

# Flexibility Services Procurement Statement

Our plans for April 2024-March 2025

Standard Licence Condition 31E Reporting Requirement

28 March 2024

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## Executive Summary

UK Power Networks is the UK's biggest electricity distributor, delivering power to 8.5 million homes and businesses across London, the East and South East of England. We keep the lights on across 29,250 square kilometres, serving 19 million people from Cromer in the east to Brighton on the South Coast.

Flexibility is a critical tool in enabling net zero at lowest cost for the customers we serve. In our Business Plan for RIIO-ED2 (2023-28), we set out ambitious commitments for the procurement and use of flexibility to defer £410m of network investment. In the first year of ED2 we realised £85m of benefits, putting us on track to deliver our overall commitment.

This builds on our track record of leadership in this space. In 2018, we were the first DNO to publish a Flexibility Roadmap that described how we would develop flexibility markets. We were also the first DNO to commit to market testing all of our high voltage and extra high voltage reinforcement before we invest in any new assets. Subsequently we were also the first DNO to tender for LV needs. In the past year we have launched a demand turn-up product, in which more than 20,000 households are regularly participating. We also formed the first, and only, legally separate DSO in April 2023 – underpinning a promise of unrivalled transparency.

This document describes the flexibility we will procure during 2024/25 and how we will do it.

- **We will continue to run two long-term tenders, launching in May and October.** These will enable us to continue connecting customers ahead of network reinforcement. We will continue to procure both turn up and turn down services, supporting the acceleration of new connections (e.g. through programmes such as Technical Limits and MW Dispatch). We expect to tender for up to 300MW in May, with further requirements to be confirmed in October. We also expect to run around five tenders to support planned network outages. These will help us to reduce risks of customer interruptions.
- **We will supplement this with regular day-ahead auctions, enabling a wider participation and improved ESO-DSO coordination.** This builds on successful product co-development and trials completed in the Lawford area during 2023/24. We will open up opportunities to new zones from April 2024, focusing first on those areas where we are already dispatching flexibility.

- **We have adopted the outputs of Open Networks and will continue to push for further standardisation and a smooth transition to the Market Facilitator.** For our October 2023 tender we adopted standard commercial and technical registration questions and the standard agreement (v2.1). From May 2024, we will procure through the new ENA standard flexibility products. We chair the Open Networks programme and are leading or co-leading 5 of the 10 technical working groups, including the group developing a standard dispatch interface during 2024/25.
- **Our procurement and use of flexibility will be facilitated through the EPEX SPOT LocalFlex platform.** We continue to facilitate an external ecosystem of providers supplying specialist tools for flexibility. Both long-term and day-ahead participation will be facilitated by the LocalFlex platform, provided by EPEX SPOT, a leading operator of short-term markets. We will maintain our current dispatch API through Smarter Grid Solutions and review the outcome of Open Networks standardisation work.
- **We will work with the ESO to make it easier to stack ESO and DSO services.** Alongside the ESO we are co-leading the Flexibility Products and Stackability workstream at Open Networks. We are committed to making tangible progress towards better market opportunities and more efficient whole-system outcomes.
- **We will continue to work to better understand flexibility providers** and ensure that our data, processes and systems enable them to participate with confidence and position themselves competitively. We see a particular opportunity to grow participation from domestic flexibility and will engage with aggregators and suppliers to ensure that they understand and can pass on to their customers the value of flexibility to distribution networks. Engagement and iteration with stakeholders has been a critical enabler to our progress to date, notably in developing the day-ahead flexibility product in 2023/24. We will continue to improve existing engagement channels, while also looking for opportunities to collaborate with other system operators to deliver a simpler customer experience.

If you are interested in learning more, or signing up for our flexibility mailing list to be kept abreast of developments, please email [flexibility@ukpowernetworks.co.uk](mailto:flexibility@ukpowernetworks.co.uk)

## 1. Introduction

### Introduction to UK Power Networks

We are the UK's biggest electricity distributor, delivering power to over 8.4 million homes and businesses across London, the East and South East of England. We keep the lights on across 29,250 square kilometres, serving 19 million people from Cromer in the east to Brighton on the South Coast.

A key part of our vision is to 'Enable the Net Zero Transition For All'. This means ensuring we have

right electricity network capacity, at the right time and in the right place – at lowest cost. Over the next few years we expect millions of electric vehicles and heat pumps to connect to our network, along with grid-scale renewables and batteries. This is a huge shift in the volume and nature of distribution network utilisation.



Figure 1 - UK Power Networks' vision

### Why flexibility?

Our vision is of a dynamic distribution system, with electricity demand and supply flexing in response to distribution-level conditions and wider market signals. We will see market-based solutions incentivising customers to utilise available network capacity efficiently, supplemented with traditional network investment, to deliver the lowest costs for consumers overall. This will lead to a smarter and more highly utilised distribution network, with faster and cheaper access for the DERs to achieve Net Zero.

In April 2023 we established an independent Distribution System Operator (DSO), delivering clear accountability and transparency for how we unlock capacity to connect more low carbon technologies in a timely and cost effective way. A key role of the DSO is the development of flexibility markets. In our RIIO-ED2 Business Plan<sup>1</sup>, we committed to market testing all future network needs for non-network asset solutions.

We have proven that flexibility works technically and commercially. In a period of change and uncertainty, flexibility enables us to right-size our investment in the network and continue to connect thousands of charge points, heat pumps and renewables without needing to wait for additional

network infrastructure. It is already delivering significant benefits to citizens, flexibility providers and UK Power Networks.

### Purpose of this document

This document sets out:

- The flexibility we intend to procure in the next regulatory year, including information on service types, volumes sought, pricing strategies and forecasted dispatch; and
- How we intend to comply with the licence condition by demonstrating transparency of flexibility procurement and coordination across industry participants

<sup>1</sup> <https://ed2.ukpowernetworks.co.uk/#business-plan>

## 2. Our flexibility requirements

### Planned flexibility procurement over the next regulatory year

We plan to run two long-term flexibility auctions this year, covering requirements up to Winter 2027/28. These will run alongside regular day-ahead auctions. This is in response to forecast thermal constraints and enables us to keep connecting customers and their electric vehicles, heat pumps and other low carbon technologies to the network ahead of network reinforcement. By incorporating a day-ahead utilisation auction, we are widening access, driving competition, providing faster market access and enabling flexibility service providers to better consider alternative uses of their flexibility in wholesale or ancillary markets.

We also expect to run around five smaller tenders throughout the year to secure flexibility to support planned network outages. These enable us to conduct essential work on the network while cost-effectively managing the risk of customer interruptions. We are typically protecting against a second, unplanned, outage during the maintenance work, which would result in customers losing supply. Requirements may be pre- or post-fault, depending on the necessary network running arrangements. These tenders will typically be 2-4 months ahead of the scheduled maintenance.

Over 2023/24 we worked alongside our DSO peers to develop a standard set of flexibility products. For the vast majority of our requirements (i.e. all those related to network capacity), we intend to procure via the newly standardised flexibility products. For outage tenders, we reserve the right to make minor adjustments to these products to reflect the specific needs of the network. We will highlight these adjustments clearly within our outage tenders and

our intent is to work with other DSOs to fully standardise these products in future years.

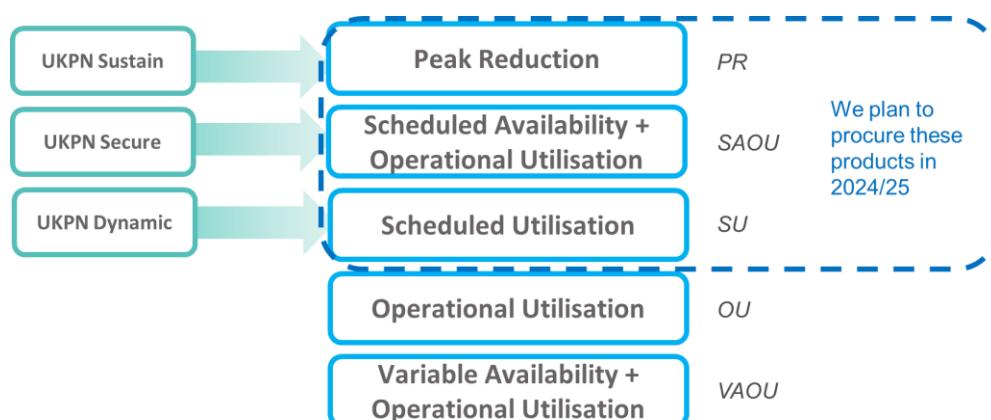
The figure below illustrates the replacement of our legacy flexibility products with three standard flexibility products:

1. **Peak Reduction (replacing UKPN Sustain).** Contracts are awarded through long-term tenders, where the provider agrees to reduce their highest demand peaks during contracted windows
2. **Scheduled Availability and Operational Utilisation (replacing UKPN Secure).** Contracts are awarded through long-term tenders, where the provider commits to be available during contracted windows, with utilisation confirmed at day-ahead
3. **Scheduled Utilisation (replacing UKPN Dynamic).** Contracts are awarded through a day-ahead auction where the provider agrees to deliver their flexibility for the following day

Further details on these products is included in Annex D or through the [ENA website](#).

From provider feedback, we know it is important to offer a short list of products which enable broad participation but which do not overwhelm with too much choice or complexity. For this reason, we do not plan to procure via Operational Utilisation or Variable Availability & Operational Utilisation and will work with DSO peers during the year to understand their plans and the potential for products to be retired. We are co-leading the Flexibility Products and Stackability workstream at Open Networks and are committed to further simplification of the product set.

*Figure 2 - Flexibility products*



## Tender Round 10 (May to Aug 24)

The intention of this tender is to ‘top-up’ against system needs that have not been fulfilled by the previous tender. We plan to tender up to 300MW of requirements. This may vary depending on the signing of contracts from the current tender and new connection requests. We will procure multi-year contracts to address thermal constraints until Winter 2026/27. This contracting approach is aligned with contract end dates for our last tender and balances the certainty of multi-year contracts with opportunity to drive down costs through re-competition of requirements as market participation increases during RIIO-ED2.

We have identified sites based on the following drivers (described further in our [Distribution Network Options Assessment](#)):

- Retendering sites where we have not received enough flexibility contracts to cover the full system needs from the previous tender round;
- Capacity shortfalls expected based on recent network load data; and
- Risks of capacity shortfall in the next year, including uncertainty in timing of uptake of accepted new connections load.

We may also tender for flexibility at five additional sites with high volumes of recent connection requests (particularly related to en-route electric vehicle charging).

We will meet the above needs by procuring a combination of Scheduled Availability and Operational Utilisation (SAOU) and Peak Reduction. We will also allow providers to compete at day-ahead using the Scheduled Utilisation product. By offering a range of products with different levels of commitment, we hope to attract a more diverse cohort of flexibility providers.

We have provided a summary of the sites, including MW requirements in Appendix B. We estimate an average of 50 hours of utilisation per year for a typical site although actual utilisation levels may vary from this level depending on real-time network conditions. There will typically be a ceiling utilisation price of £600/MWh at each site although this price can vary depending on the site-specific cost-benefit analysis for flexibility (see Section 5 for more detail). Providers can vary their utilisation price provided it remains below the ceiling price.

We will use the [EPEX SPOT LocalFlex platform](#), which is openly accessible to all stakeholders, to run both tenders. We will share participation guidance and run training webinars to make it as easy as possible for providers to participate. We will publish further information on the platform in May 2024 regarding the confirmed capacity requirements, voltage levels and forecasted utilisation for all sites as summarised in Appendix B.

## Tender Round 11 (Oct 24 to Feb 25)

The second tender will also be a multi-year tender where we will seek flexibility services to meet our needs over the next two to three years. We will use the latest data on network load and connections pipeline, along with our latest forecast under the Consumer Transformation scenario, to inform where flexibility will be procured. This scenario represents our best view of future network load and is the basis of our long-term planning as outlined in [our Long Term Development Statement \(LTDS\) and Network Development Plan \(NDP\)](#). Due to the timing of this report relative to the inputs below, we cannot publish our specific flexibility requirements. We will identify sites based on the following drivers:

- Peak demand forecasts and firm capacities used in the production of the NDP which is published on the Open Data Portal<sup>2</sup>. Peak demand forecasts consider the four Distribution Future Energy Scenarios (DFES) as outlined in Appendix A;
- Related forecasts for groups and circuits which are not published in the NDP substation list;
- Retendering sites where we have existing flexibility contracts, to increase reliability and drive competition for utilisation;
- Capacity shortfalls based on recent network load data and modelled Low Voltage utilisation not covered in the NDP; and
- Risks of capacity shortfall in the next year, including uncertainty in timing of uptake of accepted new connections load.

## Day-ahead auctions – from Apr 24

Alongside long-term tenders, we have introduced day-ahead auctions for flexibility services. We have been running a trial of day-ahead auctions at Lawford, a generation constraint zone in East Anglia, since December 2023 and have moved to live auctions through the Localflex market platform since February 2024.

The trial is testing auction rules and automation of processes, supported by three flexibility providers participating in the trial so far. We continue to migrate data and providers onto Localflex whilst working with the vendor and providers to ensure

the platform is ready for wider rollout of day-ahead auctions from April 2024.

The introduction of day-ahead auctions follows on from much stakeholder consultation and support for closer to real time markets which has the potential to unlock additional capacity<sup>3</sup>. One of the main benefits with the day-ahead timeframe is that it aligns with the other key markets, such as the wholesale market and ESO ancillary services markets, giving the flexibility provider the ability to move between markets.

We shall be procuring the Scheduled Utilisation product through the day-ahead market. This is a natural evolution of our Dynamic product which was dispatched at day-ahead based on the provider's submitted capability.

## Utilisation principles

In the past year we have codified our principles for dispatch within our [Flexibility Dispatch Framework](#). These are carried out by our DSO Operations team, which sit within our control room, alongside DNO colleagues.

Our objective is to ensure security of supply, by dispatching efficiently, transparently and with the whole-system in mind.

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<sup>2</sup> <https://www.ukpowernetworks.co.uk/open-data-portal>

<sup>3</sup> [Consultation](#) and [proposal](#)

In making dispatch decisions, we take into account a wide range of data about the network requirement, the flexible unit and wider system conditions (e.g. from the ESO):

- Network conditions
- Weather conditions for dispatch involving wind or solar
- Forecasts of demand, generation and constraints
- Type of constraint (turn up or turn down)
- Availability of service
- Price of available unit
- DER characteristics and constraints. This will include as a minimum characteristics such as minimum and maximum generation windows, minimum and maximum generation ramp rates, generation type e.g. solar and the time taken to respond to a service
- ESO operational plans where available (for e.g. day ahead or intra-day info on ESO services)
- Primacy Rules in place to minimise service conflicts between the DSO and NGESO & the associated data exchanges

Following the process below, each dispatch will pass the following criteria:

- Is the network need identified at time of procurement still valid?
- If so, what units are available and what is the cost of each unit?
- Following primacy rules, are any units disqualified on the basis of another service?
- With the units remaining in the list, what is the most cost-effective unit? i.e. taking

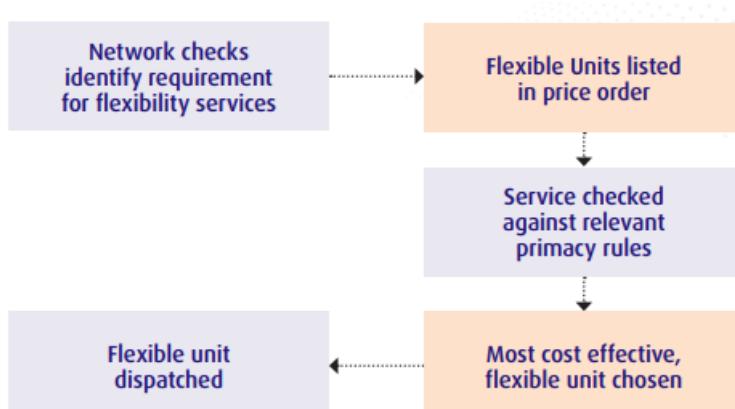
- into account the minimum run time of a flexible unit may mean running longer and so costing more than another service which costs more per MWh (e.g. a gas generator may have a lower £/MWh utilisation price but need to run for longer, making it more expensive overall)
- Once the most cost-effective unit has been chosen it will be scheduled for dispatch

We facilitate the participation of individual flexible assets as well as aggregations by defining Flexible Units. This is a single controllable unit consisting of one or more flexible assets aggregated together.

We enable competition in dispatch by allowing providers under long-term agreements to update their utilisation pricing (up to an agreed cap) and enabling new providers to enter the market at day-ahead. By aligning the timescales for utilisation decisions, we ensure fairer and more efficient dispatch decisions.

We communicate dispatch instructions via email or Application Programming Interface (API). Our API specification is published on [our website](#). UK Power Networks will continue to co-lead work at Open Networks during 2023 to establish a cross-DNO standard API for dispatch. In the medium term, we intend to support both our existing and any new API.

In August 2023 we began to publish [monthly dispatch data](#) (in addition to the annual returns through LC31E) to improve market transparency. As we make greater use of day-ahead flexibility products, we will explore how we can publish this data even more regularly.



## Utilisation forecast for the next regulatory year

In 2023/24 dispatch volumes have grown more than six-fold, to above 7GWh. This is closely in line with our forecast within our 2023 Procurement Statement. We will provide final dispatch volumes for 2023/24 within our 2024 Flexibility Report. In 2024/25 we expect dispatch volumes to grow significantly again, to between 10GWh and 15GWh. Given the significant increase in volumes, we now correct our network demand forecasts to reflect the ‘pre-dispatch’ position so that our current use

of flexibility does not obscure ongoing capacity requirements. So, if we see that maximum demand at a site was 10MW during 2023/24, but we were dispatching 1MW of demand reduction, we will take the 11MW ‘natural’ demand into account within our forecasts.

Flexibility payments have increased in line with increased dispatch volumes, and will continue to do so during 2024/25. We expect to see some reduction in average prices, reflecting a more mature and competitive utilisation market, facilitated through day-ahead procurement.

### Dispatch volumes grew more than six-fold and will grow again in 24/25

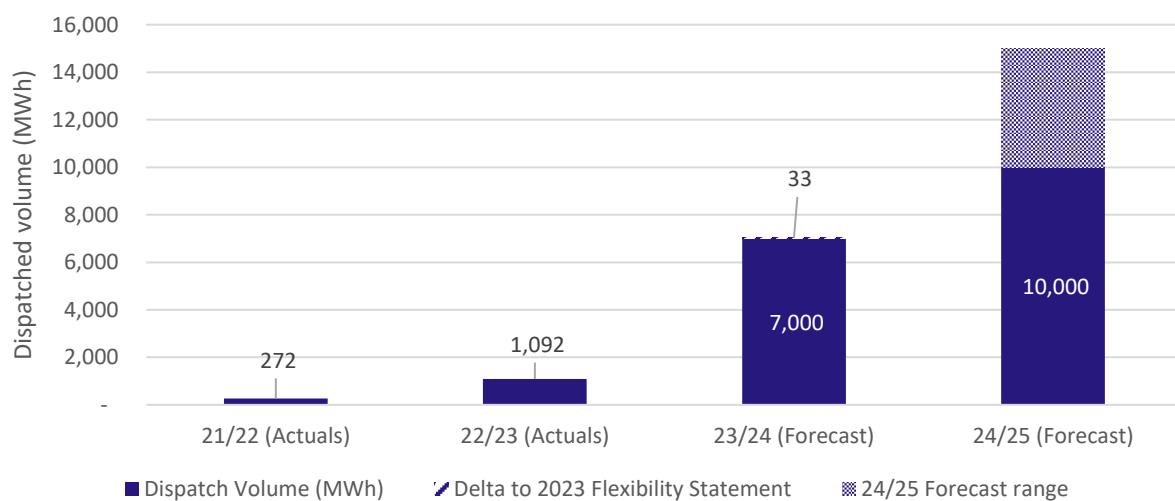


Figure 3 - Flexibility dispatch volumes

### Flexibility payments have grown in line with dispatch volumes

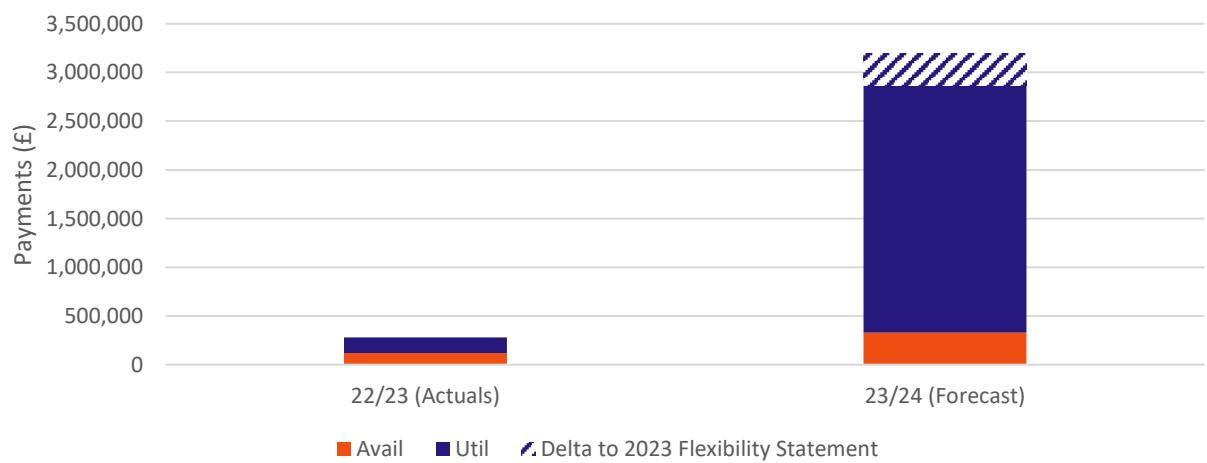


Figure 4 - Flexibility spend

### 3. Tendering Process

#### Progress and trends in our procurement of flexibility

Below we describe the key trends and customer priorities from 2023/24 and how we are responding in 2024/25.

##### *Increasing volumes*

During 2023/24 we increased the volume of flexibility available to the control room ten-fold, to more than 300MW. We also dispatched more than five times as much as in 2022/23. Nonetheless, we have not procured sufficient flexibility to meet all of our capacity requirements and will continue efforts to grow participation. We expect continued growth in operational flexibility this year, particularly participating at day-ahead. We are simplifying our processes and introducing additional support for automation to ensure that we and our customers can scale up efficiently.

##### *Closer to real-time procurement*

In December 2023, in response to significant interest from flexibility providers, we began to trial day-ahead flexibility procurement. In developing the product we had useful feedback on market timing, data requirements and order structure which we played back to stakeholders and which informed our design. We believe our design enables wider participation, accelerated market access and flexibility providers to optimise their activity across local, wholesale and ancillary service markets. We have had positive feedback on our initial trials and are in the process of scaling up the service to more flexibility zones and providers. This leverages our partnership with EPEX SPOT, the leading operator of close to real-time wholesale markets.

##### *New use cases for flexibility*

In December 2022, we were the first DNO to tender for Demand Turn Up (and Generation Turn Down) and at the time of writing, we are still the only DNO to be doing this. We have applied many of the lessons learnt and standards from conventional demand turn down products. We are using Demand Turn Up to accelerate generation connections and defer investment in additional network capacity. Utilisation of this service will form a significant part of our procurement activity at day-ahead.

We have also started to use flexibility to manage planned outages. Here flexibility helps us to mitigate the impact of any subsequent unplanned outage – keeping customers on supply. We expect to tender for around five outage requirements during 2024/25, using what we learn to standardise our approach.

We will continue to explore additional use cases for flexibility, leveraging the standard products and processes wherever possible.

##### *Implementing standards and driving further*

We see standardisation as a key enabler for wider participation in local flexibility. We have implemented the standard products, contract and registration question developed through the Open Networks programme in 2023/24. We will implement additional standards as they are agreed this year. We are co-leading work to develop a standard dispatch API.

We have chaired the Open Networks programme since 2021 and currently lead several of the technical working groups. We will continue to play a key role in standardisation efforts and in supporting the establishment of a Market Facilitator in 2024.

Additionally, we have been working during 2023/24 with National Grid Electricity Distribution (NGED) to identify areas of alignment and intend to jointly consult on our proposals for further standardisation in summer 2024. As two of the leaders in DSO flexibility, we can bring to bear several years of practical experience of what works and doesn't.

#### *Greater need for coordination*

As increasing volumes of flexible resources connect to the distribution network, we foresee increasing needs to coordinate our activity with that of the ESO. This will enable more efficient whole-system outcomes, while opening up new opportunities for flexibility providers to efficiently 'stack' revenues across multiple markets. We have agreed to co-lead the Flexibility Products and Stacking workstream at Open Networks which will coordinate the implementation of stacking recommendations developed during 2023/24. We will continue to work closely with the ESO to push the boundaries of data sharing and better align our products and timescales.

Our SHIFT 2.0 project is looking at the relationship between local flexibility requirements and wider market signals (particularly wholesale market prices) to see how we can ensure these signals provide coherent messages to flexibility providers and minimise the cost of the whole system. The project will trial the approach with around 1,000 electric vehicles managed by Octopus Energy and ev.energy.

### Pre-tender activities

In our [RIIO-ED2 Business Plan](#) we committed to deferring £410m of load related expenditure through use of flexibility. This was supported by a

commitment to market test all network needs before considering reinforcement, adopting a 'Flexibility First' approach.

In 2023/24 we published our first Distribution Networks Options Assessment (DNOA), providing transparency of our flexibility first strategy within our strategic decision making. This included information on the various stages including network data and load forecasting, and substation area selection and flexibility requirements assessment. We recently published our second DNOA, following consultation with industry on how to make our methodology and results even more useful. Our DNOA is approved by our independent Supervisory Board, which scrutinises the methodology and outcome to ensure that decisions on capacity have demonstrably been made in the interests of our customers.

The forecasts which identify capacity needs and drive our DNOA process are informed by extensive engagement with local authorities, as well as the national Future Energy Scenarios (FES) and other data such as connections. Our Local Net Zero team engages closely with the 133 local authorities served by our network, providing data and tools and gleaning valuable insight on the likely parameters of local decarbonisation. For each site with additional capacity needs, we assess of the value of flexibility. This involves completing a cost-benefit analysis (CBA) that estimates the net present value of deferring the reinforcement CAPEX by a certain number of years. We use the ENA's Common Evaluation Methodology (CEM), developed through the Open Networks project, to carry out the CBA. The Net Present Value (NPV) of the deferral becomes the available funding pot for flexibility services. Further details are provided in Section 5.

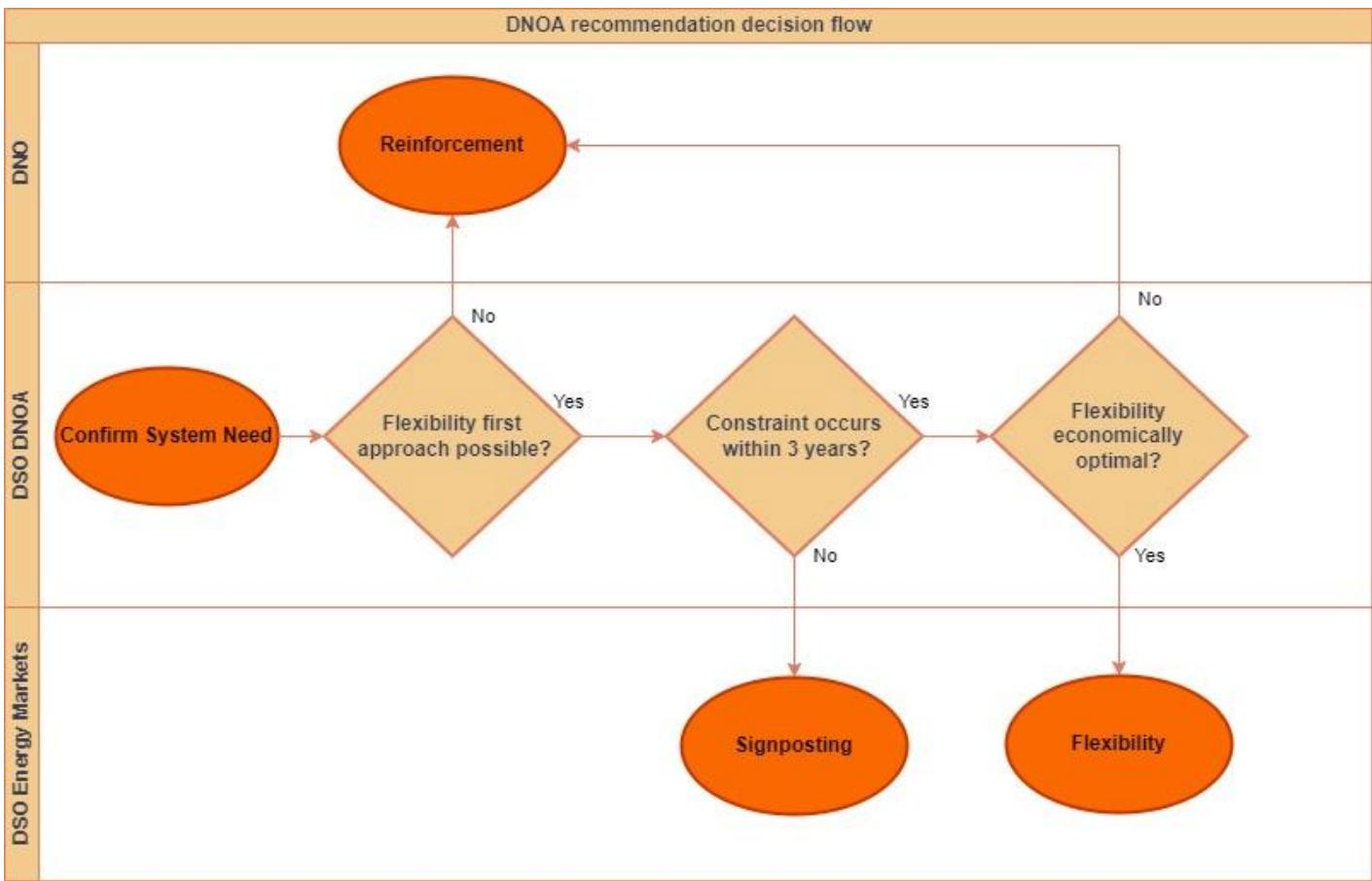


Figure 5 - Simplified DNOA recommendation decision flow.

## Tender stages

Tenders take place through an open and independent procurement platform operated by EPEX SPOT. The process is as follows:

- **Tender initiation:** We publish network locations and needs. Providers register their resources and capabilities free of charge. Tender documents setting out technical and commercial requirements, such as the Participation Guidance, standard contract and available flexibility revenues, are published on our webpage and are openly accessible to any interested stakeholder.
- **Pre-qualification:** The provider submits details of their company and flexible assets. We then check whether providers and resources are commercially and technically capable of delivering the service. The most common reason for failing pre-qualification is that assets are not electrically connected to the right part of the network. We already provide postcode information to allow an initial check to be made, and are exploring how we can move our final checks earlier in the process
- **Competition:** Pre-qualified parties can then submit offers into a competitive tender via the

platform. We assess bids based on three criteria: value, volume and budget. Flexibility budgets are determined through the standard ENA Common Evaluation Methodology (CEM); more detail is provided in Section 5. We announce the results and award successful bidders the standard ENA contract. Full tender results are published on our website, through the market platform and the Open Data Portal.

- **Pre-delivery:** We monitor the delivery of planned solutions by tracking contractual post-tender milestones and engagement with the provider. We complete a proving test on all solutions prior to service delivery.

We are committed to transparency in our flexibility procurement and have led the way with the publication of key tender information since 2019. This includes making our tender documentation openly accessible on our website and publishing

very granular competition results<sup>4</sup>. The competition result information includes:

- Bid information by competition area;
- The volume of flexibility accepted and rejected;
- Names of flexibility providers that have bid;
- The total volume of the flexibility contracts in place; and
- The availability and utilisation prices received.

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<sup>4</sup> An example is our Summer 2023 Post Tender Report – <https://d1lf1oz5vvd9r.cloudfront.net/app/uploads/2023/09/Flexibility-Post-Tender-Report-Summer-2023.xlsx>

### An objective, transparent and market-based tendering process

Objective	Transparent	Market-based
<ul style="list-style-type: none"> <li>• Flexibility requirements and related guide prices are set objectively through our DNOA, which applies the Common Evaluation Model</li> <li>• All providers are first assessed according to their responses to a standard set of financial and technical questions</li> <li>• For day-ahead auctions, bidding information is assessed programmatically through EPEX SPOT's LocalFlex platform</li> <li>• For long-term auctions, we currently assess anonymised bids manually. We intend to migrate this process to the LocalFlex platform</li> <li>• All providers are awarded contracts in line with the agreed standard ENA flexibility contract (currently v2.1)</li> </ul>	<ul style="list-style-type: none"> <li>• All information related to long-term tenders is published at the start of the tender, and publicised through a range of channels, including email newsletters, LinkedIn and our DSO website</li> <li>• This includes the process and assessment criteria we will follow, along with our detailed requirements and guide prices</li> <li>• We offer a webinar at the start of each long-term tender to explain the process and answer any questions. We publish the slides and recordings</li> <li>• Day-ahead tenders follow a regular pattern, with requirements published by 10am day-ahead and utilisation decisions confirmed by 1:30pm</li> <li>• Where we providers or bids are not accepted, we notify them of the reason and work with them to address issues, to the extent possible within the agreed process. We allow flexibility providers to challenge the results of our long-term tenders</li> <li>• We publish the results of tenders and the detail of flexibility subsequently dispatched in a timely way through our website. This includes the names of flexibility providers and details of their flexibility</li> </ul>	<ul style="list-style-type: none"> <li>• Any provider can create an account and register assets on the market platform free of charge</li> <li>• We offer low thresholds for participation to maximise the number of assets eligible, including 10kW minimum flexible capacity, minimum of 30 minute run time, different metering solutions and dispatch methods</li> <li>• Providers can bid into a variety of products with varying levels of commitment, including both long-term and day-ahead products</li> <li>• Both existing and planned assets can participate in long-term tenders</li> <li>• We use regular auctions with clear cut-off times to maximise market access and our ability to make economic decisions</li> </ul>

## Pricing strategy

For long-term products linked to High Voltage constraints, flexibility providers submit competitive bids. We provide site-specific guide prices to providers to inform their business plan and bidding. These guide prices are directly linked to the value of reinforcement deferral at each site established through the CBA (see Section 5 for more detail).

For the Day-Ahead Scheduled Utilisation product, we provide site-specific guide prices. This pricing reflects the direct and opportunity costs faced by providers delivering flexibility close to real-time. Long-term and short-term flexibility providers will compete against each other at day-ahead, i.e. we

will request dispatch from providers of Scheduled Availability and Operational Utilisation and Day-Ahead Scheduled Utilisation products in order of increasing utilisation price. As we evolve towards closer to real-time markets in RIIO-ED2 and market liquidity increases, utilisation prices are expected to fall as providers compete to be dispatched.

For flexibility tendered via the Peak Reduction product to address low voltage network constraints, a fixed price per kW is set by UK Power Networks. This simplification reflects the large number of sites covered in this way. The price (currently around £26/kW/yr) is calculated based on the deferment of low voltage reinforcement projects and an estimate of average required flexibility volumes.

## Procurement timetable and process

The procurement timetable for the current tender and retender are outlined below.

*Table 1: Tender timelines*

Stage	Activity	Tender Round 10	Tender Round 11
<b>Stage 1: Tender Initiation</b>	Flexibility zones signposted	May 2024	September 2024
	Tender documentation published	May 2024	October 2024
<b>Stage 2: Pre-Qualification (PQ)</b>	PQ Open	May 2024	October 2024
	PQ Submission Deadline	June 2024	November 2024
	PQ Results	July 2024	December 2024
<b>Stage 3: Competition</b>	Competition Open	July 2024	December 2024
	Competition Close	July 2024	December 2024
	Competition Results	August 2024	January 2025
<b>Stage 4: Pre-delivery</b>	Signed Contract deadline	August 2024	March 2025
	Solutions delivered in accordance with Post Tender Milestones	Per contract	Per contract
<b>Stage 5: Delivery</b>	Solutions complete and delivering flexibility	Per contract	Per contract

## 4. Stakeholder engagement

Stakeholder engagement is crucial to informing product, process and system refinements and extending participation in local flexibility markets. We engage through multiple channels to reach as wide an audience as possible and engage in the most appropriate way for the desired outcome. An example of stakeholder feedback driving better products, processes and systems is given below (from a webinar in March 2024).

### Our day-ahead product has been shaped by your input

You said	We did
We don't want to wait for twice yearly tenders	<ul style="list-style-type: none"> <li>Registration for the day-ahead market will be 'always open'.</li> <li>You can sign a framework contract and put forward assets at any time</li> </ul>
This needs to work alongside wholesale market auctions and key ESO auction timings	<ul style="list-style-type: none"> <li>We have worked with providers and ESO to set timings for offers (by 12:00) and confirmation of dispatch (13:30)</li> <li>We will continue to review these timings with customer feedback and as market timings evolve</li> </ul>
Keep it simple	<ul style="list-style-type: none"> <li>Simple offer structure</li> <li>Providers can set recurring offers (xkW at y price for z time)</li> <li>Partnered with EPEX, leading operator of short-term electricity markets</li> <li>APIs available for all processes</li> </ul>
We need transparent data to help us price competitively	<ul style="list-style-type: none"> <li>Since August 2023 we have published all dispatches monthly</li> <li>As soon as we have the systems in place, we will publish data daily</li> </ul>



Figure 3 – How we have listened and responded to stakeholders

We continue to work with other DSOs and the ESO to establish standardised approaches for the procurement and utilisation of flexibility, thus creating an open and accessible market which delivers optimal whole system outcomes for the end consumer.

### Improving stakeholder engagement

Engaging with flexibility providers and our wider stakeholders has played a huge role in our success to date – in launching new flexibility products and contracting flexibility to defer network investments. We also recognise the need to continue evolving our approach to take into account the growing maturity and new challenges in local flexibility. In the next section we describe the full range of engagement channels, but significant changes for 2024/25 include:

- Working with other DSOs to ensure we consistently implement and communicate the standardisation work completed within Open Networks during 2023/24
- Looking for more opportunities to collaborate with other system operators on

communication and engagement, e.g. in presenting a joined up position on 'revenue stacking'

- Taking the opportunity of our transition to the EPEX LocalFlex platform, to simplify and improve guidance to customers
- Continuing to make greater use of our Open Data Portal, to ensure data is more accessible than ever before

### How we engage with stakeholders

We engage with a diverse population of stakeholders, with fundamentally different business models, underlying technologies and understanding of flexibility markets. We strive to create a level playing field for all, but we recognise that we must engage in a way that will reach each segment and allow them to input meaningfully. What works for a large energy supplier will not work for a start-up aggregator or a local authority. We also adapt our choice of channel according to the purpose of engagement – for example in raising awareness or co-designing products.

The channels we use include:

- **Flexibility Forums<sup>5</sup>:** We will continue to hold two in-person forums during the year— one in the summer and one in the winter. These events are open to everyone and are an excellent opportunity for us to engage with new and existing providers, to share challenges and opportunities and spark new collaborations. We advertise our Flexibility Forums via LinkedIn, our DSO website and our flexibility newsletter.
- **Flexibility Council:** In 2023/24 we invited our active flexibility providers to two in-person workshops, where we invited input and debate on key strategic choices, e.g. around rollout of our day-ahead flexibility product. We intend to maintain and refine this engagement during 2024/25
- **Webinars:** We will continue to organise webinars to talk through tender requirements and give providers an opportunity to ask questions. We are also running a series of webinar and training sessions with our market platform provider EPEX SPOT.
- **Presenting at industry events:** We recognise that to grow the supply of local flexibility, we must increase awareness. We will continue to present at industry events focused on key customer segments: e.g. storage, renewables, electric vehicles, energy suppliers, local authorities and industrial energy users.
- **One-to-one meetings:** We offer calls with interested providers throughout the year. These are particularly popular during flexibility tenders. Stakeholders can request a meeting via [flexibility@ukpowernetworks.co.uk](mailto:flexibility@ukpowernetworks.co.uk).
- **Surveys:** We will monitor and enhance the flexibility journey, supplementing the channels above with systematic survey data to better understand provider expectations and frustrations. We will provide feedback to stakeholders on the actions we take as a result of these surveys.
- **Flexibility Mailing list<sup>6</sup>:** We will continue to send monthly updates and calls for input during the year. The mailing list currently has over 400 stakeholders subscribed. We also communicate tender requirements through third-party mailing lists such as the ADE and Power Responsive.
- **Open Data Portal<sup>7</sup>:** This gives greater visibility of the opportunity for participation. It also allows interested parties to link multiple data sets, which are relevant to the individual to understand the bigger picture.
- **Social Media:** We will launch LinkedIn campaigns for each tender to capture attention from potential future flexibility providers.

## Coordinating flexibility services across DNOs

UK Power Networks chairs the Open Networks project; a collaboration between all the UK and Irish distribution and transmission networks, aimed at standardising flexibility products, processes and contracts to enable increased participation in local flexibility markets.

As well as chairing the programme, we currently lead or co-lead 5 of the 10 technical working groups, reflecting our commitment to delivering a simpler and more standard experience for stakeholders. These encompass:

- Flexibility products and stackability,
- Dispatch systems interoperability,
- Primacy rules,
- Operational data-sharing
- Active Network Management (ANM) information sharing

We expect a Market Facilitator to be appointed during 2024, which will take on overall accountability for much of this collaboration. In this context, we believe that UK Power Networks still has a critical role to play – in driving standardisation ahead of the establishment of the Market Facilitator, facilitating a smooth transition and continuing to influence the rules with our considerable real-world experience of local flexibility.

<sup>5</sup> Winter and summer forum slides in the events section - [Upcoming events - UKPN DSO \(ukpowernetworks.co.uk\)](#)

<sup>6</sup> Providers can sign up to the Flexibility Mailing list by contacting the Flexibility Mailbox ([flexibility@ukpowernetworks.co.uk](mailto:flexibility@ukpowernetworks.co.uk)).

<sup>7</sup> <https://www.ukpowernetworks.co.uk/open-data-portal>

## Working with the ESO to enable accelerated grid connections and wider whole-system outcomes

In 2023/24 we collaborated with ESO and other DNOs, through the Strategic Connections Group, to develop the Technical Limits solution. This allowed us to bring forward proposed connection dates for 4GW of generation and storage which was waiting for completion of Transmission works, some by more than a decade. We will continue to develop the Technical Limits solution, including the associated data and process, to maximise the opportunity for projects to connect ahead of Transmission works.

The MW Dispatch project, in collaboration with ESO, passed its technical tests in March 2024, supported by the agile approach to delivery used by both UKPN and ESO. The triparty commercial Service Terms were agreed in February 2024, paving the way for DERs that are connected to register for the MW Dispatch service. Four of the five connected customers have started registration process on ESO's Single Market Platform (SMP).

We expect to complete an operational trial with one DER customer early in 2024/25, establishing confidence on the accuracy and reliability of the solution. The five connected DERs are all shortly to be onboarded to the UKPN Dispatch platform. Work is on-going on the joint operating procedures and internal business processes to support Operational Go Live. This will allow DERs to resolve Transmission constraints in a way that respects operation of the Distribution Network.

We have also been progressing a parallel workstream to improve the accuracy and effectiveness of the minimum viable product. This workstream assess scaled up impacts to the Distribution and Transmission networks and consider the benefits of conflict resolution, joint stack creation and joint scheduling use cases. This analysis will inform future development of the MW Dispatch solution. We have already developed a comprehensive ESO-UKPN data exchange spreadsheet that was presented to the Open Networks ENA Primacy Technical Working Group (TWG). This data set has been recognised as meeting 80% of the Transmission and Distribution coordination challenges and primacy implementation.

## 5. Quantitative assessment

### Our Distribution Network Options Assessment

We begin by identifying system needs – areas where forecast network demand is greater than the firm capacity of the network. We use measured or inferred data about current network usage, overlaying expected customer connections and wider long-term forecasts. We publish details of the available headroom under different scenarios within our Network Development Plan.

For sites where we have forecast capacity constraints we then consider network and flexibility options. The expected cost of the network solution is a key input to our flexibility process (as below).

### Ensuring flexibility services are the most economic solution

We undertake cost benefit analysis using the Common Evaluation Methodology (CEM) and supporting Excel based CEM tool, which was developed through the Open Networks project to deliver consistency in how DNOs evaluate different network investment options used to market test flexibility solutions. The CEM is based on the Ofgem CBA, which we used in earlier tender rounds.

The methodology sets out to analyse the Net Present Value (NPV) of discounted cash flows of each solution. The difference between the NPV of

the network reinforcement and the NPV of the deferred reinforcement represents the amount that could be spent on flexibility services to achieve the deferral. The simple table below shows this calculation where reinforcement has been deferred by three years.

Note that the actual CBA is more complex since it models the TOTEX (total expenditure) cash flow DNO funding model where a proportion of the expenditure is recovered from bill-payers in the year it is incurred and the rest is recovered over time. The CEM tool also enables consideration of multiple scenarios and deferral periods.

The flexibility budgets, which we publish to the market prior to each tender, are converted into indicative prices to help the market translate value into offers by dividing the budget by the required availability and utilisation volumes. These volumes are determined from site-specific load profile analysis and forecasts. Site specific budgets and prices can be found in the Competition Data spreadsheet that we publish on [our website](#).

Where we use flexibility to reduce the risk of customers losing supply, our counterfactual is based on the penalty associated with the potential customer interruptions and minutes lost (itself based on the number of customers connected and estimated time to restore supply) along with the likelihood of a second (unplanned) outage triggering that interruption.

	NPV	Year 1	Year 2	Year 3	Year 4
Baseline	$NPV_{Baseline}$	Reinforcement			
Deferral	$NPV_{Deferral}$				Reinforcement
Flexibility budget	$NPV_{Deferral-Baseline}$	Flex	Flex	Flex	

Figure 6 - Overview of NPV comparison

## Assessment of competitive bidding

We publish our bid assessment methodology within the participation guidance for each tender. This is available on [our website](#). We seek to meet the volume requirement, at a cost that is within budget and as economically as possible as shown in **Error! Reference source not found..**

The comparable rate (in £/MWh) is derived from the availability fee and utilisation fee and allows comparison between bids. The detailed formulation can be found in the participation guidance. We

provide an example of the bid assessment in Appendix C.

For **Day-Ahead Scheduled Utilisation**, providers set their utilisation price. They can change their price on a daily basis. Where we have more than one Flexibility Unit in a zone, we will dispatch Flexible Units in price order subject to security of supply and operability considerations (see Figure 2). This merit order approach to dispatch encourages providers to compete on utilisation price, thus driving further efficiencies.



Figure 4 - Assessment of bids

## 6. References

Reference	Description
<a href="#">RIIO-ED2 Business Plan</a>	Describes UK Power Networks' plans and commitments for 2023-28
<a href="#">RIIO-ED2 DSO Strategy</a>	Describes our plans to establish an independent DSO and maximise its benefits over 2023-28
<a href="#">Distribution Network Options Assessment (DNOA)</a>	Describes the decision-making process for assessing infrastructure vs flexibility when increasing network capacity, along with the results of that assessment
<a href="#">Flexibility Dispatch Framework</a>	Describes how we make flexibility dispatch decisions in the control room, including coordination with the ESO
<a href="#">Long-Term Development Statement and Network Development Plan</a>	Outlines how we expect network capacity requirements to evolve over the next 5-10 years and where we plan to build additional network infrastructure
<a href="#">Network Headroom Report</a>	Indicates the amount of unused network capacity for demand and generation up to 2050, across our Bulk Supply Points and Primary substations
<b>Key websites</b>	
<a href="#">UKPN DSO website</a>	Outlines the services the DSO offers and the latest news and events
<a href="#">Flexibility Data Catalogue</a>	Catalogues data on flex requirements, contracts, dispatches and case studies
<a href="#">Open Data Portal</a>	Provides APIs and downloads for key UK Power Networks datasets
<a href="#">EPEX LocalFlex</a>	Enables flexibility providers to register, commit to contracts and receive payments
<b>Engagement</b>	
<a href="#">Slides and recordings from flexibility events</a>	Provides materials for previous engagement events
<a href="#">DER and Customer Forum</a>	Provides details of upcoming engagement events relating to connection and operation of generators and storage
<b>Market Information</b>	
<a href="#">Live and historic tenders</a>	Provides descriptions and data for all ongoing and completed flexibility tenders
<a href="#">Standard contract</a>	Sets out the standard terms for flexibility service commitments
<a href="#">Competition data</a>	Details of our requirements, including the eligible postcodes, voltage level, capacity and guide prices

## Appendix A: Distribution Future Energy Scenarios

The table below summarises the key system drivers which characterise four Distribution Future Energy Scenarios.

Parameter	Falling Short	System Transformation	Consumer Transformation	Leading the Way
Net Zero by 2050?	No	Yes	Yes	Yes
Core Demand				
Energy efficiency	Low	Medium	High	High
Building stock growth	Medium	Medium	Medium	Medium
Low-Carbon Transport				
Cars and vans: electrification	Limited Uptake	ICE Ban	ICE Ban	Reduced Demand
Heavy duty vehicles: decarbonisation	Baseline	Hydrogen world	High electricity	Fast rollout
Decarbonised Heating				
Heat pumps	Low	Medium	High	High with hybrids
District heat uptake	Low	Medium	High	High
Distributed Generation				
Rooftop solar PV	Low	Medium	High	High
Large-scale solar PV	Low	Medium	Medium	High
Onshore wind	Low	Low	High	Medium
Renewable engines	Low	Medium	High	High
Decentralised biomass	High	Medium	Medium	Low
Non-renewable CHP /Gas engines/ Energy from waste	High	Low	Low	Low
Battery Storage				
Domestic battery storage	Low	Medium	High	High
I&C behind-the-meter battery storage	Low	Medium	High	Medium
Co-located battery storage	Low	Medium	Medium	High
Grid-scale storage	Low	Medium with early phase out	Medium with late phase out	High
Flexibility				
Flexibility	Low	Medium	High	High

## Appendix B: Tender Round 10 Site Summary

The table below summarises the 46 demand constraint flexibility zones which we expect to include in the first tender of 2024/25. There will also be an additional 219 flexibility zones at the LV level. In May we will publish the final details of sites on our website and on the LocalFlex platform.

Flexibility Zone	Licence area	Maximum Connection voltage (kV)	Capacity required (MW)
Aldreth	EPN	11	1.66
Barming	SPN	11	2.38
Bow	LPN	11	3.40
Bramford Diss Thetford Circuits	EPN	132	8.96
Brington	EPN	11	4.56
Capel Switching Station	SPN	33	4.52
Cobham (Kent) T1	SPN	11	3.44
Cockfosters	EPN	11	6.26
Croydon	EPN	11	3.17
Croydon B	SPN	33	1.56
East Enfield	EPN	11	0.63
Edenbridge	SPN	11	1.01
Godmanchester	EPN	11	1.62
Guyhirn	EPN	11	0.96
Halstead	EPN	11	2.22
Hendon Way	EPN	11	5.45
Kenninghall	EPN	11	3.02
Kimbolton	EPN	11	2.08
Kimms Belt	EPN	11	1.85
Laxfield	EPN	11	0.24
Leysdown	SPN	6.6	0.53
Lithos Road	LPN	11	2.17
Little Chart	SPN	6.6	0.87

Flexibility Zone	Licence area	Maximum Connection voltage (kV)	Capacity required (MW)
March Primary	EPN	11	0.63
Rainbow Lane	EPN	11	0.20
Reed	EPN	11	5.69
Ripe	SPN	11	0.50
Selwyn Road	EPN	11	1.81
Smeeth	SPN	11	1.02
St Anthony St	EPN	11	1.11
St Helier	SPN	11	1.62
Steel Cross	SPN	6.6	0.78
Stickfast Lane	EPN	11	2.50
Takeley	EPN	11	0.58
Thaxted Local	EPN	11	4.30
Uplands Park	EPN	11	0.49
W. Weybridge 132/11	SPN	11	6.52
Warehorne	SPN	11	0.53
Warehorne-Kenardington-Tenterden_Wittersham 33kV Group	SPN	33	8.18
West Horndon	EPN	11	2.57
Whiston Road	LPN	11	4.55
Willesden Grid GSP	LPN	132	25.00
Wingham	SPN	11	4.87
Wittersham	SPN	6.6	1.15
Worstead	EPN	11	0.41
Wrotham	SPN	11	1.76

## Appendix C: Example Bid Assessment

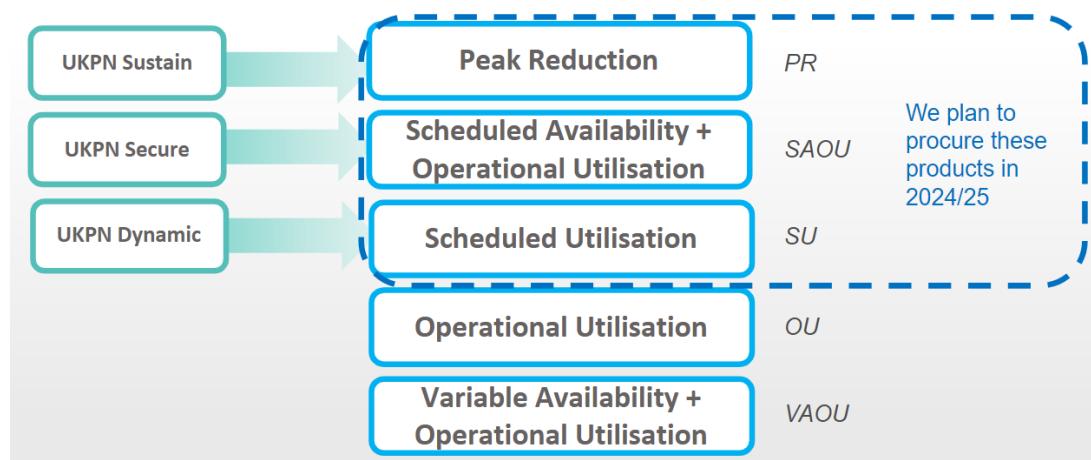
The table shows details of the bid assessment carried out for the Secure (Scheduled Availability and Operational Utilisation) service at Burwell Milton Arbury Hist

Bid Grouping	Company	Capacity (MW)	Bid Avail Fee (£/MW/h)	Bid Util Fee (£/MWh)	Service Start Date	Service End Date	Service Window From	Service Window To	Avail spend	Util hours	Util spend	Total spend	Energy delivered (MWh)	Total contract cost	Total contract energy (MWh)	Contract comparable rate (£/MWh)	Result
Bid 7	Ohme Operations UK Ltd	15.70	18	270	01/12/2022	11/03/2023	07:00	20:30	£ 385,325	5 £	21,195	£ 406,520	78.5	£ 1,519,683	350.6	£ 4,334	Accepted
Bid 7	Ohme Operations UK Ltd	17.40	16	270	01/12/2023	11/03/2024	07:00	20:30	£ 383,357	5 £	23,490	£ 406,847	87	£ 1,519,683	350.6	£ 4,334	Accepted
Bid 7	Ohme Operations UK Ltd	18.51	14	270	01/12/2024	11/03/2025	07:00	20:30	£ 353,408	5 £	24,993	£ 378,402	92.5685	£ 1,519,683	350.6	£ 4,334	Accepted
Bid 7	Ohme Operations UK Ltd	18.51	12	270	01/12/2025	11/03/2026	07:00	20:30	£ 302,921	5 £	24,993	£ 327,915	92.5685	£ 1,519,683	350.6	£ 4,334	Accepted
Bid 12	Tesla Motors Netherlands B.V.	0.04	15	270	01/12/2021	11/03/2022	07:00	20:30	£ 855	5 £	56	£ 911	0.209	£ 911	0.2	£ 4,361	Accepted
Bid 8	Ohme Operations UK Ltd	0.06	15	270	01/12/2021	11/03/2022	07:00	20:30	£ 1,289	5 £	85	£ 1,374	0.315	£ 6,881	1.6	£ 4,369	Accepted
Bid 8	Ohme Operations UK Ltd	0.06	15	270	01/12/2022	11/03/2023	07:00	20:30	£ 1,289	5 £	85	£ 1,374	0.315	£ 6,881	1.6	£ 4,369	Accepted
Bid 8	Ohme Operations UK Ltd	0.06	15	270	01/12/2023	11/03/2024	07:00	20:30	£ 1,301	5 £	85	£ 1,386	0.315	£ 6,881	1.6	£ 4,369	Accepted
Bid 8	Ohme Operations UK Ltd	0.06	15	270	01/12/2024	11/03/2025	07:00	20:30	£ 1,289	5 £	85	£ 1,374	0.315	£ 6,881	1.6	£ 4,369	Accepted
Bid 8	Ohme Operations UK Ltd	0.06	15	270	01/12/2025	11/03/2026	07:00	20:30	£ 1,289	5 £	85	£ 1,374	0.315	£ 6,881	1.6	£ 4,369	Accepted
Bid 3	Cambridgeshire County Council	0.06	15	270	01/12/2022	11/03/2023	07:00	20:30	£ 1,227	5 £	81	£ 1,308	0.3	£ 5,245	1.2	£ 4,371	Accepted
Bid 3	Cambridgeshire County Council	0.06	15	270	01/12/2023	11/03/2024	07:00	20:30	£ 1,239	5 £	81	£ 1,320	0.3	£ 5,245	1.2	£ 4,371	Accepted
Bid 3	Cambridgeshire County Council	0.06	15	270	01/12/2024	11/03/2025	07:00	20:30	£ 1,227	5 £	81	£ 1,308	0.3	£ 5,245	1.2	£ 4,371	Accepted
Bid 3	Cambridgeshire County Council	0.06	15	270	01/12/2025	11/03/2026	07:00	20:30	£ 1,227	5 £	81	£ 1,308	0.3	£ 5,245	1.2	£ 4,371	Accepted
Bid 10	Orange Power Ltd	0.50	48	380	01/12/2022	11/03/2023	07:00	20:30	£ 32,724	5 £	950	£ 33,674	2.5	£ 135,020	10.0	£ 13,502	Accepted
Bid 10	Orange Power Ltd	0.50	48	380	01/12/2023	11/03/2024	07:00	20:30	£ 33,048	5 £	950	£ 33,998	2.5	£ 135,020	10.0	£ 13,502	Accepted
Bid 10	Orange Power Ltd	0.50	48	380	01/12/2024	11/03/2025	07:00	20:30	£ 32,724	5 £	950	£ 33,674	2.5	£ 135,020	10.0	£ 13,502	Accepted
Bid 10	Orange Power Ltd	0.50	48	380	01/12/2025	11/03/2026	07:00	20:30	£ 32,724	5 £	950	£ 33,674	2.5	£ 135,020	10.0	£ 13,502	Accepted
Bid 11	Orange Power Ltd	0.50	68	380	01/12/2022	11/03/2023	07:00	20:30	£ 46,359	5 £	950	£ 47,309	2.5	£ 189,695	10.0	£ 18,970	Accepted
Bid 11	Orange Power Ltd	0.50	68	380	01/12/2023	11/03/2024	07:00	20:30	£ 46,818	5 £	950	£ 47,768	2.5	£ 189,695	10.0	£ 18,970	Accepted
Bid 11	Orange Power Ltd	0.50	68	380	01/12/2024	11/03/2025	07:00	20:30	£ 46,359	5 £	950	£ 47,309	2.5	£ 189,695	10.0	£ 18,970	Accepted
Bid 11	Orange Power Ltd	0.50	68	380	01/12/2025	11/03/2026	07:00	20:30	£ 46,359	5 £	950	£ 47,309	2.5	£ 189,695	10.0	£ 18,970	Accepted
Bid 1	Bankenergi limited	0.50	111	577	01/12/2021	11/03/2022	07:00	20:30	£ 75,674	5 £	1,443	£ 77,117	2.5	£ 386,533	12.5	£ 30,923	Accepted
Bid 1	Bankenergi limited	0.50	111	597	01/12/2022	11/03/2023	07:00	20:30	£ 75,674	5 £	1,493	£ 77,167	2.5	£ 386,533	12.5	£ 30,923	Accepted
Bid 1	Bankenergi limited	0.50	111	597	01/12/2023	11/03/2024	07:00	20:30	£ 76,424	5 £	1,493	£ 77,916	2.5	£ 386,533	12.5	£ 30,923	Accepted
Bid 1	Bankenergi limited	0.50	111	597	01/12/2024	11/03/2025	07:00	20:30	£ 75,674	5 £	1,493	£ 77,167	2.5	£ 386,533	12.5	£ 30,923	Accepted
Bid 1	Bankenergi limited	0.50	111	597	01/12/2025	11/03/2026	07:00	20:30	£ 75,674	5 £	1,493	£ 77,167	2.5	£ 386,533	12.5	£ 30,923	Accepted
Bid 9	Orange Power Ltd	1.00	118	580	01/12/2022	11/03/2023	07:00	20:30	£ 160,893	5 £	2,900	£ 163,793	5	£ 656,765	20.0	£ 32,838	Alternative efficient fee offered
Bid 9	Orange Power Ltd	1.00	118	580	01/12/2023	11/03/2024	07:00	20:30	£ 162,486	5 £	2,900	£ 165,386	5	£ 656,765	20.0	£ 32,838	Alternative efficient fee offered
Bid 9	Orange Power Ltd	1.00	118	580	01/12/2024	11/03/2025	07:00	20:30	£ 160,893	5 £	2,900	£ 163,793	5	£ 656,765	20.0	£ 32,838	Alternative efficient fee offered
Bid 9	Orange Power Ltd	1.00	118	580	01/12/2025	11/03/2026	07:00	20:30	£ 160,893	5 £	2,900	£ 163,793	5	£ 656,765	20.0	£ 32,838	Alternative efficient fee offered
Bid 4	Conrad Energy Limited	6.00	275	450	01/12/2021	11/03/2022	07:00	20:30	£ 2,249,775	5 £	13,500	£ 2,263,275	30	£ 11,338,650	150.0	£ 75,591	Alternative efficient fee offered
Bid 4	Conrad Energy Limited	6.00	275	450	01/12/2022	11/03/2023	07:00	20:30	£ 2,249,775	5 £	13,500	£ 2,263,275	30	£ 11,338,650	150.0	£ 75,591	Alternative efficient fee offered
Bid 4	Conrad Energy Limited	6.00	275	450	01/12/2023	11/03/2024	07:00	20:30	£ 2,272,050	5 £	13,500	£ 2,285,550	30	£ 11,338,650	150.0	£ 75,591	Alternative efficient fee offered
Bid 4	Conrad Energy Limited	6.00	275	450	01/12/2024	11/03/2025	07:00	20:30	£ 2,249,775	5 £	13,500	£ 2,263,275	30	£ 11,338,650	150.0	£ 75,591	Alternative efficient fee offered
Bid 4	Conrad Energy Limited	6.00	275	450	01/12/2025	11/03/2026	07:00	20:30	£ 2,249,775	5 £	13,500	£ 2,263,275	30	£ 11,338,650	150.0	£ 75,591	Alternative efficient fee offered
Bid 6	Just Charging Ltd	0.35	290.17	71.4	01/12/2022	11/03/2023	07:00	20:30	£ 138,476	5 £	125	£ 138,601	1.75	£ 555,776	7.0	£ 79,397	Rejected
Bid 6	Just Charging Ltd	0.35	290.17	71.4	01/12/2023	11/03/2024	07:00	20:30	£ 139,847	5 £	125	£ 139,972	1.75	£ 555,776	7.0	£ 79,397	Rejected
Bid 6	Just Charging Ltd	0.35	290.17	71.4	01/12/2024	11/03/2025	07:00	20:30	£ 138,476	5 £	125	£ 138,601	1.75	£ 555,776	7.0	£ 79,397	Rejected
Bid 6	Just Charging Ltd	0.35	290.17	71.4	01/12/2025	11/03/2026	07:00	20:30	£ 138,476	5 £	125	£ 138,601	1.75	£ 555,776	7.0	£ 79,397	Rejected
Bid 13	ev.energy	0.01	295	100	01/12/2021	11/03/2022	07:00	20:30	£ 4,022	5 £	5	£ 4,027	0.05	£ 478,724	5.9	£ 80,661	Rejected
Bid 13	ev.energy	0.04	295	100	01/12/2022	11/03/2023	07:00	20:30	£ 16,089	5 £	20	£ 16,109	0.2	£ 478,724	5.9	£ 80,661	Rejected
Bid 13	ev.energy	0.17	295	100	01/12/2023	11/03/2024	07:00	20:30	£ 69,463	5 £	86	£ 69,548	0.855	£ 478,724	5.9	£ 80,661	Rejected
Bid 13	ev.energy	0.32	295	100	01/12/2024	11/03/2025	07:00	20:30	£ 129,519	5 £	161	£ 129,680	1.61	£ 478,724	5.9	£ 80,661	Rejected
Bid 13	ev.energy	0.64	295	100	01/12/2025	11/03/2026	07:00	20:30	£ 259,038	5 £	322	£ 259,360	3.22	£ 478,724	5.9	£ 80,661	Rejected
Bid 5	Green Energy Options (geo) Ltd	0.01	540	540	01/12/2021	11/03/2022	07:00	20:30	£ 7,363	5 £	27	£ 7,390	0.05	£ 7,390	0.1	£ 147,798	Rejected
Bid 2	Bankenergi limited	2.00	737	111	01/12/2021	11/03/2022	07:00	20:30	£ 2,009,799	5 £	1,110	£ 2,010,909	10	£ 10,074,444	50.0	£ 201,489	Rejected
Bid 2	Bankenergi limited	2.00	737	111	01/12/2022	11/03/2023	07:00	20:30	£ 2,009,799	5 £	1,110	£ 2,010,909	10	£ 10,074,444	50.0	£ 201,489	Rejected
Bid 2	Bankenergi limited	2.00	737	111	01/12/2023	11/03/2024	07:00	20:30	£ 2,029,698	5 £	1,110	£ 2,030,808	10	£ 10,074,444	50.0	£ 201,489	Rejected
Bid 2	Bankenergi limited	2.00	737	111	01/12/2024	11/03/2025	07:00	20:30	£ 2,009,799	5 £	1,110	£ 2,010,909	10	£ 10,074,444	50.0	£ 201,489	Rejected
Bid 2	Bankenergi limited	2.00	737	111	01/12/2025	11/03/2026	07:00	20:30	£ 2,009,799	5 £	1,110	£ 2,010,909	10	£ 10,074,444	50.0	£ 201,489	Rejected

## Appendix D: Flexibility Services Products

The standard ENA Flexibility Services products was updated towards the end of 2023/24<sup>8</sup> with DNOs implementing the new products for new contracts by Q2 2024. The update includes name changes and a set of parameters per product, with some parameters having variable selections, for example the Operational Utilisation product can be utilised at 2 min or 15 min response times.

The following diagram maps our previous products, Sustain, Secure, and Dynamic to the new products of Peak Reduction, Scheduled Availability + Operational Utilisation, and Scheduled Utilisation respectively.



- Sustain / Peak Reduction** – Contract awarded through a long-term tender where the flex provider reduces their highest demand peaks during contracted windows.
- Secure / Scheduled Availability + Operational Utilisation** – Contract awarded through a long-term tender where the flex provider commits to be available during contracted windows, with utilisation confirmed at day-ahead.
- Dynamic / Scheduled Utilisation** - Contract awarded through a day-ahead auction where the flex provider agrees to deliver their flex for the following day

The following tables provide the detailed parameters for each of our products

### Peak Reduction

	Parameter Name	Industry standard	UKPN notes
Structure	Payment Structure	Utilisation Only	✓
	When prices are set (procurement timescales)	At trade	✓
Availability	Availability Request Mechanism	N/A	✓
Utilisation	Utilisation Payment Unit	£/MWh	✓
	Utilisation Period	Settlement Periods	✓
	Delivery Expectation	Peak Delivery	✓
	Maximum Response Time	N/A	✓
	Payments during response time?	No	✓

<sup>8</sup> [https://www.energynetworks.org/publications/on-flexibility-products-review-and-alignment-\(feb-2024\)](https://www.energynetworks.org/publications/on-flexibility-products-review-and-alignment-(feb-2024))

	Parameter Name	Industry standard	UKPN notes
	Minimum Utilisation Time	30 mins	✓
	Minimum Utilisation Volume	End state: N/A Interim: differs per DNO	10kW
	Utilisation Instruction Timings	At trade	✓
	Partial Utilisation Instruction possible	End State: Yes Interim: differs per DNO	Yes (at trade)
	Time Variable Utilisation Volumes Allowed	End State: Yes Interim: differs per DNO	No

### Scheduled Availability + Operational Utilisation

	Parameter Name	Industry standard	UKPN notes
Structure	Payment Structure	Availability and Utilisation	✓
	When prices are set (procurement timescales)	At trade	Utilisation prices can be reduced after initial commitment
Availability	Availability Request Mechanism	Request initiated by DNO	✓
	Availability Acceptance timing	At trade	✓
	Availability Refinement timing	Not allowed	✓
	Availability Changes Allowed?	No	✓
	Minimum Aggregate Unit Size	End state: N/A Interim: differs per DNO	10kW
	Partial Availability Acceptance Possible?	End State: Yes Interim: differs per DNO	Yes (at trade)
	Time Variable Availability Volumes Allowed	End State: Yes Interim: differs per DNO	No
	Availability Payment Unit	£/MW/H	✓
	Availability Period	Settlement Periods	✓
Utilisation	Utilisation Payment Unit	£/MWh	✓
	Utilisation Period	Minutes	✓
	Delivery Expectation	Continuous	✓
	Maximum Response Time	N/A	✓
	Payments during response time?	No	✓

	Minimum Utilisation Time	30 mins	✓
	Minimum Utilisation Volume	End state: N/A Interim: differs per DNO	10kW
	Utilisation Instruction Timings	Operational - Day Ahead	✓
	Partial Utilisation Instruction possible	End State: Yes Interim: differs per DNO	Yes
	Time Variable Utilisation Volumes Allowed	End State: Yes Interim: differs per DNO	No

### Scheduled Utilisation

	Parameter name	Industry standard	UKPN notes
Structure	Payment Structure	Utilisation Only	✓
	When prices are set (procurement timescales)	At trade	✓ (at day-ahead)
Availability	N/A	N/A	✓
Utilisation	Utilisation Payment Unit	£/MWh	✓
	Utilisation Period	Settlement Periods	✓
	Delivery Expectation	Continuous	✓
	Maximum Response Time	N/A	✓
	Payments during response time?	No	✓
	Minimum Utilisation Time	30 mins	✓
	Minimum Utilisation Volume	End state: N/A Interim: differs per DNO	10kW
	Utilisation Instruction Timings	At trade	✓
	Partial Utilisation Instruction possible	End State: Yes Interim: differs per DNO	Yes
	Time Variable Utilisation Volumes Allowed	End State: Yes Interim: differs per DNO	Yes

UK Power Networks Distribution System Operator (DSO)

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