

Flexibility Services Procurement Statement

An LC31E Reporting Requirement
30 March 2021



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Executive Summary

UK Power Networks owns, operates and manages three electricity distribution networks in Great Britain, delivering power to 8.3 million homes and businesses across London, the east and south east of England. We have a critical role at the heart of the future energy landscape, enabling the transition to the net zero carbon economy and enabling all our stakeholders to benefit from better safety, reliability and cost efficiencies as we innovate and invest to deliver a sustainable energy future for all.

We set out in our Future Smart consultation¹ in 2017 our strategy to use customer flexibility as an alternative to network upgrades. In 2018, we were the first DNO to publish a Flexibility Roadmap² that describes how we will develop flexibility markets. We were also the first DNO to commit to market testing all of our HV and EHV reinforcement before we invest in any new assets³, subsequently we were also the first DNO to tender for LV needs.

Flexibility is a critical tool in enabling net zero at lowest cost for the customers we serve.

The Procurement Statement document describes the type of flexibility we will procure and our approach to procurement for the 2021/22 regulatory year. We also summarise the previous year's engagement activities with customers and stakeholders to ensure a coordinated, co-designed, and transparent marketplace for flexibility services.

Some of the key highlights of what is covered in this document:

- **Tenders:** In Section 2, we set out our current and future tender requirements. At the time of writing, we are in the process of running tenders across 138 sites for up to 387MW of flexible capacity. In our next tender this summer we are investigating 140 sites or up to 400MW of flexible capacity from existing and new sites.
- **Transparency:** In Section 3, we describe our tendering process and how transparency is embedded in its design. This includes a market testing process independent from the network planning process, using an open and independent market platform, making our tendering documentation and methodologies openly accessible on our website, and publishing the most granular post-tender results information of any DNO.
- **Market facilitation:** In Section 3, we also discuss how we have reduced barriers to participation. From having low minimum entry criteria of 10kW, opportunities at all voltage levels and license areas, allowing planned solutions to participate and not just existing solutions, short and long duration contracts from 1 of up to 7 years, and product offerings with different degrees of commitment to cater for different business models.
- **Customer engagement:** In Section 4, we describe how we have collaborated with over 1,200 of our customers and stakeholders in the previous year to improve the market design and processes and increase participation. Through our key bi-annual events, we welcomed around 140 stakeholders to our recent Flexibility Forum, Connections Forum, and DER Forum. We also held 80 surgeries or bilateral meetings with 90 companies and held a joint webinar with Piclo prior to the tender.
- **Coordination:** In Section 4, we also discuss how we are working with other network companies. Through the Open Networks project, we have introduced a standardised flexibility contract and a common evaluation methodology. This year's focus is even greater alignment between DSO and ESO processes and primacy rules. We are also collaborating with the ESO on the South Coast which could enable up to 600MW of distributed energy resources to be connected in the region through the Regional Development Programme.

¹ <http://futuresmart.ukpowernetworks.co.uk/>

² <http://futuresmart.ukpowernetworks.co.uk/wp-content/themes/ukpnfuturesmart/assets/pdf/futuresmart-flexibility-roadmap.pdf>

³ Please see p. 5 of our Flexibility Roadmap.

1. Introduction

Introduction to the company

At UK Power Networks, we own, operate and manage three of the 14 electricity distribution networks in Great Britain, covering an area of approximately 30,000km² and delivering power to 8.3 million homes and businesses across London, the east and south east of England.

UK Power Networks has a clear public purpose, to safely and reliably deliver electricity to our customers. We strive to be the best performing distribution network operator (DNO), supported by our vision to be an employer of choice, a respected and trusted corporate citizen, and to do so in a sustainable, cost-efficient way. Our vision is informed by the world we live in and the regular and personal engagement we have with our stakeholders that, in turn, informs and shapes our strategy.

We have a critical role at the heart of the future energy landscape, enabling the transition to the net zero carbon economy and enabling all our stakeholders to benefit from better safety, reliability and cost efficiencies as we innovate and invest to deliver a sustainable energy future for all.

The changing electricity system provides opportunities for network operators to manage and develop the energy system in new ways. The evolution to a Distribution System Operator (DSO) involves using flexible demand and generation to support the planning and operation of the smart grid. Through use of open and transparent local markets, we shall procure this flexibility to deliver reliable supplies at efficient cost for our customers.

We committed to a 'Flexibility First' approach when we launched our Flexibility Roadmap⁴ in 2018. Since then, through regular tender rounds, we have been market testing whether flexibility can offer a more economical solution to reinforcing or upgrading assets across our whole network. We will take this approach whenever it is the most cost-effective option for our customers.

Why flexibility?

Using customer flexibility is one of our five key DSO priorities as outlined in our DSO strategy⁵ and will allow us to manage planning, network development and operations in a more economic and efficient way. DSO ancillary services sits at the core of the DSO evolution as specified in the Ofgem RIIO-ED2 Sector Specific Methodology Consultation:

"DNOs must actively develop markets to enable and appropriately reward DER to provide services, including distribution non-frequency ancillary services (DSO ancillary services), to efficiently manage their network."

Purpose of this document

This document is one of three key reporting tools required by SLC31E of the electricity distribution licence, 'Procurement and use of Distribution Flexibility Services'. SLC31E was implemented in December 2020 and transposes in the GB regulatory framework Article 32 of the Clean Energy for all Europeans Package. This procurement statement sets out:

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

⁴ Flexibility Roadmap - <https://smartgrid.ukpowernetworks.co.uk/flexibility-hub/>

⁵ Future Smart Consultation - <https://smartgrid.ukpowernetworks.co.uk/>

2. Flexibility services and energy efficiency requirements

Planned flexibility procurement over the next regulatory year

At the time of writing this report, we are running a flexibility tender for generation turn-up and demand turn-down services to defer reinforcement at a number of forecasted to be highly loaded sites, comprised of grid, primary and secondary substations.

The sites were identified by assessing the impact of load growth forecasts on our substations. These sites are forecasted to go over firm network capacity (the capacity guaranteed to be available under all probable operating conditions) between now and the end of the RII0-ED2 period considering two forecast scenarios published in 2020; Steady Progression and Green Transformation. These forecast scenarios are identical to those used for planning infrastructure upgrades ensuring a fair comparison of flexibility and infrastructure solutions. The demand drivers considered in deriving the scenarios are summarised in the following table:

Table 1: Distribution Future Energy Scenarios

Scenario world	Steady Progression	Green Transformation
Net-zero by 2050?	No	Yes
Energy efficiency	Medium	Low
Building stock growth	Medium	Medium
Electric vehicles (cars and vans)	Low	Medium
Electric vehicles (other)	Baseline	Baseline
Heating technologies	Medium electrification	Low electrification with decarbonised gas
District Heat uptake	Medium	High
District Heat supply	Decentralised scenario	Decarbonised gas scenario
Small scale solar PV	Medium	Medium
Large solar PV	Medium	High
Gas reciprocating engine	Medium	Medium
Onshore wind	Low	Low
Other generation	Medium	Medium
Domestic battery storage	Medium	Low
I&C behind-the-meter battery storage	Low	Low
Grid-level battery uptake	Medium	Medium
Flexibility	Medium	Low
EV smart charging	Medium	Low

The Steady Progression scenario represents a steady rate of demand growth in line with existing uptake of decarbonisation measures. We will procure the Secure and Sustain⁶ products to manage the Steady Progression scenario as the higher certainty of this scenario requires the higher commitment and reliability offered by providers contracted under these products. The Green Transformation scenario represents a high rate of demand growth associated with an acceleration of decarbonisation. Due to the greater uncertainty of these increased levels of demand, we will procure the Dynamic product to manage this scenario for its optional characteristics.

⁶ The different flexibility products are explained on page six this document

We are testing the market's ability to deliver a flexibility solution in RIIO-ED2 which is a more economic and efficient solution for consumers than traditional reinforcement. The results of the market tests will feed into the RIIO-ED2 business plan for Flexibility and Infrastructure Planning.

We have identified capacity needs at 138 sites for this tender round (10 at EHV, 68 at HV and 60 at LV⁷). Flexibility services will be used to defer reinforcement with flexible solutions primarily dispatched pre-fault. The locations are published onto the Piclo Flex⁸ platform, which is openly accessible to all stakeholders; a snapshot of the live zones is given in Figure 1.

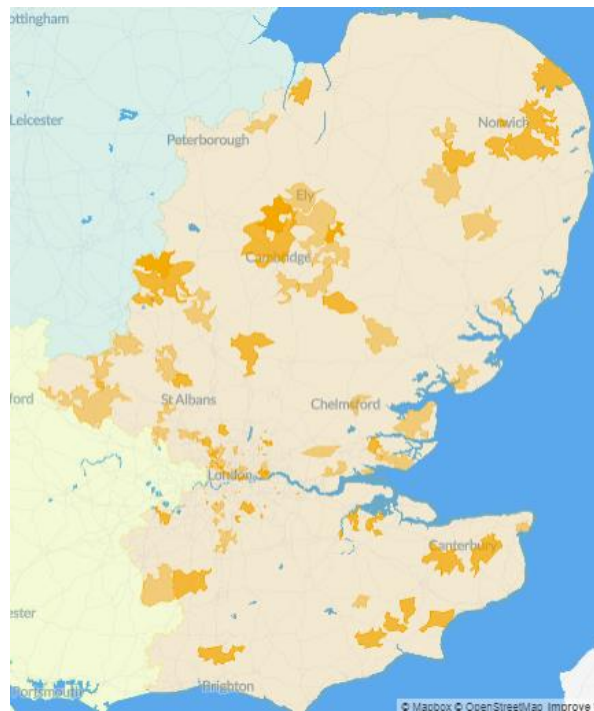


Figure 1: Current tender locations openly published on Piclo Flex

We are procuring flexible capacity across three different products, each differing in payment structure, required level of provider commitment and dispatch mechanism as shown in Table 2. These are standardised products which we co-developed with other DNOs as part of the Energy Networks Association's (ENA) Open Networks project in order to reduce barriers to entry for flexibility providers. It makes it easier for providers to develop solutions when faced with similar service needs across all DNOs. We have adopted these products since our April 2020 tender.

Information on capacity requirements, voltage levels, availability windows and forecasted utilisation for all sites is openly available on the Piclo Flex platform during a live tender, from tender initiation to publication of pre-qualification results. An example site is provided in the Appendices showing the type and format of the information provided. Detailed site information is also included in spreadsheet format accompanying this document.

⁷ For the purposes of this statement and the data in the attached spreadsheet, EHV is greater than or equal to 22kV, HV is greater than 1kV but less than 22kV, and LV is 1kV or less.

⁸ <https://picloflex.com/>

We run two tender rounds each year, one in spring and one in autumn. In the spring tender, which currently takes place in March, we open up the flexibility sites identified following the analysis on the previous year's network data⁹. In the autumn tender we re-tender for residual needs following the outcomes of the spring tender. We provide the specifics of the timelines around our 2021 tenders in Table 5 below. At the time of finalising this report, our spring 2021 flexibility tender is in the bid assessment phase. The capacity requirements are given in Table 2.

Based on projections of contracted capacity across existing competition zones and potential new zones, we estimate we could be tendering for 80 HV and 60 LV zones in our upcoming autumn 2021 tender round. The estimated capacity requirements are shown in Table 3.

All services being tendered in 2021 will be procured under the terms of the ENA standard contract¹⁰, developed with other network operators and industry stakeholders through the Open Networks project.

Table 2: Flexibility products and current tendered capacity requirements for February 2021

Product	Constraint voltage	Payment structure	Provider commitment	Dispatch mechanism	Capacity requirement (MW peak, unique capacity)
Secure	EHV/HV	Availability (£/MW/h) Utilisation (£/MWh)	High (forward commitment of price and volume)	Real-time instruction	98
Dynamic	EHV/HV	Utilisation (£/MWh)	Low (optional in real-time)	Real-time instruction	253
	LV				18
Sustain	LV	Service fee (£/kW)	Medium (optional month-ahead)	Scheduled month-ahead	18

Table 3: Indicative flexible capacity requirements for our autumn 2021 tender

Product	Constraint voltage	Capacity Requirement (MW peak, unique capacity)
Secure	EHV/HV	107
Dynamic	EHV/HV	262
	LV	18
Sustain	LV	18

Energy efficiency

One of our key principles is to ensure that we are technology agnostic when procuring flexibility services. To this end, we have worked with parties to enable energy efficiency schemes to participate in our flexibility tenders and reduce barriers to entry. We recognise within our procurement framework that energy efficiency schemes help to mitigate network constraints by delivering a continuous reduction in the overall net demand profile. We have engaged with energy efficiency providers and facilities management companies to explain the opportunities and have designed a product

⁹ Please see Figure 3 below below.

¹⁰ Standard flexibility services contract - <https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2020/12/Appendix-1-ENA-Standard-Flexibility-Services-Agreement-PE1-0056-2020-rev-1.1.pdf>

tailored to their capabilities, under the Secure product. This enables energy efficiency schemes to be credited with availability payments for the site demand reduction or generation increase delivered during the defined service window. Further information can be found in our Invitation to Tender (ITT) documentation¹¹.

Technical service requirements

We publish all our service requirements in our tender documentation. A summary of the main service requirements to participate is given below. More details can be found in Section 5 of our ITT.

- **Capability**
 - *Direction*: the solution needs to deliver a reduction in imports or an increase in exports of active power from or onto the distribution network
 - *Capacity*: the solution needs to be able to deliver at least 10kW of flexibility relative to its baseline level
 - *Run Time*: the solution needs to be able to sustain its capacity for the duration of its tendered run time on instruction, which has to be at least 30 minutes
 - *Response Time*: the solution should deliver its capacity by its tendered response time which should be in 30 minutes or less
- **Connection**
 - *Point of connection*: the assets providing the service needs to be electrically connected to the network asset subject to the limitation
- **Communications**
 - *Receiving instructions*: the provider shall be able to receive text, email, telephone, or API instructions or any other method agreed with UK Power Networks
- **Metering**
 - *Data resolution*: each asset should have minute-by-minute metering
 - *Metering point*: the asset's metering point can be at the boundary or sub metered where approved by UK Power Networks

Dispatch principles

The network conditions under which we initiate a utilisation instruction can either be when near real-time electricity demand on the network is expected to reach the network limit or when the limit has been reached. This is known as pre-fault and post-fault dispatch respectively. The instructions can be activated manually or automatically. For automatic dispatch, we have developed a cloud-based solution and are supporting contracted flexibility providers to integrate with the Application Programming Interface (API).

Operational dispatches will only apply to solutions that will deliver their energy on instruction. Solutions that provide continuous delivery, such as energy efficiency, are expected to deliver during the Service Windows without operational instructions.

We facilitate the participation of individual flexible assets as well as aggregations thereof in our tenders by defining a Flexible Unit (FU). This is a single controllable unit consisting of one or more flexible assets aggregated together. We will dispatch FUs in accordance with three dispatch principles – cost efficiency, security of supply, and operability. This is consistent with published ENA dispatch criteria¹² and is shown in Figure 2.

¹¹ Invitation to Tender for current tender round - https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2020/12/Invitation-to-Tender-PE1-0056-2020-Flexibility-Services_HV_rev-1.2.pdf

¹² [https://www.energynetworks.org/assets/images/Resource%20library/ON19-WS1A-P3%20Dispatch%20Settlement%20Processes%20\(PUBLISHED\).pdf](https://www.energynetworks.org/assets/images/Resource%20library/ON19-WS1A-P3%20Dispatch%20Settlement%20Processes%20(PUBLISHED).pdf)

As volumes of dispatches increase there will be an increasing impact on the wider energy system. We are working closely with the ESO and DNOs through the Open Networks project this year on establishing coordinating mechanisms covering procurement and dispatch. For more information see Section 4.

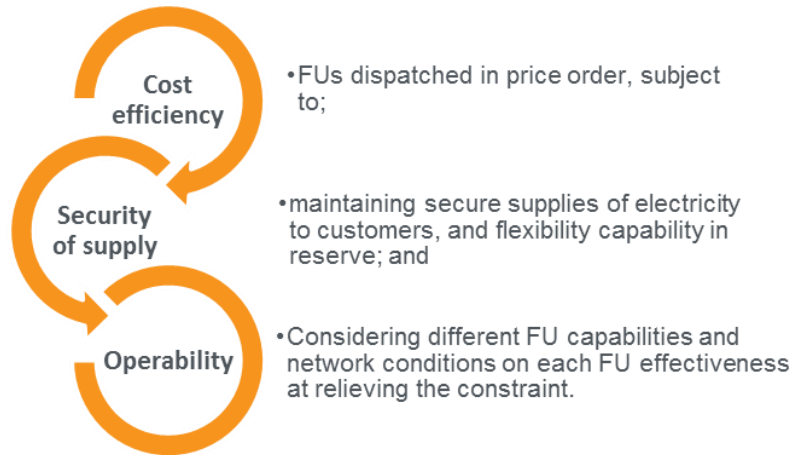


Figure 2: Dispatch principles

3. Tendering process

Pre-tender activities

The market testing process runs independently from the DNO network planning process illustrated in Figure 3. To ensure market solutions are given every opportunity, we are committed to market testing all of our high-voltage reinforcement requirements driven by background load-growth before we opt for any asset solution. The pre-tender activities include:

- **Network Data & Load forecasting:** We forecast and monitor the peak demand across our network assets to ensure that they can deliver safe and reliable supplies to our customers. We forecast the future load growth, which helps us identify where assets might exceed their technical limits due to expected increases in load or generation growth. As asset reinforcement can take a few years to complete, our load forecasting looks sufficiently far ahead to allow reinforcement to be undertaken prior to when our assets are forecast to exceed their technical capacity limits.
- **Substation area selection and flexibility requirements:** Where our network data and load forecasting indicates that an asset will exceed its technical limits, it is enrolled into the flexibility tender process. The load forecasting information will identify the substations that are forecast to exceed the capacity limit and the shortfall in capacity (MW of flexibility required) and when this shortfall occurs (service window).
- **Techno-Economic Assessment of flexibility value:** For each identified site, we undertake a techno economic assessment of the value of flexibility at that site. This involves completing a cost-benefit analysis (CBA) that uses the cost of reinforcement to estimate the net present value of deferring the reinforcement capex for up to seven years to the end of the RII0-ED2 period. The model uses Ofgem's CBA methodology and will be replaced by the Common Evaluation Methodology model developed through the Open Networks project (see Section 4 for more information). The net present value (NPV) of the deferral becomes the available funding pot for commercial services. In more detail, the CBA models how the cash flows from reinforcement are received by our business over time. We then look at the same cash flows associated with deferring investment. The difference between the two cash flows represents value of deferring the cash flows for that deferral period. This represents the value of deferring reinforcement, to our customers. The flexibility budgets are converted into prices by dividing by forecasted availability and utilisation volume requirements. These are determined from site-specific load profile

analysis and forecasts, which account for the different demand drivers. Site specific budgets and price signals can be found in the Revenue Ranges spreadsheet that we publish on our website ahead of every tender¹³.

Tender stages

The tender takes place through an open and independent procurement platform, Piclo Flex. The stages of the tender includes:

- **Tender initiation:** We publish network locations and needs. Providers register their resources and capabilities on the Piclo Flex platform free of charge. Tender documents setting out technical and commercial requirements, such as the ITT, standard contract and available flexibility revenues, are published on our Flexibility Hub webpage and is openly accessible to any interested stakeholder.
- **Pre-qualification:** The provider would submit a pre-qualification questionnaire detailing their company, site, and plans. We then check whether providers and resources are commercially and technically capable of delivering the service.
- **Competition:** For the Secure product, pre-qualified bidders submit bids into a competitive tender via Piclo Flex. We assess bids based on three criteria: value, volume and budget. Flexibility budgets are determined through an Ofgem-approved Cost Benefit Analysis (CBA); more detail is provided in Section 5. For the Sustain and Dynamic products, all pre-qualified providers are accepted at the published service fee or at their submitted dynamic utilisation fee (subject to it being within the CBA derived range) respectively. We announce the results and award successful bidders the standard ENA contract. Full tender results are published onto the Flexibility Hub website and through Piclo Flex.
- **Pre-delivery:** Delivery of planned solutions is monitored by tracking contractual post-tender milestones and engagement with the provider. A proving test is completed on all solutions prior to service delivery.

¹³ Revenue Ranges spreadsheet available on the Flexibility Hub - <https://smartgrid.ukpowernetworks.co.uk/flexibility-hub/>

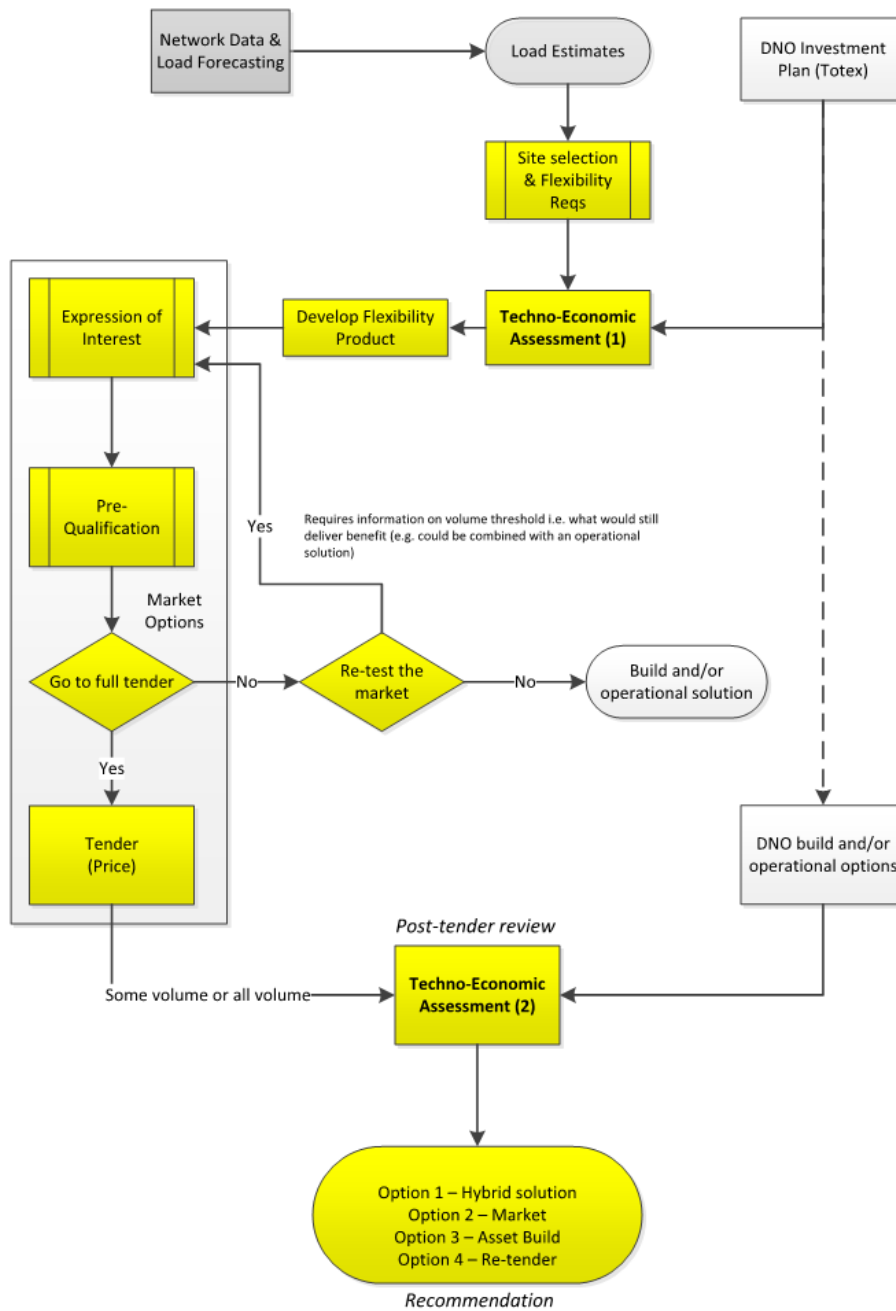


Figure 3: Market testing process

Flexibility Services Procurement Statement

An objective, transparent and market-based tendering process

The following describes each stage of the tender process, consistent with the procurement stages agreed through the Open Networks project. We also explain how fairness, transparency and market facilitation is embedded into the process.

Tender stage	Objective	Transparent	Market-based
Tender initiation	<ul style="list-style-type: none"> Locations are selected based on objective criteria primarily load forecasts and firm capacity. Flexibility prices are calculated through a rigorous CBA process on a site-specific basis. The Piclo Flex platform is independent of UK Power Networks. 	<ul style="list-style-type: none"> Sites published 4-6 months ahead of a tender, to give providers sufficient lead-time to prepare their bids. Locations and detailed flexibility requirements can be viewed by all providers on Piclo Flex including deferral value, capacity requirement, service window, estimated dispatch frequency and duration Tender documentation and timelines are published on the Flexibility Hub soon after the sites have been announced. The documentation explains the stages of the tender, timelines, and requirements to participate. 	<ul style="list-style-type: none"> Any provider can create an account and register assets on Piclo Flex free of charge. All providers already registered on the platform are notified by Piclo when assets fall into a competition zone. Engagement with providers is carried out in conjunction with the independent Piclo team. Sites selected facilitate assets across all voltage levels (EHV to LV).
Pre-qualification	<ul style="list-style-type: none"> Registered assets connected to the constraint and connected at the right voltage on Piclo Flex automatically pass through to the pre-qualification assessment phase. All providers are assessed according to their responses to standard financial and technical questionnaires. A common set of criteria are used to do the assessments regardless of technology. 	<ul style="list-style-type: none"> Providers are notified when assets in a competition zone are qualified/disqualified with reasons. Assessment criteria are published in the ITT found on the Flexibility Hub. Providers declare agreement with standard ENA contract terms before submitting the Dynamic Purchasing System (DPS) application. The DPS allows single registration for multiple tender rounds. 	<ul style="list-style-type: none"> Low thresholds for participation to maximise the number of assets eligible including 10kW minimum flexible capacity and a minimum of 30 minute run time regardless of provider or technology type. We allow new and existing assets, different metering points, we do not require real-time telemetry, and we accommodate different dispatch communication methods to minimise the cost of entry. Planned and existing solutions can participate. Baselines are established by providers according to the published methodology.
Competition	<ul style="list-style-type: none"> We assess bids using a published assessment methodology. Bid assessment is technology agnostic. 	<ul style="list-style-type: none"> Providers are notified when their accepted/rejected with reasons. Tender results are publically available on the Flexibility Hub. 	<ul style="list-style-type: none"> We can only view submitted bids once the competition deadline has passed. Providers can bid into a variety of products with varying levels of commitment required. Inefficient bids are counter-offered an efficient fee based on the CBA.
Pre-Delivery	<ul style="list-style-type: none"> We use the standard ENA flexibility contract. Only once we have completed bid assessment can we associate providers with their bids and finalise contract schedules. 	<ul style="list-style-type: none"> ENA standard contract is publically available on the Flexibility Hub and providers are required to agree to terms in order to pre-qualify. Post tender milestones are included in contract schedules. 	<ul style="list-style-type: none"> Long and short-term contracts (1-7 years) possible depending on provider preference. Contract performance incentives limit provider payment deductions to their total potential revenues.

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 results¹⁴. 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
- The availability and utilisation prices received.

Impact of flexibility procurement on other markets and wider system

In designing our flexibility tenders, we have given consideration to the ability of contracted flexibility providers to effectively participate in retail, wholesale and balancing markets. Developing improved coordination with other system operators is the focus of the Open Networks project explained in more detail in Section 4.

Key relevant features of our service:

- Our contracts do not contain any exclusivity clauses and so facilitate revenue stacking by providers.
- Secure contracted providers can participate in other markets during our service windows provided they are complementary in direction of delivery (generation turn-up/demand turn-down).
- Dynamic contracted providers can accept or reject our requests at their discretion, thus facilitating optimisation of near-term revenues across multiple markets.
- We provide visibility of expected utilisation across our products to allow flexibility providers to assess opportunities and operational requirements.
- An aggregator of flexible assets is able to select the active/inactive facilities within its portfolio to help them optimise their assets.
- Tender information published throughout the tender process for consideration by other system operators.

Pricing strategy

For the Secure Product, flexibility providers competitively bid availability and utilisation fees as they see fit. We provide site-specific price signals to providers to inform their business plan and bidding. These price signals are directly linked to the value of reinforcement deferral at each site through the CBA (see Section 5 for more detail).

For the Dynamic Product, providers set the utilisation price which can be adjusted on a monthly basis. This pricing reflects the incentive required by providers to deliver energy on a close to real-time basis. We will request dispatch from Dynamic providers if required 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 the Sustain product, we apply a fixed price across all competitions based on the typical reinforcement deferral value of an HV/LV substation. This pricing strategy is intended to simplify participation for small-scale flexibility providers.

¹⁴ An example is our April 2020 Post Tender Report - <https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2020/07/Flexibility-Post-Tender-Report-Bids-2020.xlsx>

4. Stakeholder engagement

Stakeholder engagement is central to the development of flexibility markets. We engage with market participants of all types, including generators, demand side responders and aggregators, to not only maximise participation in our tenders but also to co-design the marketplace. Furthermore, we work with other DNOs 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.

Description of stakeholder engagement

We engage with flexibility providers, customers, and interested stakeholders through multiple channels:

- **Biannual Flexibility Forum**¹⁵: Our last winter forum was held online in November 2020 attended by over 60 companies with the primary focus on providing information on the upcoming tender. The summer forum announces tender results and communicates our plans for the remainder of the year, such as retendering opportunities. The July 2020 forum was attended by over 100 stakeholders. At both forums, providers are invited to give their feedback, fostering a collaborative approach to flexibility market design. Our next summer forum is planned for the 2 June 2021. Our next winter forum is planned for the 16 November 2021.
- **Biannual Connections and DER Forums**¹⁶: These forums cater for our connections and DER customers where we cover a wide range of topics including flexibility services. We welcomed 80 customers at our most recent Connections and DER Forums in March 2021.
- **Webinars**: We hold a webinar with Piclo prior to each tender informing providers of the process for participating, the services sought and key tender dates¹⁷. The last webinar was held in November 2020 attended by 20 stakeholders.
- **Surgeries and bilateral meetings**: We run 45-minute surgeries with interested providers during the pre-qualification phase providing detail on the services being procured and the steps to be taken in order to participate. These sessions can be organised through Piclo or directly with us. We also meet bilaterally with providers throughout the year, as demand requires. In 2020, we held 80 surgeries or bilateral meetings with 90 companies and over 150 individuals.
- **Flexibility Mailing list**¹⁸: Stakeholders can register to our mailing list to receive latest news and announcements on flexibility services, which currently has over 350 stakeholders subscribed.
- **Industry events**: We attend and present at industry conferences and workshops organised by third parties. This includes the Climate Action webinar in June 2020 and the ESO's road to net zero events in March 2021.
- **Incentive on Connections Engagement (ICE)**¹⁹: We engage with the wide and varied range of customers looking to connect to our networks and develop products and services that meet their needs through our ICE initiatives. Our workplan is developed through extensive stakeholder engagement over a 12 month period which includes customer forums, scrutiny panels, customer surgeries and one-to-one meetings. We also deliver flexibility markets improvements through ICE.

Every year we take the opportunity through the Stakeholder Engagement and Consumer Vulnerability (SECV) Incentive to summarise how we engage with our wide range of stakeholders and address key consumer vulnerability issues. These reports can be found on our website²⁰. We always encourage and are receptive to stakeholder feedback. Some significant changes we have made to our offering since inception of our flexibility tenders are given in Table 4.

¹⁵ Winter and summer forum slides in the event section - <https://smartgrid.ukpowernetworks.co.uk/flexibility-hub/>

¹⁶ Connection and DER forum slides - <https://www.ukpowernetworks.co.uk/engaging-with-our-connections-customers>

¹⁷ Piclo Flex webinar recordings - <https://support.picloflex.com/article/36-piclo-flex-webinars>

¹⁸ Providers can sign up to the Flexibility Mailing list by contacting the Flexibility Mailbox (flexibility@ukpowernetworks.co.uk).

¹⁹ <https://www.ukpowernetworks.co.uk/engaging-with-our-connections-customers>

²⁰ <https://www.ukpowernetworks.co.uk/internet/en/have-your-say/events-consultations/reports-presentations/>

Table 4: Responding to market feedback

Market feedback	UK Power Networks' response
Long term visibility	Visibility of flexibility requirements up to 2028
Longer term contracts	Started offering up to seven-year contracts
Easier access to information	Launched our dedicated online Flexibility Hub
Detailed price signal information	Posted our revenue ranges (including budgets and prices) and post-tender reports
Lower barriers to entry	Dropped minimum threshold kW for participation; now 10kW across all products
More opportunities to participate	Began running two tenders per year
Greater variety of products	Introduced our Dynamic product

We are collaborating with the ESO and DNOs through the Open Networks project and the Regional Development Programme (RDP).

- **Open Networks Project:** The project managed through the ENA brings together all the UK and Ireland grid operators to standardise approaches and processes and to improve whole system coordination.
- **Regional Development Programme:** We are collaborating with the ESO on the South Coast which could enable up to 600MW of distributed energy resources to be connected in the region. The area has significant amounts of renewable energy generation, nuclear, and interconnection from Europe which makes managing electricity flows a complex challenge for transmission and distribution companies. UK Power Networks' control room will be connected with the control room at the national system operator, giving the ESO more visibility and control to keep the system balanced.

Through the Open Networks project we have made significant progress in establishing common rules for procurement and use of flexibility over the last 12 months, the highlights include:

- **DSO CBA (2020 WS1A P1):** Co-development of a common evaluation methodology for network investment decisions. This tool is used to decide which intervention to procure to mitigate a reinforcement need, whether that be a flexibility service, an asset reinforcement or an alternative innovative solution.
- **Whole System CBA (2020 WS4 P1):** Co-developing with other network companies a tool to enable the comparison of costs and benefits across different sectors, regulated and non-regulated stakeholders, and a number of scenarios.
- **Procurement processes (2020 WS1A P2):** We worked with other network companies to agree on a similar approach to procurement considering tendering stages, timelines, and frequency.
- **DSO reporting:** Agreed and implementing a common methodology for reporting flex procurement with all DNOs (i.e. how to count flexible MWs), publishing biannually through the ENA as a precursor to Ofgem's reporting under the new licence obligation.
- **Standardised products (2020 WS1A P3):** Adopting the standard ENA flexibility products Secure, Dynamic and Sustain to improve consistency across DNOs as well as agreeing on standardised service parameters.
- **Standard flex contract (2020 WS1A P4):** Leading on the development of a standard flex agreement across all DNOs which has now been implemented.
- **Baselining (2020 WS1A P7):** Developing a set of standardised baseline methodologies with other network companies and flexibility provider input.
- **Embedded Capacity Register (2018 WS2 P1)²¹:** Developed and implemented a system wide resource register providing enhanced information to our electricity network stakeholders on distributed energy resources and network requirements.

²¹ <https://www.ukpowernetworks.co.uk/electricity/distribution-energy-resources/the-embedded-capacity-register>

Planned engagement with the ESO and DNOs

We are continuing our collaboration with the ESO and other DNOs through the Open Networks project and the Regional Development Programme (RDP). The Open Networks detailed work plan for 2021 provides more information²². Some of the key priorities for the upcoming regulatory year are:

- Incorporating option value analysis and carbon assessment into the DSO CBA
- Alignment of ESO and DNO procurement timelines
- Review of curtailment requirements in legacy Flexible Connection contracts
- Further improvements to standard flexibility contract including alignment with ESO T&Cs
- Development of primacy rules for conflicts between ESO and DNO services
- Establishing a viable approach to sharing and trading capacity across the DNOs
- Implementation of standard baselining methodologies across DNOs
- Equalising the balance of curtailment risk for Flexible Connections
- Improving the availability of curtailment information
- Whole Systems CBA: further model improvements and formal incorporation into the RIIO-ED2 Coordinated Adjustment Mechanism

In addition to the above, we are progressing the approach and learnings from the Power Potential Innovation project²³ into a new customer offering. This project enables generators on our network to provide voltage control services to the ESO through market mechanisms.

Procurement timetable and process

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

Table 5: Tender timelines

Stage	Activity	Spring Tender Dates (Live Tender)	Autumn Tender Dates (preliminary)
Stage 1: Tender Initiation	Flexibility zones signposted	October 2020	June 2021
	Tender documentation published	30 October 2020	4 June 2021
Stage 2: Pre-Qualification (PQ)	PQ Submission Deadline	21 December 2020	12 July 2021
	PQ Results	28 January 2021	5 August 2021
Stage 3: Competition	Competition Open	5 February 2021	6 August 2021
	Competition Close	22 February 2021	16 August 2021
	Competition Results	25 March 2021	30 September 2021
	Signed Contract deadline	9 April 2021	16 October 2021
Stage 4: Pre-delivery	Solutions delivered in accordance with Post Tender Milestones	In accordance with contract	In accordance with contract

²² <https://www.energynetworks.org/assets/images/Resource%20library/ON21-2021%20Project%20Initiation%20Document%20Pre%20Consultation-PUBLISHED.02.02.21.pdf>

²³ <https://innovation.ukpowernetworks.co.uk/projects/power-potential/>

5. Detailed quantitative assessment

What methodology will be used to assess bids?

We publish our bid assessment methodology within the ITT documentation on the Flexibility Hub²⁴. The assessment of bids will seek to meet the volume requirement, at a cost that is within budget and as economically as possible as shown in Figure 4.

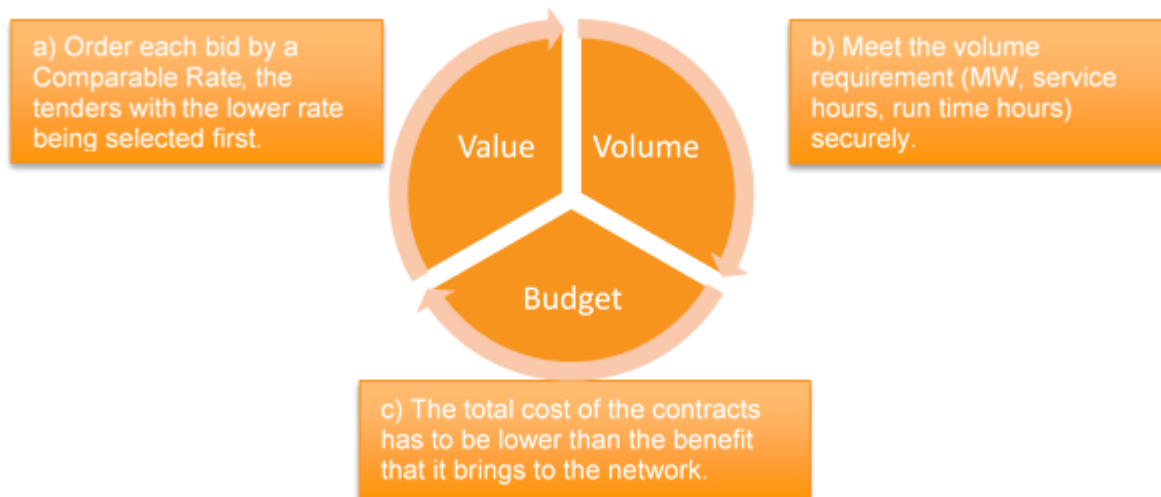


Figure 4: Bid assessment process

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 ITT. We also offer to unsuccessful bidders rejected on the basis of price, an alternative efficient fee for the same capabilities as tendered, subject to volume and budget restrictions, in ascending order of comparable rate.

²⁴ <https://smartgrid.ukpowernetworks.co.uk/flexibility-hub/>

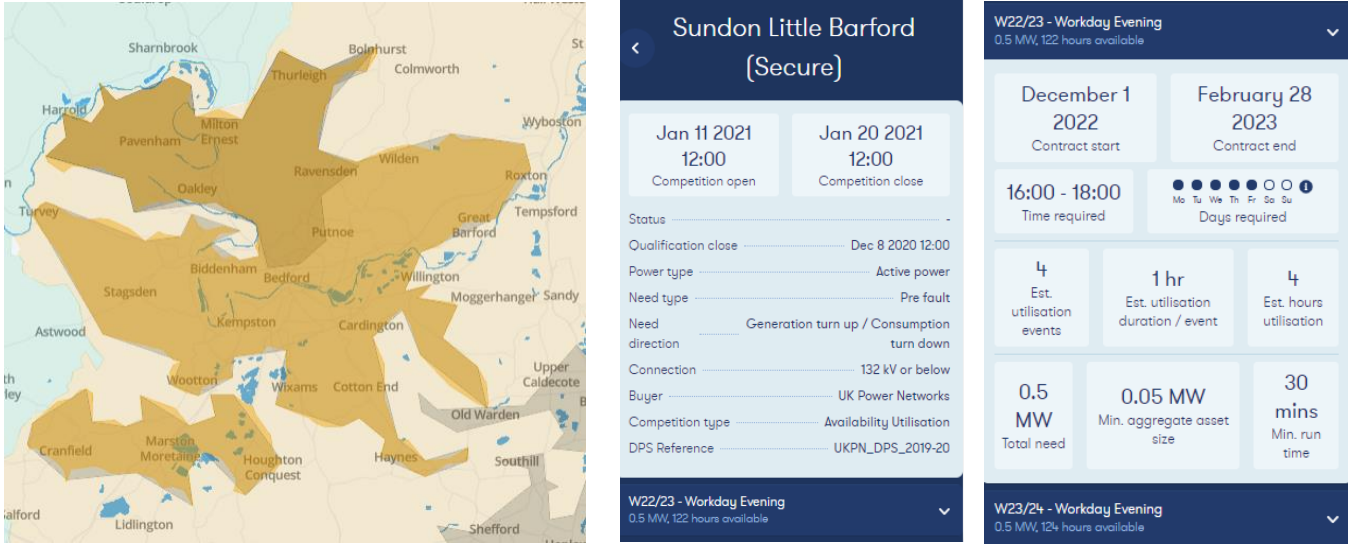
6. Summary

We have compiled this Procurement Statement as part of reporting requirements under licence condition 31E. We welcome any questions the reader may have on its contents. Please send these to flexibility@ukpowernetworks.co.uk.

Key documents	
Future Smart Consultation	https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2019/11/FutureSmart-Consultation-Report.pdf
Flexibility Roadmap	https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2019/11/futuresmart-flexibility-roadmap.pdf
Key websites	
Flexibility Hub	https://smartgrid.ukpowernetworks.co.uk/flexibility-hub/
Piclo Flex	https://picloflex.com/
Engagement	
Flexibility Forum	Document Library>Events https://smartgrid.ukpowernetworks.co.uk/flexibility-hub/
DER and Customer Forum	https://www.ukpowernetworks.co.uk/engaging-with-our-connections-customers
Piclo Webinars	https://support.picloflex.com/article/36-piclo-flex-webinars
Incentive on Connections Engagement (ICE)	https://www.ukpowernetworks.co.uk/engaging-with-our-connections-customers
Stakeholder Engagement and Consumer Vulnerability (SECV)	https://www.ukpowernetworks.co.uk/internet/en/have-your-say/events-consultations/reports-presentations/
Market Information	
Live tenders	Piclo Flex - https://picloflex.com/
Tender documentation and methodologies	Document Library>Flexibility Services - Procurement February 2021>ITT+Appendices https://smartgrid.ukpowernetworks.co.uk/flexibility-hub/
Standard contract	Document Library>Flexibility Services - Procurement February 2021>Appendix 1 https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2020/12/Appendix-1-ENA-Standard-Flexibility-Services-Agreement-PE1-0056-2020-rev-1.1.pdf
Revenue Range	Document Library>Flexibility Services - Procurement February 2021>ITT Appendix 6 - revenue ranges https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2020/11/Appendix-6-Revenue-Ranges_v1.0.xlsx
Post-tender market reporting	Document Library>Flexibility Services - Procurement April 2020>Post Tender Report and Bids https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2020/06/Flexibility-Services-Post-Tender-Report-17-June-2020.pdf https://smartgrid.ukpowernetworks.co.uk/wp-content/uploads/2020/07/Flexibility-Post-Tender-Report-Bids-2020.xlsx
Embedded Capacity Register (ECR)	https://www.ukpowernetworks.co.uk/electricity/distribution-energy-resources/the-embedded-capacity-register

Appendix: Example of published flexibility requirement

The below screenshot shows the type of information and format published on the Pico Flex platform which is freely open and accessible to all. In this case, up to 0.5MW of Secure flexibility capacity is being sought in our Sundon Little Barford zone. The service window is between December and February 4-6pm for Winter 2022/23 and Winter 2023/24.



The screenshot displays a map of the Sundon Little Barford zone on the left, with various sub-zones labeled such as Sharnbrook, Pavenham, Milton Ernest, Ravensden, Wilden, Putnoe, Great Barford, Tempsford, Stagsden, Biddenham, Bedford, Willington, Moggerhanger Sandy, Cardington, Kempston, Wootton, Wixams, Cotton End, Upper Caldecote, Old Warden, Cranfield, Marston Moretaine, Houghton Conquest, Haynes, Southill, and Lidlington.

The central card is titled "Sundon Little Barford (Secure)" and provides the following details:

- Competition open: Jan 11 2021 12:00
- Competition close: Jan 20 2021 12:00
- Status: -
- Qualification close: Dec 8 2020 12:00
- Power type: Active power
- Need type: Pre fault
- Need: Generation turn up / Consumption turn down
- Connection: 132 kV or below
- Buyer: UK Power Networks
- Competition type: Availability Utilisation
- DPS Reference: UKPN_DPS_2019-20

The right-hand side shows two panels for "W22/23 - Workday Evening" and "W23/24 - Workday Evening", both offering 0.5 MW, 122 hours available. The W22/23 panel includes:

- Contract start: December 1 2022
- Contract end: February 28 2023
- Time required: 16:00 - 18:00
- Days required: Mo, Tu, We, Th, Fr, Sa, Su (with icons for each day)
- Est. utilisation events: 4
- Est. utilisation duration / event: 1 hr
- Est. hours utilisation: 4
- Total need: 0.5 MW
- Min. aggregate asset size: 0.05 MW
- Min. run time: 30 mins