Electricity Distribution

DSO Electricity Futures Autumn Conference

Flexibility - an introduction

14 October 2025

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Charlotte Pirie

Stakeholder Experience Manager
Distribution System Operator

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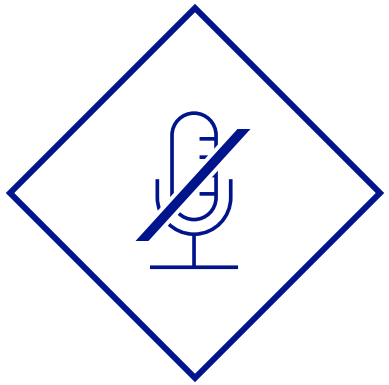
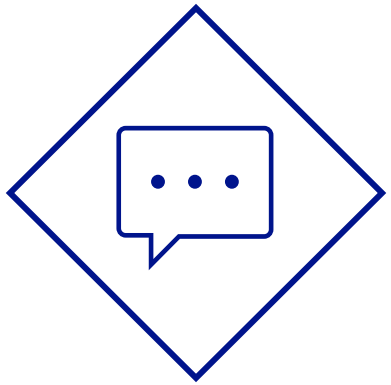
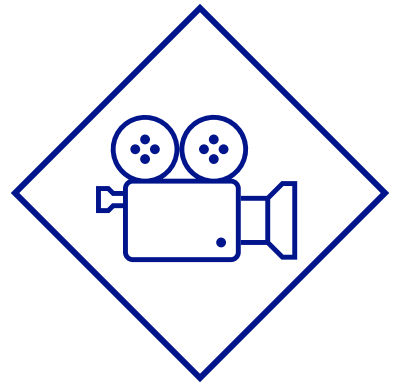
Housekeeping



Please make sure your microphone is muted when not speaking



For questions or feedback, please raise your hand or use the Q&A/chat box



We are recording this session for sharing with our stakeholders

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Agenda

13.00 Welcome, housekeeping and session outline

13:10 Understanding Flexibility
What is flexibility? Why is it important?

13:25 Accessing Flexibility
Who can participate? How and where to buy flexibility?

13:40 Q&A
Open forum

13:50 Share your views
Slido Poll

Charlotte Pirie
Stakeholder Experience Manager

Doerte Schneemann
Head of Flexibility Markets

Luke Boucher
Flexible Power Commercial Officer

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Getting to know you

It's important for us to understand your needs and how we support your involvement in flexibility.

How familiar are you with Flexibility Markets?

Have you participated in Flexibility before?

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Understanding flexibility

Doerte Schneemann
Head of Flexibility Markets

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What is Flexibility in the Energy System?

Energy flexibility refers to the **ability to adjust demand or generation.**

Flexibility helps us **manage growing demand** on the electricity network without pushing up costs.

It **supports the UK's Net Zero goals** by encouraging people to **use electricity differently**, shifting when or how they use it.

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Why we need Flexibility

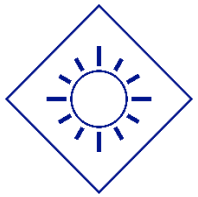
Five areas where Flexibility helps

Keep the lights on reliably

Flexibility helps balance supply and demand, reducing the pressure on the network.

Save money

By using existing capacity more efficiently, flexibility avoids costly and disruptive network upgrades.



Support more renewable energy

Flexibility smooths out the peaks and troughs of wind and solar power, so we can rely less on fossil fuel backup.

Cut carbon emissions

Shifting demand or exporting local generation, we can make better use of renewables and reduce emissions overall.

Empower communities and customers

Flexibility turns consumers into active participants, giving people, businesses, and communities a chance to earn and contribute to Net Zero.

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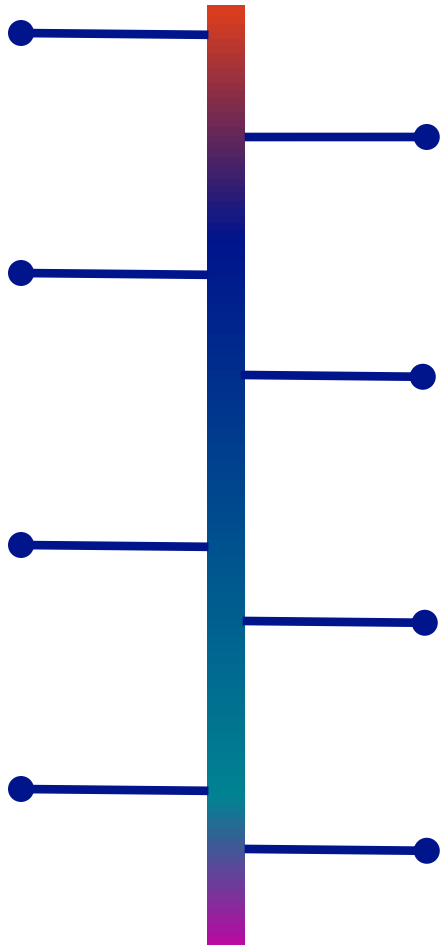
Our flexibility journey

2017 – First BAU flexibility Procurement

2023 Introduced **Week Ahead trading**

2024: **Partnered with Piclo:** enabling FSPs to access our markets via Piclo platform

September 2025: **Trading moved to Market Gateway** for both LT and ST trades



2023 – **Launched Market Gateway**

Sept 2024 **~85k assets registered** in Market Gateway

Sept 2025 **~200k assets registered** in Market Gateway

Winter 25/26 launching Day Ahead

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The national picture

National Energy System Operator

- NESO balances supply and demand across the whole of Great Britain.
- It uses large-scale flexibility from generators, interconnectors, storage, and major demand users to keep the system stable.
- NESO sets the overall framework for how flexibility supports security of supply and the Net Zero transition.

Distribution level

- Distribution System Operators (DSOs) like National Grid manage local electricity networks.
- We run local flexibility markets to solve regional constraints, often cheaper and faster than network reinforcement.
- Bringing opportunities for smaller participants EV fleets, community energy schemes to play an active role.

Regulation and policy

- Ofgem requires DSOs to “flex first” before building new infrastructure, making flexibility the default solution.
- Government’s Smart Systems and Flexibility Plan puts flexibility at the centre of the Net Zero pathway.
- Common standards and codes are being developed to ensure transparent, fair, and accessible markets nationwide.

Market platforms and participants

- Platforms such as PicloFlex advertise flexibility needs, allowing providers to bid in and be contracted.
- Aggregators make it easy for smaller users to join by bundling many smaller offers together.
- This digital ecosystem is growing rapidly, lowering barriers to entry and broadening participation.

Elexon, the market facilitator

- Elexon runs the Balancing and Settlement Code (BSC), underpinning how electricity trades are measured, matched, and paid for.
- Ensuring the money side of flexibility works.
- They also support innovation by adapting market rules and processes to include new forms of flexibility.

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How Flexibility works in practice

Identify the need

- **Forecasting:** Network operators look ahead to spot times and places where the grid may struggle, e.g. winter evenings in a busy town.
- **Defining requirements:** They decide what type of flexibility is needed (reduce demand, increase supply, or shift usage) and for how long.
- **Publishing tenders:** This information is shared on platforms like Market Gateway, so potential providers can see where opportunities exist.

Providers offer

- **Registration:** Providers (from big factories to households with EVs) register directly with the DSO or through an aggregator.
- **Submitting bids:** Providers say how much they can shift or supply, when they can do it, and the price they need.
- **Contracting:** The network operator reviews bids and agrees contracts, paying participants for availability and delivery.

Deliver

- **Activation:** When the network is under strain, the operator sends a signal (for example: “reduce by 1MW between 6–7pm”).
- **Response:** Providers take action, a business may pause a process, a battery may discharge, or EV charging may be delayed.
- **Monitoring:** Smart meters and digital systems track performance in real time to ensure the promised service is delivered.

Pay & improve

- **Payments:** Providers are paid for being available, and for actual flexibility delivered.
- **Performance checks:** Operators review how well the service worked, did it meet the need? Was it reliable?
- **Market learning:** Each event helps improve forecasts, contract design, and accessibility for future participation.

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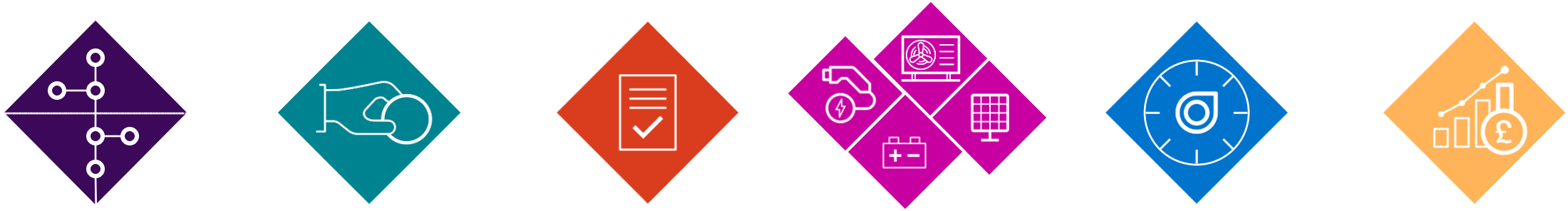
Our usage of flexibility continues to grow



	Zones	Procurement	Activation	Assets	Dispatch	Competition
Year 1	**1,491** Zones launched via 65 HV and 1,426 LV	**17 GWh** Procured of 68 GWh sought	**27%** Zones activated via 50 HV and 351 LV	**75,000** Assets registered making 763 MW available	**19,000** Dispatch events totalling 2.4 GWh	**1%** Ceiling price reduction across LV & HV
Year 2	**810** Zones launched via 63 HV, 744 LV, 3 DTU	**20 GWh** Procured of 221 GWh sought	**78%** Zones activated via 65 HV and 566 LV	**162,500** Assets registered making 1,487 MW available	**70,000** Dispatch events totalling 2.9 GWh	**18-34%** Ceiling price reduction across LV & HV

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Accessing Flexibility

Luke Boucher
Flexible Power Commercial Officer

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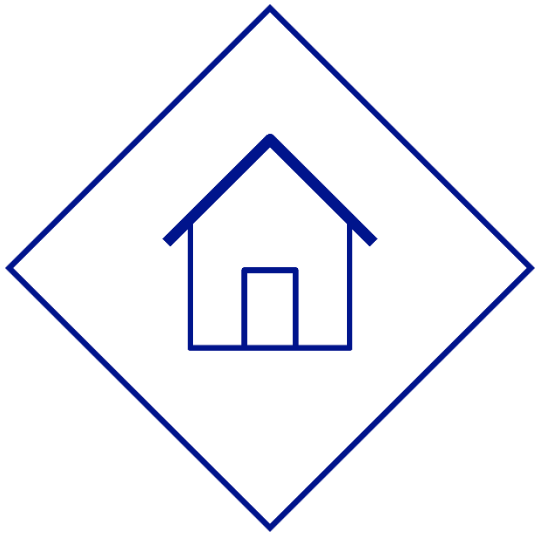
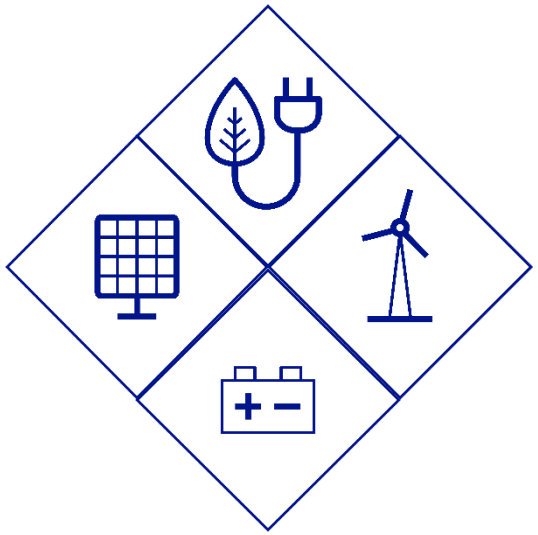
Who can participate in Flexibility?

We work with energised assets of any size or technology type, provided they can deliver for a minimum of 30 minutes.



Residential demand response



Owners and operators of storage and generation

Industrial and commercial sites

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Flexibility Products

Scheduled Utilisation

This service is a scheduled constraint management service with fixed delivery periods. It offers a utilisation only payment.

Scheduled Availability, Operational Utilisation

This service has been developed to support the network in the event of specific fault conditions, such as during maintenance work. It offers an availability and utilisation payment.

Operational Utilisation

This service supports power restoration following rare fault conditions. No availability payment, instead it offers a premium utilisation payment.

Long Term

Short Term

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Flexibility Updates

Further unlock stacking

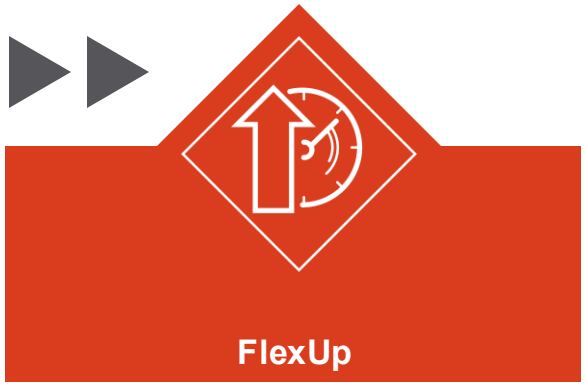
- Stacking between HV and LV zones

New trading experience

- Trading has been moved to Market Gateway for both LT and ST trades
- Historical trading records are available to view on MG

Joint Utilisation Competition

- LT contract holders are able to bid in the ST markets with lower utilisation prices to remain competitive



FlexUp

- New Demand Turn Up markets to proactively shift flexible demand into periods of high local renewable generation

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Long Term Requirements

	Procurement is for delivery between April 2026 and March 2027
	HV Zones – 67 Demand Turn Down, 5 Demand Turn Up (DTU) and 24 Grid Supply Point DTU. LV Zones- 1144
	4.5 million customer in open zones
	Highest HV zonal ceiling price; £5000/MWh Average HV zonal ceiling price; £430/MWh
	Highest LV zonal ceiling price; £888.44/MW/h Average LV zonal ceiling price; £238.63/MW/h

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Procurement Timeline

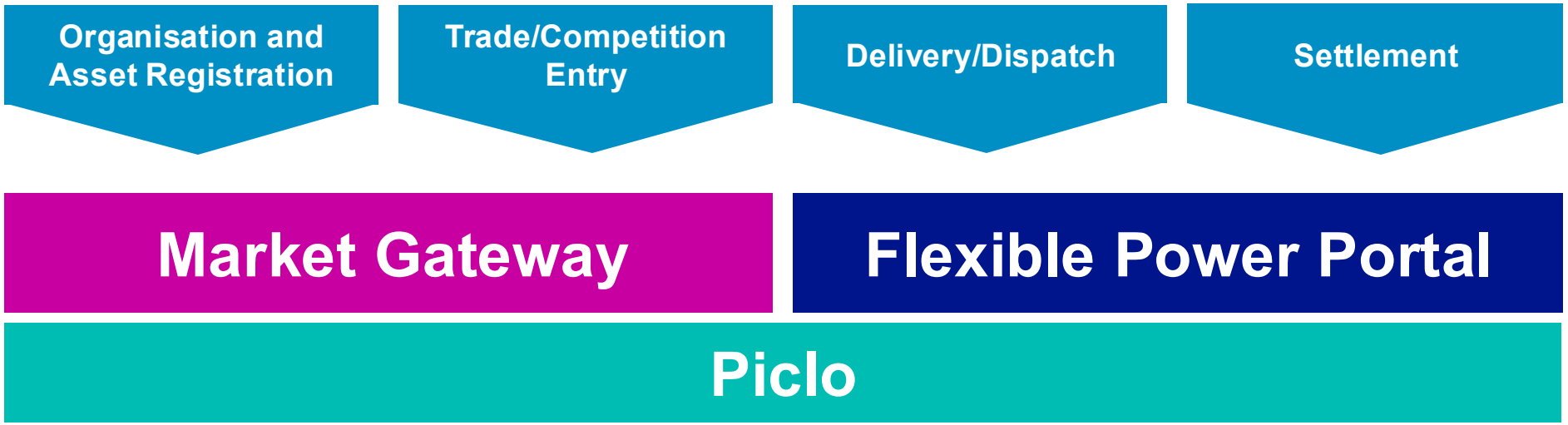
Long Term

15th September	Requirements Published to CDP and Market Gateway
29th September	Trades Open
17th November	Trade Deadlines
26th January 2026	Trade Awards Announced

Short Term

Every Thursday from Midday	Trades Open For Bids
Every Tuesday by Midnight	Trade Deadline
Every Thursday by Midnight	Trade Awards announced for delivery from the following Monday

Market Participation Platforms



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Earnings case study - Domestic

The example below is 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 Baseline Values (150 x 0.83)	0.0125 MW (12.5kW)
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)
Total revenue	**£2910.16**

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

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Earnings case study - Commercial

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

Battery Storage = 0.5MW	**Flexibility Zone: Morwenstow**
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)
Total Revenue	**£11,598.93**

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

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We want to hear your views

It's important to us to make sure we are delivering your priorities.

Has today improved your understanding of flexibility?

Has today made you more aware of how you can participate in flexibility?

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Questions and Answers

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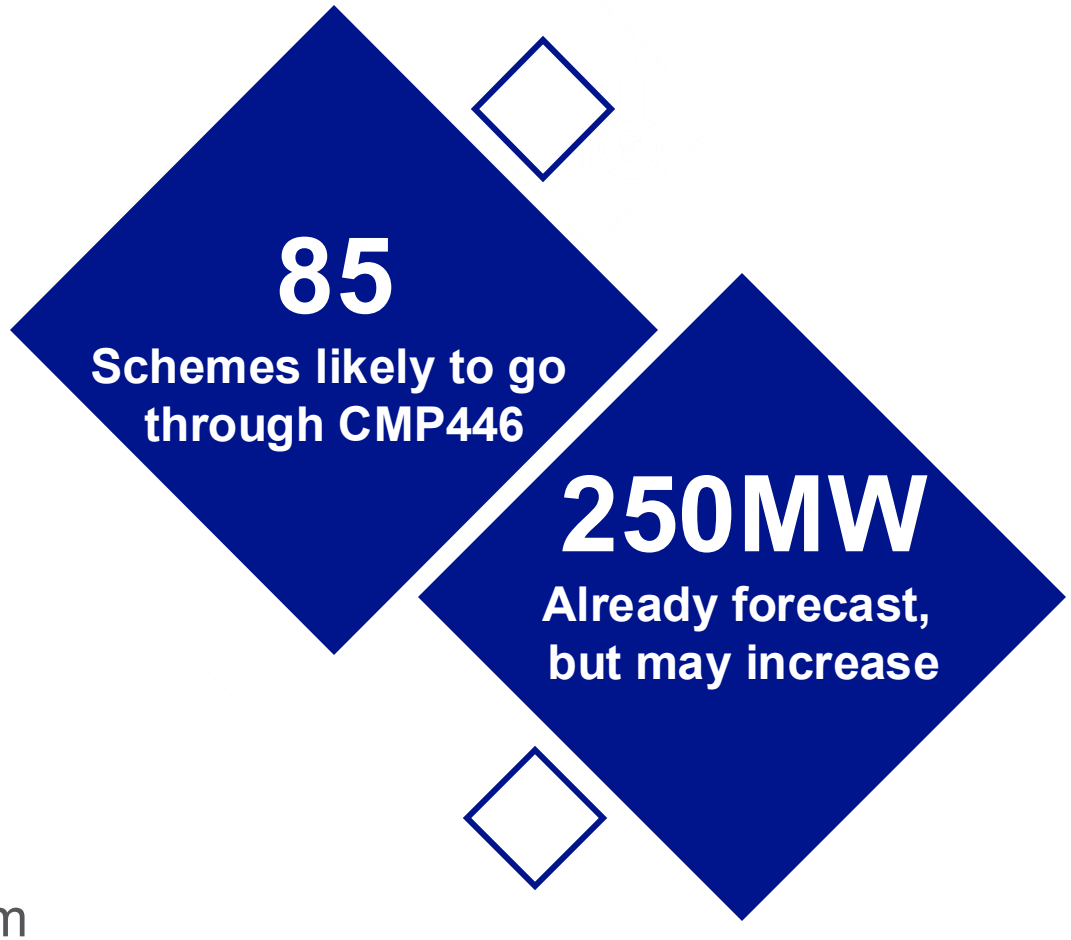
FlexUp – a new flexibility use case

Background:

- We are leading the way in accelerating <5MW generation onto the network
- Acting quickly – FlexUp is a new use case in direct response to changes brought in by CMP446

Aim of FlexUp:

- Aligning local demand with periods of high renewable generation
- Reduce risk/impact of more curtailment on other connections
- Directly supporting Clean Power 2030 and the transition to a decarbonised, distributed energy system



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