection

Support from o	ur teams is available throughout	llation work will be facilitate	d where required Monitoring support	t for all access arrangements	Data and reporting supports decised	sion making and ensures curtailment is transparen
			Flexible (Connections Journey		
	Awareness	Connections application, offer and contract	Set up of your connection	Dispatch		Reporting
Stage summary	The connectee becomes aware of the option of a flexible connection, which could help them connect to our network quicker and/or for less cost.	The connectee makes an application to connect to our network, and we produce a design and offer.	Our connections teams will help to ensure that connetees have the necessary equipment and knowledge. The connection is then installed and commissioned with ENWL.	Customers who have accepted a curtailable in real time are instru curtailment to manage network o Self managed customers will cur their contractual limits.	cted on the necessary level of constraint.	ENWL provide a number of reports to allow for flexible connections customers and other interested parties to understand forecasted and historical curtailment levels.
Key support mechanisms we provide	 Our connections, LAEP or DSO teams (depending on the connectee and what they need) support via directing connectees to documents and support tools that can support them to find information about flexible connections and plan their application The Data Hub can be used to help inform the size, planned dates and location for a connection 	 Our connections teams support via directing connectees to documents and support tools that can support tools that can support them to find information about flexible connections and plan their application It may be at this stage of the process that, if the customer has requested an unconstrained connection, that the connections team may highlight that a flexible connection to the customer of a faster more cost effective route to connecting to the network 	 Our connections teams will help to ENWL will install the necessary hardware and software onsite to enable real time flexible connections management (where required) 	 Ensuring all connections com treated fairly, as per their con For connections with self man customer is responsible for e requirements as defined within These are: Timed Connection Export limiting devices. For connections with flexible controlled via ENWL controls state via onsite monitoring. El real time to define an optimise import and export. These req avoid causing network disrup Sites which are controlled with 	ply with regulations and are naged flexible connections the nsuring they comply with the in their connection agreement. agreements, Import and connections that are , ENWL will monitor the sites NWL will send commands in ed request for curtailment of uests should be adhered to, to otion. th the assistance of our Active n (ANM) will have their levels of v attribute curtailment across	 edge to fulfil their contractual obligations. Sites being controlled with the assistance of ANM will be given access to our curtailment forecasting system which 48 hours ahead will provide a forecast of potential constraints. Sites with a curtailment index will be provided with an annual report of actual curtailment, they can find more information at <u>https://www.enwl.co.uk/get-connected/apply-for-a-new-connection/flexible-connections/curtailment-information/</u> We report annually to Ofgem on the volumes of flexible connections to the network. Our Embedded Capacity Register (ECR) provides information on connections with Flexible connections: <u>https://www.enwl.co.uk/get-connected/network-information/embedded-capacity-register/</u>



Flexibility Services

Flexible Connections

What we've already got set up:

Our systems and processes to facilitate a range of flexible connections

How we are evolving our use of flexible access arrangements

We have engaged with stakeholders to understand their needs to inform our current and future activities

What do our customers, stakeholders and connectees need from us when interacting with flexible connections?

- Guidance and support: Timely support to decide which connection type is suitable for you and in navigating the connections process, as well as access to reliable data on which to base decisions.
- Options and choice: Choice regarding connection types that can suit a range of customer and business types and requirements, and can save money and time when connecting.
- Make it easy: Have a simple experience, without additional costs and barriers such as additional control assets.
- **Predictability:** You need to know how much network access to expect, in order to plan your operations. Some customers want to know close to real-time based on the best information.
- **Transparency:** You want to know why you have been curtailed, and that it conforms to your original agreements.
- Network access: You need maximum network access when connected via a flexible access arrangement, especially where you have opportunities to provide services to the wider energy system.

	our systems and processes to racintate a range of nexible connections
Guidance and support	 We offer pre-application engagement to help customers understand their options The DSO team is involved in offers where complex flexible access arrangements are possible Curtailment assessments are provided with flexible offers and clear curtailment forecasts and caps, ensuring customers can complete revenue modelling and make informed investment decisions Our data portal contains a range of operational data to support decisions regarding flexible connections
Connection product options	 We offer 5 types of flexible connection to customers to enable timely and lower cost access to the grid The range of options is suitable for different customer needs (import and export) and at all levels of the network We have modified the ANM system in order to support the NESO to apply technical limits enabling connections restricted by Transmission constraints to connect earlier
Efficient systems enablement	 As of 2025, our Active Network Management (ANM) system is live across our whole network ANM is enabled via our Network Management System and so the cost of entry for new customers is low as we do not need to install local control assets
Predictability and transparency	 We cap curtailment using the curtailment index method to ensure fairness Our <u>Operational Decision-Making Framework</u> (ODMF) is published clearly setting out dispatch principles
Network and wider market access	 Our ANM enables fine adjustments to capacity, not just on/off, and works based on real-time network modelling rather than simple "worst case" assumptions We consider prior in-year curtailment levels vs. curtailment limits to inform how we order dispatch options, allowing us to fairly distribute curtailment based on a "pseudo-price" (see our ODMF – link above) Our dispatch framework is consistent with the ENA Open Networks Primacy rules for coordinating dispatch with the NESO

What we're looking to do next: Growing customer volumes under management and evolving whole system coordination

 We will develop the ANM system to be able to facilitate "Part 3" constraints, enabling customers to connect We will iterate connections products as per industry and stakeholder needs e.g. developing ramped connections We are investigating more innovative arrangements for Distributed Generation e.g. in community energy schemes We will increase the co-ordination between our ANM and other applications e.g. fault restoration systems to drive optimal use of ANM We will be leveraging findings from tests in 2025 innovation projects e.g. Bilateral trading of curtailment liability risk via BiTrader We will provide curtailment C including day-ahead and intra-day where required by customers and stakeholders to help plan and manage their operations We will be launching further operational decision-making reporting for transparency We will share the merit order with NESO so that we can support future whole system collaboration and optimisation We are establishing an Inter-Control Centre-Communications Protocol (ICCP) link to share real time data with NESO We will look to introduce facility for bilateral trading of curtailment pricing in order to incentivise DNOs to take flexibility options We will look to introduce facility for bilateral trading of curtailment obligations, pending trials outcomes and customer demand 	e g	 We are aiming to streamline connecting customers experience with us through strengthening our process hand-offs between our Connections teams and the DSO We are increasing our focus on proactive outreach where customers can benefit from flexibility
 applications e.g. fault restoration systems to drive optimal use of ANM We will be leveraging findings from tests in 2025 innovation projects e.g. Bilateral trading of curtailment liability risk via BiTrader We will provide curtailment C including day-ahead and intra-day where required by customers and stakeholders to help plan and manage their operations We will be launching further operational decision-making reporting for transparency We will share the merit order with NESO so that we can support future whole system collaboration and optimisation We are establishing an Inter-Control Centre-Communications Protocol (ICCP) link to share real time data with NESO We will work with the ENA to further the concept of curtailment pricing in order to incentivise DNOs to take flexibility options We will look to introduce facility for bilateral trading of curtailment 	nd I	 constraints, enabling customers to connect We will iterate connections products as per industry and stakeholder needs e.g. developing ramped connections We are investigating more innovative arrangements for Distributed
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Co-ordination



How we coordinate with stakeholders to enable net zero both locally and across the wider energy system

Co-ordination will be a key enabler for net zero - The Clean Power 2030 (CP30) plan highlights the need for a **five-fold increase in flexibility**. Achieving this efficiently requires two core co-ordination pillars:

1

Whole system coordination of Distributed Energy Resources to do what is most valuable for the whole energy system

What is whole system coordination?

Whole system coordination of Distributed Energy Resources (DER) and flexibility refers to how we coordinate renewable generation, storage, and demand-side response to ensure that electricity flows efficiently where and when it's needed – reducing costs, enhancing resilience, and accelerating the transition to net zero.



This requires close coordination between the National Energy System Operator (NESO) and the DNOs through market mechanisms and dispatch. It's a smarter, more connected energy future where every asset plays a role in balancing the grid and maximising value for consumers and communities alike.

This can drive:

Reduced whole system costs and bills

Greater revenue opportunities for service providers to incentivise investment

Lower carbon intensity energy system



Co-ordination and support for communities to deliver successful community energy schemes that facilitate net zero

What is community energy?

A community energy project is an initiative where local individuals, businesses, or organisations collaboratively develop, own, or benefit from renewable energy generation, energy efficiency measures, or flexibility services.

These projects aim to increase local energy resilience, reduce carbon emissions, and provide economic and social benefits to the community.

Setting up community energy schemes requires coordination across a range of actors and support to navigate complexities in design and implementation.

This can drive:

Faster connections of distributed generation and new demands



Reduced consumption and lower energy costs for local communities Improved investment cases to unlock funding for net zero



How we are supporting whole system coordination of **Distributed Energy Resources**

1

Whole system coordination of Distributed Energy Resources to do what is most valuable for the whole energy system

How we will deliver

What do our customers, stakeholders, and flexibility service providers need from us to enable whole system flexibility?

- Effective energy system co-ordination is needed to ensure that distribution-connected assets can do what is most valuable across the entire energy system – i.e. participate in more than one NESO market as well as DNO flexibility markets.
- Flexibility service providers need guidance and support to understand how to participate in whole system flexibility and inform their investments.
- They also need us to have aligned commercial arrangements with the NESO such that they can participate in more than market at once and stack revenues.
- The NESO needs us to coordinate in operational timeframes to ensure that we are aligned in how we are dispatching flexibility, and not working against each other.
- DERs need us to maximise their network access if they are to provide services to the wider system, either through firm connections where possible, or by minimising curtailment of flexible connections through efficient network management.

Guidance and support	 Through proactive engagement with customers and flexil distribution network, to ensure providers can provide flexil
Aligned commercial arrangements	 We maximise the ability for providers to participate in wid operational needs (e.g. availability to support a planned of
Market openness and integration	• We will be adopting the ENA standard API for the Market F allow us to seamlessly change market platform with little o in our market operating model that will support us in a
NESO dispatch coordination	 We are establishing an Inter-Control Centre-Communication NESO in 2025. This will enable faster data sharing in relation use a Risk of Service Conflicts report available via API The industry has defined "Primacy" rules which govern where rules on our network, and will continue to mature these primates and the set of the s
Network access	 In network planning, we have added wider system and soor Panel, meaning we prioritise network investment if it en we have established the ability to put a price on curtailly dispatch a flexibility service to manage a need that is cheat. We are currently trialling and hope to have facility via our customers on flexible connections would be able to trade

Co-ordination and support for communities to deliver successful community energy schemes that facilitate net zero

kibility service providers we advise on market opportunities beyond the kibility where it is most valued and rewarded

ider markets. We would only ever specify exclusivity for high-risk outage in the event of fault) for which we pay higher prices.

Platform to FSPs to allow for standardisation across the industry and to change to FSPs. As the market facilitator role matures, we have openness adopting any industry-wide market processes for coordination.

ions Protocol (ICCP) link with the NESO, pending scheduled works by the ation to flexibility schedule conflicts in near to real time. In the meantime, we Pl on our Open Data Portal.

who gets priority in dispatch for a given service. We have trialled Primacy processes as dispatch volumes increase.

ocial benefits into our options appraisal, in collaboration with our DSO nables DER that will provide valuable flexibility.

Iment, rather than consider it a "free" option. This means that if we can eaper than curtailment, that is what we'll do.

market platform partner to enable **secondary trading**. This means that out of their curtailment to participate in wider markets if it makes sense.



1

ale.

How we are supporting community and local energy schemes

Whole system coordination of Distributed Energy Resources to do what is most valuable for the whole energy system

How we will deliver

What do our customers, stakeholders, and flexibility service providers need from us to support communities to deliver successful projects that facilitate net zero?

- Help, via network data, to identify locations and regions that have potential for setting up local energy schemes that can drive benefits
- Guidance, and facilitation of engagement with other stakeholders to help design and implement local energy schemes
- Supporting identification of and access to funding routes, cost savings, and revenue **streams** to support local energy projects
- Connecting local energy groups with suppliers, partners and energy industry participants needed to support energy schemes
- Support driving the most innovative **projects** that may change industry arrangements

Guidance, support, and engagement• We are centralising our activity on community energy into a single for the level of activity. • This team provides advice on how to plan and establish community market data, advice on flexibility market access, design of local scheme • Through ongoing engagement with Local Authorities, regional enterpris we will collaboratively work to identify areas for local energy scheme transition. • We are establishing a formal process with our connections function to application connections engagement, to be referred to our specialist expensive or long lead-time connection offersAccess to funding, cost savings, and revenue streams• Provision of advice and assistance to community energy organisation can support their project • Assistance accessing available funding, including access to our own upcoming Local Power Plan fundingPartnerships• Providing advice on the range of service providers that might be re- access to our network of partners that have been involved in trials ar • This could include supporting community and local energy schemes to aggregators, investors, smart suppliers, other community energy groupInnovation trials• Support through our innovation funding mechanisms if appropriate.			
Identification of locationswe will collaboratively work to identify areas for local energy scheme transition.Identification of locations. We are establishing a formal process with our connections function to application connections engagement, to be referred to our specialist expensive or long lead-time connection offersAccess to funding, cost savings, and revenue streams. Provision of advice and assistance to community energy organisation can support their projectPartnerships. Providing advice on the range of service providers that might be red access to our network of partners that have been involved in trials are . This could include supporting community and local energy schemes to aggregators, investors, smart suppliers, other community energy groupInnovation trials. Support through our innovation team for the most innovative scheme		for the level of activity.This team provides advice on how to plan and establish community	
Access to funding, cost savings, and revenue streamscan support their project• Assistance accessing available funding, including access to our own upcoming Local Power Plan funding• Providing advice on the range of service providers that might be re- access to our network of partners that have been involved in trials ar • This could include supporting community and local energy schemes to aggregators, investors, smart suppliers, other community energy group• Support through our innovation team for the most innovative scheme		 we will collaboratively work to identify areas for local energy scheme transition. We are establishing a formal process with our connections function to application connections engagement, to be referred to our specialist 	
Partnershipsaccess to our network of partners that have been involved in trials and • This could include supporting community and local energy schemes to aggregators, investors, smart suppliers, other community energy groupInnovation trials• Support through our innovation team for the most innovative scheme	cost savings, and	can support their projectAssistance accessing available funding, including access to our own	
Innovation trials	Partnerships	access to our network of partners that have been involved in trials arThis could include supporting community and local energy schemes to	
	Innovation trials		



Co-ordination and support for communities to deliver successful community energy schemes that facilitate net zero

team in the DSO and strengthening the team in line with our ambitions

and local energy schemes. This can include provision of network and nes, connections journey support, and help with access to funding.

se groups, and the NESO's new Regional Energy Strategic Plan hubs, mes, with a priority focus on enabling local benefits and driving a just

assist them in identifying high potential locations through prest team, as well as referring complex connections that have been offered

ions seeking to understand the costs and benefits of energy schemes that

Powering Communities fund, as well as wider opportunities such as

equired to support a community or local energy scheme, as well as and schemes across our areas

o connect with the NESO, hardware providers, flexibility managers, ps, and wider connecting customers.

mes that might face industry barriers that need to be overcome. This can



What does our new community energy approach mean we will do and why?

Whole system coordination of Distributed Energy Resources to do what is most valuable for the whole energy system

2

Through our community and local energy services we are seeking to support organisations like...

<u>OYOYO</u>

Community

energy groups



1 л.



Housing trusts and associations



Environmental

groups



Community groups





Distributed

generators

Local Authorities



Sports clubs

Example projects

Local solar offtake scheme



Summary of project

- A solar field is being curtailed at peak times. and is looking for a customer to offtake excess generation behind the network constraint
- · We have joined them with a social housing customer who is buying this energy at a reduced rate via a Power Purchase Agreement, thus avoiding curtailment

What are the benefits?

- · Reduced lost revenue for the solar field
- · Cheaper energy for the social housing
- Lower carbon intensity energy grid
- Negates need for network reinforcement

See our website for further current case studies and how to get involved: <u>Community and local energy</u>

Charge My Street



Summary of project

- This project will test an app to help make the business case for co-located solar and electric vehicle charge points in community settings
- · Charge my Street have also been introduced to flexibility services and have been contracted to provide services to us

What are the benefits?

- Reduced lost revenue for the solar
- Lower carbon intensity for charging
- Increased charging infrastructure at lower prices for locals
- Revenues from flexibility services

Co-ordination and support for communities to deliver successful community energy schemes that facilitate net zero



Low Carbon Community Heat





Summary of project

• This project is to explore the feasibility for an off-gas village to decarbonise it's heating via a shared ground source heat pump. It aims to use a community-led approach to support the village in transitioning from its fossil fuelled energy supplies

What are the benefits?

- Low carbon heating for the community
- Community infrastructure planning enables easier network planning Ground loops present opportunity to reduce need for reinforcement compared to individual heat pumps within the community



Uhere to get involved

22 Flexibility Strategy 2025

Where to get involved



Where can I get involved in the next year and when

To help you plan we have mapped the next year of planned tenders, publications and DSO engagement

	pril – Spring 2025 ments Published		27th October – Autumn 20 Requirements Published
April - Jun		Jul – Sept	Oct - Dec
3rd April - DSO Conference	April – DSO Incentive Report		

Continuous Stakeholder Engagement

121 sessions on request
 DSO Discussions - Discussions between us and you about certain themes e.g. Data, DFES, Flex and ODMF
 DSO Functions - Recorded webinars with updates from us
 Bilaterals with Local Authorities and Strategic Partners
 Communications: Newsletters, event promotions press releases, social media, blogs

Industry relevant conferences and Strategic Partner events

Participate in flexibility services:

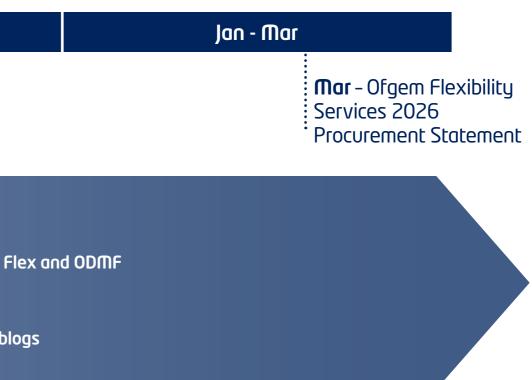
Our next flexibility tender round which will allow providers to respond to our needs will launch in Spring 2025. To discuss with us directly how to participate in Flexibility Services contact us here: Flexible Services get in touch form.

Provide feedback on this strategy:

Contact us with thoughts here: <u>flexible.contracts@enwl.co.uk</u>

Or attend one of our DSO engagement sessions above

2025



Explore our datasets:

These include our flexibility service requirements and data which can inform your connection request: <u>Home — Electricity North West</u>



Electricity North West Limited

Registered Office: Borron Street Stockport Cheshire SK1 2JD

Email: <u>DSO@enwl.co.uk</u>

Registered no: 2366949 (England)

