

Flexibility Services Invitation to Tender - 2019

UK Power Networks (Operations) Limited

Reference: PE1-0029-2019 Flexibility Services

Version 1.0
Date: August 2019

1	Introduction	3
1.1	Company Invitation	3
1.2	Company Overview	3
2	The current regulatory period	4
2.1	Network Regulation – RIIO-ED1 Incentives	4
2.2	What RIIO-ED1 means for UK Power Network’s supply chain	5
2.3	Desired behaviours from UK Power Networks and its supply chain	6
3	Procurement timetable	7
4	Flexibility Services Overview	8
4.1	Introduction	8
4.2	Market testing	9
4.3	Eligibility	9
4.4	Testing	10
4.5	Operations	10
4.6	Payment	11
4.7	Baseline methodology	12
5	Service Requirements	15
6	Stage 1: Expression of interest	16
6.1	Procurement platform	16
7	Stage 2: Pre-qualification	16
7.1	Submission	16
7.2	Company evaluation	17
7.3	Technical evaluation	17
7.4	Pre-qualification result	18
8	Stage 3: Competition	18
8.1	Bidding rules	18
8.2	Procurement volumes	19
8.3	Assessment methodology	19
8.4	Competition result	20
9	Participant Check List	21
10	Appendices	22
11	Version Control	22

1 Introduction

1.1 Company Invitation

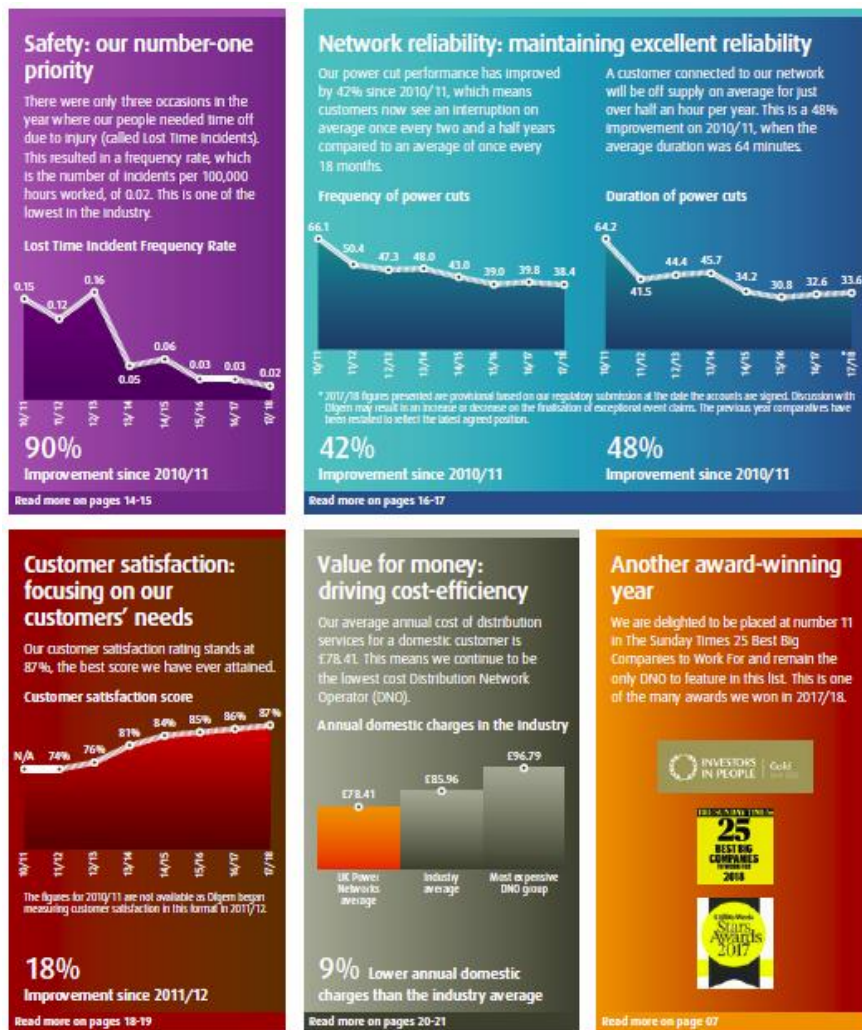
You are invited to participate in this procurement event in accordance with the details of this document, terms and conditions and all other attachments for UK Power Networks (Operations) Limited's requirements for **Flexibility Services**.

Flexibility Providers (FPs) should read this document in its entirety to satisfy themselves that they understand fully UK Power Networks' requirements and the terms and conditions associated with participation in this event.

1.2 Company Overview

UK Power Networks provides power to approximately a quarter of the UK's population via its three regulated electricity distribution networks, which are owned by, London Power Networks plc (LPN), Eastern Power Networks plc (EPN) and South Eastern Power Networks plc (SPN).

We are proud of our achievements since 2010 and the progress we have made in our performance, as can be seen below¹:



¹ <https://www.ukpowernetworks.co.uk/internet/en/about-us/UKPNAR2017-18.pdf>

UK Power Networks is committed to:

- **Ensuring that we remain the lowest priced, most reliable and innovative DNO group throughout the RIIO-ED1 period (2015 – 2023, see section 2 for further details)**
- Build further on our good safety record and continue with innovative internal safety programmes, achieving at least one year with no lost time incidents for employees and contractors and the public
- Maintaining a safe, secure and sustainable power supply to eight million homes and businesses in London, the South East and the East of England
- Improve reliability, reducing Customer Minutes Lost (CMLs) by more than 19% in SPN and EPN and more than 8% in LPN, getting the lights back on for 90% of HV power cuts within 2 hours (2015 – 2023)
- Developing what is already one of Britain’s biggest electricity networks – which includes 187,992 kilometres of power lines
- Strengthening links with the local communities we serve and building on the skills base of the 6,000 people who work for us across the network, including our major bases in Ipswich, Bury St Edmunds, Potters Bar, London, Crawley and Maidstone
- Giving our customers the best possible service and maintaining operational efficiency across our area networks will be at the heart of what we do.

Further information about UK Power Networks, including financial data, can be found at www.ukpowernetworks.co.uk

2 The current regulatory period

2.1 Network Regulation – RIIO-ED1 Incentives

RIIO is Ofgem’s framework for setting price controls for network companies. These companies face an unprecedented challenge of securing significant investment to maintain a reliable and secure network, and dealing with the changes in demand and generation that will occur in a low carbon future.

As the regulator, Ofgem must ensure that this is delivered at a fair price for consumers. To help achieve this, they developed RIIO (Revenue = Incentives+ Innovation + Outputs), a new performance based model for setting the network companies’ price controls which is to last eight years (1 April 2015 – 31 March 2023).

RIIO is designed to encourage network companies to:

- Put stakeholders at the heart of their decision-making process
- Invest efficiently to ensure continued safe and reliable services
- Innovate to reduce network costs for current and future consumers
- Play a full role in delivering a low carbon economy and wider environmental objectives.

A major focus in RIIO-ED1 is the incentivising of UK Power Networks and its supply chain to deliver more efficiently whilst achieving outputs required by Ofgem. UK Power Networks’ strategy is to deliver all outputs at the lowest cost to our customers.

The RIIO-ED1 incentives will focus on key output areas, as outlined below:

- Safety
- Customer Service
- Network availability and reliability
- Connections performance
- Environmental performance
- Innovation
- Expenditure.

UK Power Networks submitted its Business Plan to Ofgem in July 2013, which included 77 output commitments for 2015 to 2023, with the aim to ensure that we remain the lowest priced, most reliable and innovative DNO group throughout RIIO-ED1.

2.2 What RIIO-ED1 means for UK Power Network’s supply chain

Achievement of UK Power Networks’ 77 output commitments during RIIO-ED1 will require successful bidders to work in collaboration with UK Power Networks and other supply chain members to deliver quality services that align to Ofgem’s key output areas, whilst actively contributing towards UK Power Networks vision of being consistently the best performing distribution network operator.



(Source: <https://www.ofgem.gov.uk/publications-and-updates/infographic-how-ofgems-network-price-control-proposals-riio-ed1-will-affect-you>)

2.3 Desired behaviours from UK Power Networks and its supply chain

The table below details UK Power Networks' commitment to promote the right values and ensure they are demonstrated in everyday activities. UK Power Networks expects that all members of its Supply Chain and their employees will embrace, adopt and demonstrate behaviours in line with these values.

Values	What this means for everyone
Integrity	<ul style="list-style-type: none"> • Delivering on promises • Taking personal responsibility • Demonstrating positive ways-of-working
Continuous Improvement	<ul style="list-style-type: none"> • Contributing and supporting ideas for improvements • A flexible attitude towards change • Sharing ideas and experience • A proactive approach to self-development
Diversity & Inclusiveness	<ul style="list-style-type: none"> • Valuing others' diverse backgrounds, experiences and opinions • Seeking and acting on feedback • Involving a variety of colleagues and customers within the working environment
Respect	<ul style="list-style-type: none"> • Valuing the efforts, contribution and point-of-view of others • Learning from mistakes • Acting professionally and courteously at all times
Responsibility	<ul style="list-style-type: none"> • Understanding and complying with all relevant policies and procedures • Taking responsibility for your own and others' safety • An awareness of the environment and the impact of our work on it
Unity	<ul style="list-style-type: none"> • Working together to achieve our business objectives • Understanding our customers

3 Procurement timetable

The stages and dates of the 2019 procurement event:

1. **Expression of interest** – Flexibility Providers (FPs) register their flexible Facilities and UK Power Networks signposts zones for flexibility onto the Piclo Flex platform. Tender documents are published onto UK Power Networks’ website.
2. **Pre-qualification** – FPs and their flexible resources within the zones are pre-qualified to participate in the Competition. FPs agree to the service terms and conditions. Zones with pre-qualified flexible volume can proceed to Competition.
3. **Competition** – Pre-qualified FPs submit prices into a tender. FPs are notified of outcome.
4. **Post Competition** – FPs successful in the Competition sign the Framework Contract with updated contract schedules. FPs deploy their flexible solutions, undertake testing, and start delivery in Summer 2020, Winter 2020/21, or Summer 2021.

Stage	Task	Date
Expression of interest	Register on Piclo Flex	Ongoing
Pre-qualification	PQ submission deadline	Tue, 08/10/2019
	PQ results deadline	Wed, 30/10/2019
	Signed declaration deadline	Wed, 06/11/2019
Competition	Competition open	Thu, 31/10/2019
	Competition close	Wed, 06/11/2019
	Competition results	Wed, 27/11/2019
	Signed Framework Agreement deadline	Wed, 11/12/2019
Post-Competition	Proving Test	At least 1 month before the Delivery Season
	Start of service delivery	Summer 2020, Winter 2020/21, and/or Summer 2021 (see zones on Piclo Flex for specific start dates)

4 Flexibility Services Overview

4.1 Introduction

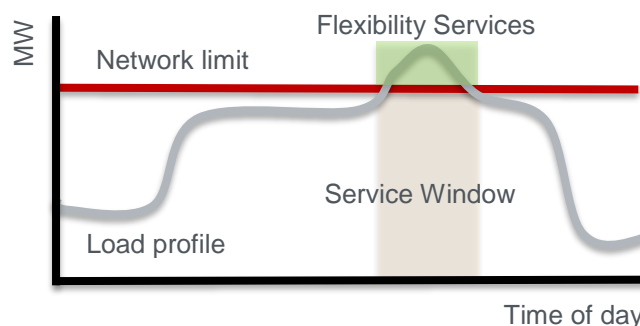


Figure 1: Flexibility Services peak shave during the Service Window

- 4.1.1 Flexibility services are provided by any technology or process that can shave or shift peak demand - importing less or exporting more power to the distribution network as an additional amount relative to its baseline operations - to support UK Power Networks in its role in delivering a safe, secure, and efficient distribution network. The Flexibility Roadmap² describes the core applications for flexibility on the distribution network as deferral of network reinforcement, managing planned maintenance, and managing unplanned interruptions.
- 4.1.2 The flexible Facility's connection to the distribution network has to be within the feeding area of specific network assets that are highly loaded, such as a substation where peak demand is close to the network capacity. Feeding areas that could use flexibility services to reduce network loading are called zones. The current zones can be found on the Piclo Flex platform³.
- 4.1.3 The zones currently identified are load related reinforcement (LRR) schemes that could use flexibility to defer a planned network upgrade into the future. The benefit is the net present value of deferred capital expenditure.
- 4.1.4 There are a number of zones with network reinforcement underway, and so flexibility could be used to increase the security of the network before completion. The benefit is the reduced impact of a low probability outage event. UK Power Networks are also exploring other applications of flexibility including on the low-voltage networks, planned maintenance and unplanned interruption.
- 4.1.5 UK Power Networks shall contract with FPs for a firm service during defined seasonal and diurnal periods where demand is projected to be at its highest (generally winter evening peaks) so that flexibility can be available and delivered quickly when needed. The contracted service period includes the Service Windows (the time of day) and the Delivery Season (contracted dates). The FP is paid an availability payment for its capability to peak shave during the service periods. Note that FPs are not required to have the duration capability to deliver for the full Service Window, but a minimum of 30 minutes delivery duration is required.
- 4.1.6 Indicative flexibility requirements are also published on Piclo Flex, including Service Windows and Delivery Seasons per zone, and the MW requirement derived from the forecasted peak demand. The MW requirement includes an amount of over commitment to manage risk of operational unavailability of flexible resources.
- 4.1.7 The individual Facilities can be aggregated together into a single controllable unit of flexibility called a Flexible Unit (FU) of at least 50kW. A FU is a notional Facility that can be made up of one or more real Facilities located within the same zone. The individual Facilities making up the FU can be changed prior to and during the service period through an Allocations process.

² <http://futuresmart.ukpowernetworks.co.uk/>

³ <https://picloflex.com/>

In addition, the aggregator can select which Facilities within the FU actually delivers the service in operational timescales.

- 4.1.8 UK Power Networks send instructions to notify the FP when to deliver and when to stop delivering its contracted flexibility from the FU. The FP will receive utilisation payments for the delivered energy. The FP shall submit their minutely metered data at the end of each month to be used for payment calculations.
- 4.1.9 The FP sets its own availability and utilisation fee via a competitive tender. The lowest cost combination of contracts to meet the requirement are accepted but only if total contract costs is economic and efficient relative to the network solution. FPs can also offer optional services paid at a utilisation-only fee as set by the FP from time to time.
- 4.1.10 FPs with existing flexible Facilities and FPs that can deliver new solutions by the tendered delivery period are eligible to participate in the Competition, subject to passing Pre-qualification. FUs and Facilities that satisfy the Service Requirements (Section 5) are eligible, whilst those that do not satisfy the Service Requirements must submit a Delivery Plan as part of Pre-qualification setting out how the solution will be delivered.
- 4.1.11 Any action from the FP that increases export or reduces imports during the Service Window, not attributable to UK Power Networks' instruction, will not be in breach of the service terms. This supports providers to stack multiple revenue streams. It is the responsibility of the FP to ensure that the service can still be delivered when instructed by UK Power Networks.

4.2 Market testing

- 4.2.1 A market test is one or more procurement events used to determine whether the market can offer a flexible solution that is economic and efficient compared to the traditional network option.
- 4.2.2 Acting on feedback, UK Power Networks are introducing an additional procurement event at 9-month ahead to the market testing process in 2019 to give FPs another opportunity to offer services.
- 4.2.3 This will be in addition to the procurement events set out in the Flexibility Roadmap at 18-month ahead and 6-month ahead as a top-up tender.

4.3 Eligibility

- 4.3.1 UK Power Networks will consider any solution that can meet the Service Requirements (Section 5) by Winter 2020/21 (9 months-ahead), Summer 2020 (front summer), or Summer 2021 (forward summer). Refer to each zone on Piclo Flex for specific start dates.
- 4.3.2 FPs and each FU must pass the Pre-qualification process to participate in the tender (Section 7):
 - a) FPs with an existing solution that satisfies the Service Requirements (Section 5) at the point of Pre-qualification are eligible to enter the Competition.
 - b) FPs with a solution that does not satisfy the Service Requirements at the point of Pre-qualification shall complete and submit the Delivery Plan template (Appendix 2) explaining in detail how the solution shall be delivered by the Service Period. The Delivery Plan is scored as part of Pre-qualification (Section 7.3.2).
 - c) FPs need to pass the company and financial checks, by completing the Company Questionnaire (Appendix 5). FPs that have pre-qualified in the previous tender do not need to complete the questionnaire again if the information has not changed.
- 4.3.3 The pre-qualified FP must confirm acceptance of the terms and conditions of the procurement and Framework Contract to participate in the Competition by signing a declaration form (Appendix 7) by the Signed declaration deadline. In participating in the procurement event, the FP shall be deemed to have satisfied itself as to the adequacy of information contained in

the tender documents and that obtained by its own independent observations, enquiries and understanding, including inspection and assessment of documentation and data which are in the public domain.

- 4.3.4 FPs successful in the tender need to sign the Framework Contract with the updated contract schedule and return it to UK Power Networks by the Signed Framework Contract deadline (Section 8.4.2).
- 4.3.5 Successful FPs need to pass testing post tender award but before service delivery (Section 4.4).

4.4 Testing

- 4.4.1 At least one month before the start of the Delivery Season the FP shall demonstrate the following as part of a Proving Test in respect of each FU:
 - Receive and respond to UK Power Networks' instructions;
 - Export its Flexible MW from the start time;
 - Maintain active power delivery for an agreed continuous period; and
 - Demonstrate delivery through the metered data from each Facility.
- 4.4.2 During the service period, if the FU has underperformed to a utilisation instruction, UK Power Networks may require a repeat of the Proving Test.
- 4.4.3 Each party shall bear its own cost in relation to the Proving Test.

4.5 Operations

- 4.5.1 The conditions required for UK Power Networks to initiate a utilisation instruction can either be when near real time electricity demand on the network is expected to reach its capacity, or the occurrence of the aforementioned and a fault on the network. The instructions can be activated automatically or manually.
- 4.5.2 Figure 2 illustrates an example generator or storage FU increasing active power following a utilisation instruction.

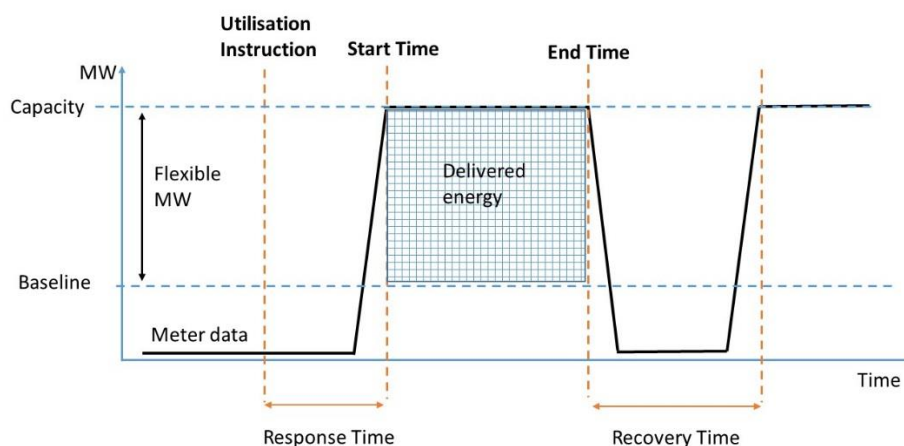


Figure 2: Operational parameters during a utilisation event

- 4.5.3 At any time during the contracted Service Window, UK Power Networks may instruct the FP, via text, email, and telephone or any other method as agreed between UK Power Networks and the FP, to deliver its Flexible MW. The utilisation instruction will specify the **Start Time** and optionally the **End Time** of delivery. If an End Time is not specified in the initial instruction, the End Time shall either be the end of the Service Window or as defined in a **Cease Instruction**.

- 4.5.4 In the event that the end time is greater than the **Maximum Run Time** (as set by the FP) from the time of instruction, then the FP shall only be expected to deliver up to its Maximum Run Time.
- 4.5.5 The lead-time from the time of the instruction to the start time (or end time in the case of a cease instruction) shall be no less than the FP's **Response Time**.
- 4.5.6 The FP can notify UK Power Networks at any time if unavailable for a future service period, but will not receive availability payments for those affected periods. FPs can only be unavailable for unplanned technical and not commercial reasons.
- 4.5.7 UK Power Networks may issue a request for utilisation outside of the FP's contracted service period which is optional on the FP to accept. The request shall specify the start and end time and capacity required, which the FP may accept within certain limitations within 15 minutes of the request.
- 4.5.8 The FP can add, remove, or reallocate Facilities between aggregated Facilities (FUs) during the term of the contract through an Allocations process, and shall be subject to approval by UK Power Networks. A change in Facility will require a calculation of the baseline for the affected Facility and should not reduce the contracted capabilities of the FU.
- 4.5.9 The FP can select which Facilities delivers the FU's contracted service at any given time during operational timescales. This is notified to UK Power Networks monthly as part of the Performance Report.

4.6 Payment

4.6.1 Figure 3 shows a high-level process of calculating payments for flexibility services.

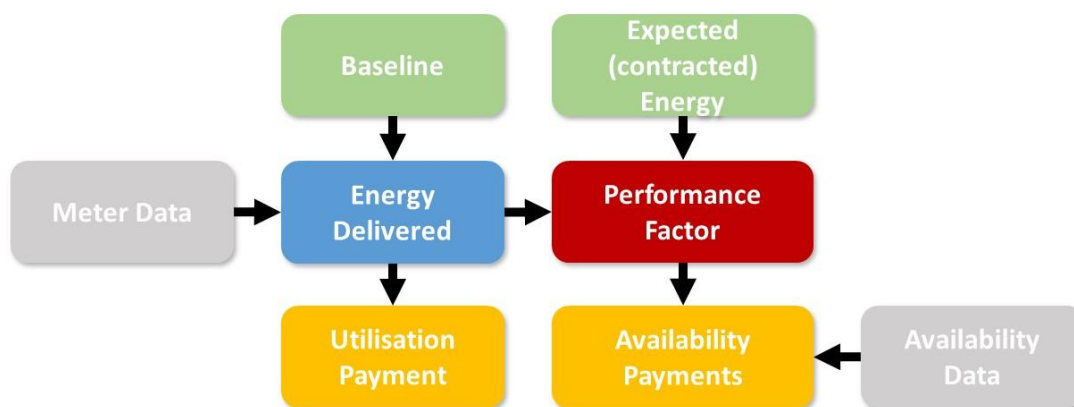


Figure 3: High-level process of payments

- 4.6.2 At the end of each month, the FP shall submit minutely resolution meter data for all Facilities within the FU to UK Power Networks. The meter data is compared to the baseline to calculate the energy delivered during utilisation events and hence utilisation payments, where $\text{Utilisation Payment (£)} = \text{Utilisation Fee (£/MWh)} * \text{energy delivered (MWh)}$.
- 4.6.3 The FP shall be paid availability payments for all periods available, reduced by a performance factor derived by comparing the energy delivered to the energy contracted to be delivered during utilisation events.
- 4.6.4 Figure 4 gives an example of a generator or storage facility responding to a utilisation instruction and shows the energy delivered (green box) and the expected energy to be delivered (yellow box).
- 4.6.5 Note that over-delivery during one period will not be treated as compensating for under-delivery in another.

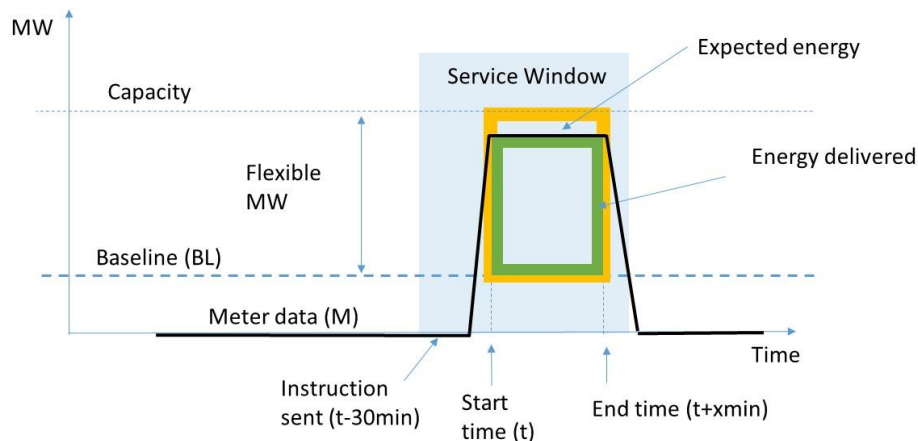


Figure 4: Delivery of flexible energy from an example generator or storage

4.6.6 For net import sites, the consumption and baseline will be treated as negative export, and the calculation is the same.

4.6.7 The performance factor (PF) is derived from the delivery performance (DP) using tiers as shown below, where DP is calculated as the monthly ratio of all delivered energy (capped by its contracted energy) to all contracted energy expected during utilisation events. If there were no utilisation events in a month, DP for that month shall be the average of the most recent two months' DP where there were utilisation events.

If DP is...	PF =
≥ 90%	1
< 90% AND ≥ 80%	0.8
< 80% AND ≥ 70%	0.7
< 70% AND ≥ 60%	0.6
< 60%	0

4.6.8 The FP can notify UK Power Networks of its Optional Utilisation Fee from time to time. If enacted, the optional utilisation payment shall be calculated in the same way as a committed utilisation payment but using the optional utilisation baseline. There are no availability payments for an optional instruction.

4.6.9 In order to allow FPs to determine rapidly whether they can provide the required optional service, the baseline for the optional service will be based on the Last Observation Baseline or Recent History Baseline methodology (see 4.7.10).

4.7 Baseline methodology

4.7.1 The baseline represents the counterfactual generation or consumption level of the FU had it not been providing flexibility services. The Flexible MW is the level of additional generation or additional reduction in consumption that can be provided relative to this baseline.

4.7.2 The **default baseline methodology** calculates the baseline as the average generation or consumption of the FU during representative historic peak periods at the time of the Competition (see 4.7.6). The FP nominates the Flexible MW level from the calculated baseline. The Flexible MW of the FU and the baseline for each individual Facility, is fixed for the duration of the contracted service period. This approach achieves a level of additional response compared to the period used to plan the network, and it provides upfront certainty to the FPs ahead of delivery.

4.7.3 Figure 5 explains the implications of the baseline through an example of a 1MW generator with a baseline calculated at 0.2MW, and a Flexible MW declared of 0.6MW. The inferred set-point is therefore 0.8MW (baseline + Flexible MW), meaning that on instruction if the

generator exports at or over the set point of 0.8MW then it will have successfully complied with the instruction.

- 4.7.4 If the FU is at the inferred set point when instructed by UK Power Networks the FU shall be compliant with the instruction and payments will be made. In the example in Figure 5, it shows this scenario but the generator turns down before the end time of the instruction, hence the energy delivered (green box) is less than the contracted energy (yellow box), leading to an under-delivery which will impact on the payment. Therefore, it is the responsibility of the FP to ensure that even if it the FU provides a compatible action it is still capable of responding to a UK Power Networks instruction within the Service Window in accordance with its contracted parameters.

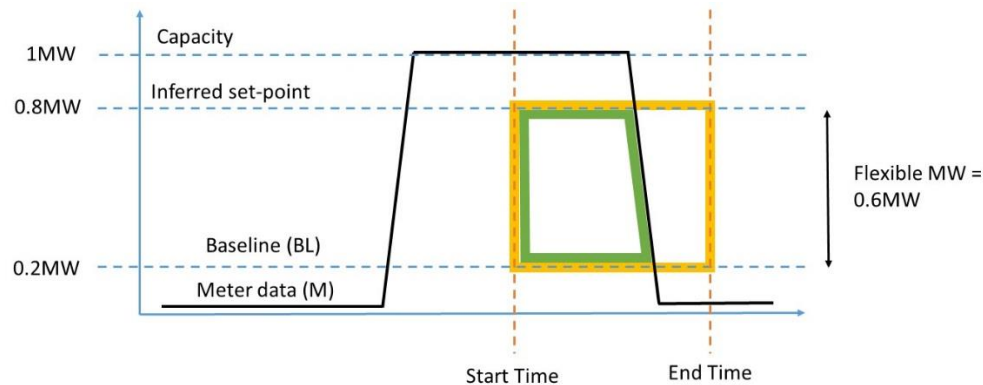


Figure 5: Baseline and compatibility

- 4.7.5 The FP calculates the baseline at the Pre-qualification stage for existing Facilities, and prior to the Delivery Season as a Post Tender Milestone for newly recruited Facilities (the baseline may be zero for new exporting Facilities), and during the term of the contract when altering an aggregated portfolio in the Allocations process. This will need to be approved by UK Power Networks.
- 4.7.6 The default baseline for each Facility within the FU shall be calculated by the FP using the template (Appendix 4) and approved by UK Power Networks, as follows:
- UK Power Networks shall specify for each zone the ten days of highest peak demand ("Reference Days") from the Reference Year, being the most recent comparable period to the service period at the time of tender (for Facilities that have provided meter data at time of tender), or at allocation as per 4.7.7 (in which case the FP will need to request the Reference Days from UK Power Networks);
 - The baseline, for each Facility, shall be the average (mean) of the half hourly meter data of the Facility across the Reference Days, during the coincident Service Window periods (where exports are positive, and imports negative);
 - The tendered Flexible MW will be nominated by the FP as the additional amount of flexibility that can be provided relative to the baseline;

- d) The baseline for the FU is derived during the term of the contract by summing the active Facilities' baselines depending on which Facilities are used to deliver the service as notified by the FP to UK Power Networks post-delivery in the Performance Report.

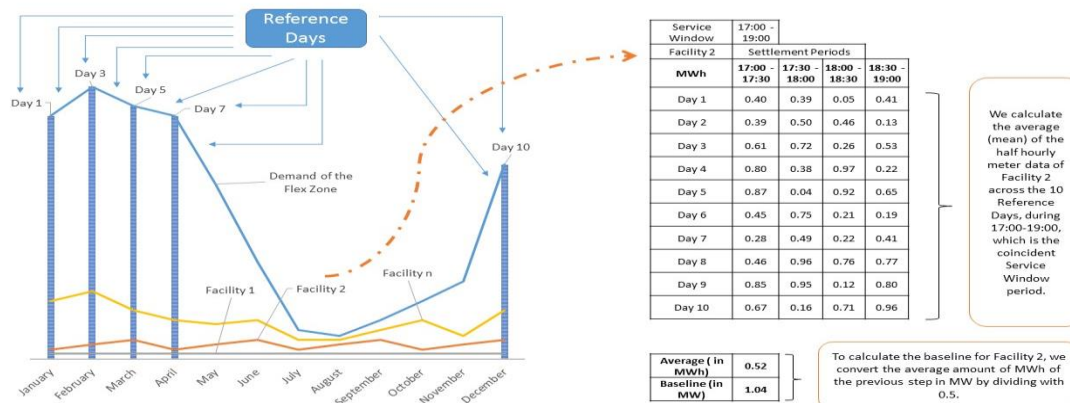


Figure 6: Default Baseline calculation

- 4.7.7 The Reference Year for each Facility in the FU is fixed for the period of the contract. For Facilities allocated post Competition, the Reference Year is the most recent comparable period to the committed service period at the time of the allocation. FPs will need to request the Reference Days from UK Power Networks before adding a new Facility. This gives FPs certainty that any load shifting/shaving from the Facilities will not reduce its future capability for a fixed number of years.
- 4.7.8 UK Power Networks may consider an alternative baseline (see 4.7.10) to the default baseline methodology if the FP enters an appeal providing satisfactory reasons why the default baseline is not suitable prior to the Competition. UK Power Networks can accept or reject that request.
- 4.7.9 The baseline methodology cannot be changed during the contract term without satisfactory reason as per 4.7.8. Any change in the baseline as a result of changes in Facilities should not reduce the contracted capabilities, and where it does, UK Power Networks will apply a reduction in payment rates according to the deficiency.
- 4.7.10 The optional utilisation baseline can be either:
- Recent History Baseline: Applicable to demand sites, this is a rolling baseline taken as the average of metered consumption during the Service Windows on the five weekdays (and weekends if applicable to the service period) preceding a utilisation.
 - Last Observation Baseline: Applicable to generation or storage sites, this baseline is defined as the average export of the site in the half hour preceding a utilisation instruction.

5 Service Requirements

The Service Requirements are technical requirements that each Facility, FU, and FP must satisfy to provide flexibility services. These requirements are defined to be consistent with the minimum requirements as specified by the Energy Network Association⁴.

5.1.1	The flexible Facilities making up the FU shall be connected and capable of exporting to or importing from the feeding area of the network asset(s) subject to the limitation (represented by the zone) during intact and under first circuit outage of that network asset(s).
5.1.2	Exporting generators and storage assets, greater than 16A per phase shall have a long-term parallel connection compliant with the requirements of EREC G59 or G99. Flexible or timed connections are permissible, subject to the conditions of the connection. Those less than 16A per phase shall be compliant with the requirements of EREC G83 or G98.
5.1.3	The FU shall be able to deliver on instruction a reduction in imports or an increase in export, from or onto the distribution network.
5.1.4	The Flexible MW is the volume of additional consumption or generation that can be adjusted flexibly relative to a defined baseline level. It shall be at least 50kW from one or more Facilities making up the FU, can be delivered reliably and in full, is fixed for the duration of the service period, and must be delivered within the conditions of each Facility's connection agreement.
5.1.5	The FU shall have a single set of capability parameters, and shall be a single point of communication and control.
5.1.6	The Response Time (lead-time from the time of the instruction to full delivery) from a FU shall be 30 minutes or less.
5.1.7	The Flexible MW shall be sustainable for at least 30 minutes, and up to the tendered Maximum Run Time. The Maximum Run Time of the FU can be less than the Service Window.
5.1.8	The FP shall be able to receive text, email and telephone instructions or any other method as agreed with UK Power Networks, and have appropriate systems and processes in place to deliver flexibility from its Facilities according to the instruction and its contracted capability.
5.1.9	Each Facility making up the FU shall have minute-by-minute metering of sufficient accuracy to enable UK Power Networks to monitor the provision of flexibility services. The data shall be made available to UK Power Networks on request and at the end of every month. The metering point shall be at the boundary between the site on which the Facility is located and the distribution network, or on the terminals of the Facility if approved by UK Power Networks. The FP should be able to provide technical details of the meter and a single line diagram of each Facility on request.
5.1.10	The FU can run for other purposes during the Service Window, subject to it not increasing demand on the network. It is the responsibility of the FP to ensure that they can deliver the contracted service on instruction.

⁴ http://www.energynetworks.org/assets/files/ON-WS1-P2 Product Definition_Final_7Sept2018 - PUBLISHED.pdf

6 Stage 1: Expression of interest

6.1 Procurement platform

- 6.1.1 UK Power Networks shall be using the Piclo Flex platform, which is owned and operated by Piclo. The technology platform digitises the procurement process to make it easier for FPs to view the local opportunities and to participate in the procurement process.
- 6.1.2 Piclo Flex communicates UK Power Networks' flexibility zones and requirements. The zones and requirements are indicative and may be subject to change prior to the PQ submission deadline. The platform and detailed instructions on how to use the platform is available at <https://picloflex.com/>.
- 6.1.3 FPs must have registered on Piclo Flex by the PQ submission deadline, providing details of locations and capabilities. Piclo Flex automatically shows each Facilities' "Qualifying" status based on its location and connection voltage. FPs whose Facilities show as Qualifying will need to submit additional documentation directly to UK Power Networks for Pre-qualification (see 7.1).
- 6.1.4 UK Power Networks shall check the point of connection of Qualifying Facilities periodically during the Expression of Interest stage in order to ensure the Facility's electrical connection is eligible. If this is not the case, UK Power Networks shall inform Piclo Flex and the status of these Facilities will be amended to show as not qualifying.

7 Stage 2: Pre-qualification

7.1 Submission

- 7.1.1 FPs, shown as Qualifying on Piclo Flex, shall submit the following information for evaluation by UK Power Networks, by the PQ submission deadline.

What	Who	How
Company and asset information	All FPs	Uploaded to Piclo Flex as part of registration.
Company Questionnaire	All FPs	Completed form and saved as a single PDF (Appendix 5). Sent by email.
Default Baseline Calculation	FUs that has satisfied all Service Requirements	Completed Excel template (Appendix 4). Sent by email.
Delivery Plan	FUs that have <u>not</u> satisfied all Service Requirements	Completed template and saved as a single PDF (Appendix 2). Sent by email.

* Email to flexibility@ukpowernetworks.co.uk (include Asset Ref as used on Piclo Flex)

- 7.1.2 UK Power Networks may contact the FPs to clarify the information submitted. Failure to submit all required information may result in the FP and/or FU failing Pre-qualification.
- 7.1.3 The details provided in the Company Questionnaire needs to be for the organisation that will be entering the contract with UK Power Networks.
- 7.1.4 Where the FP has provided a Company Questionnaire in the previous tender round, and the information has not changed, the FP will only need to declare that the information is unchanged in Section 3 of the Company Questionnaire. Where the information has changed,

the FP must inform UK Power Networks by completing Section 4 of the Company Questionnaire.

7.2 Company evaluation

- 7.2.1 UK Power Networks shall evaluate the completed Company Questionnaire, and will undertake additional checks as required.
- 7.2.2 The company evaluation step shall determine whether the FP is of sound standing to be able to provide flexibility services to UK Power Networks.

7.3 Technical evaluation

- 7.3.1 The technical evaluation shall determine whether the FU, and its Facilities, satisfies or is capable of satisfying the Service Requirements by the service period. This will be completed using the asset information from Piclo Flex, the Default Baseline Calculation and the Delivery Plan if applicable. Where this cannot be determined using the information submitted UK Power Networks may contact the FPs to clarify and/or request further information.
- 7.3.2 The Delivery Plan Criteria, given below, shall be used to evaluate each Delivery Plan. UK Power Networks reserves the right to pre-qualify a minimum of one FP per zone with the highest score(s).

Delivery Plan Criteria		Score ⁵
1	<p>Are the plan and milestones specific (what work will be completed), relevant (does it cover the activities), and measurable (can it be verified), and have suitable Post Tender Milestones been submitted?</p> <p>The Post Tender Milestones should include:</p> <ul style="list-style-type: none"> At least 4 months before the start of the Delivery Season, details of the new Facilities/FU is notified to UK Power Networks; At least 1 month before the start of the Delivery Season, the FU must have passed the Proving Test; For new assets, where relevant, include submission of evidence of the connection agreement, land rights, financing, construction contracts, and planning permissions; New aggregated FUs should include the key stages of recruitment of the Facilities, and the profiles of staggered delivery of volume from the FU over time; and There should be a minimum of one Post Tender Milestone once every 3 months. 	__ / 10
2	Are the milestones and the timescales achievable by the Delivery Season?	__ / 10
3	Have the risks and dependencies been identified and mitigations considered. What due-diligence has the bidder undertaken? How is the business model viable?	__ / 10
4	What experience, expertise, and resource does the provider have in delivering this type of project?	__ / 10
Total		__ / 40

⁵ Scoring is based on Scoring Guidance in Appendix 3

7.3.3 The successful FPs shall be monitored post Competition against the Post Tender Milestones in the Delivery Plan.

7.4 Pre-qualification result

7.4.1 FPs will be notified of the outcome of Pre-qualification on Piclo Flex.

7.4.2 FPs that have pre-qualified in any of the zones need to sign and return a declaration form (Appendix 7) confirming agreement with the terms and conditions of the Framework Contract and the procurement by the Signed declaration deadline in order to participate in the Competition. This should be a single PDF emailed to flexibility@ukpowernetworks.co.uk.

7.4.3 UK Power Networks may decide not to proceed to Competition in zones where there is insufficient flexibility potential to meet the procurement requirements. In such cases, UK Power Networks shall notify pre-qualified FPs. The FPs are invited to include the affected FUs in the Framework Contract to offer optional services.

8 Stage 3: Competition

8.1 Bidding rules

8.1.1 Instructions on how to submit bids on the platform will be available on Piclo Flex.

8.1.2 The FP can submit a single bid by FU by zone and by 9-month ahead (9MA), front Summer and forward Summer delivery. Each bid consists of variations of capability, fee, and service period parameters.

8.1.3 The following standardised bidding rules shall apply to each bid:

- a) Flexible MW – can offer the Flexible MW at a single price or split the Flexible MW into smaller volumes but at different prices.
- b) Service Windows – must be for whole Service Windows, but does not have to be for all Service Windows where there are multiple Service Windows in any given Delivery Season.
- c) Delivery Season – must be for whole Delivery Seasons and must start in Winter 2020/21 (9MA). Similarly, for summer this must start in Summer 2020 or Summer 2021.
- d) Service period - A winter service term of up to 4 seasons ahead can be offered for 9MA delivery. For the summer service term, up to 3 seasons ahead from Summer 2021 or a single season for the front Summer 2020. The below illustrates the different bid configurations allowed.

Delivery start	Delivery start - duration		Winter 20/21	Winter 21/22	Winter 22/23	Winter 23/24
9MA	9MA – 1					
	9MA – 2					
	9MA – 3					
	9MA – 4					

Delivery start	Delivery start - duration	Summer 2020	Summer 2021	Summer 2022	Summer 2023	
Front	Front – 1					
Forward	Forward – 1					
	Forward – 2					
	Forward – 3					

- e) All-or-nothing – variations within the bid are treated as all-or-nothing - the whole bid must be either accepted or rejected. The exception is the front Summer season and the forward

Summer season delivery, and summer and winter seasons, which are treated as independent bids.

- f) Additional parameters - no additional commercial parameters can be submitted in the bid, above the technical limitations as specified in the asset registration. If there are other technical limitations that have not been captured, FPs should make UK Power Networks aware.

8.2 Procurement volumes

- 8.2.1 UK Power Networks' volume requirement gives an indication of how much flexibility is needed. Where the application is reinforcement deferral, most of this volume is required to be procured for the front seasons. However, UK Power Networks may consider procuring less volume where flexibility can be used alongside other mitigating measures, such as network reconfigurations. If sufficient economic volume cannot be procured, UK Power Networks will seek to progress with the reinforcement solution.
- 8.2.2 For applications of flexibility used to support the network ahead of reinforcement completion, the volume requirement is "up to", and hence there is no minimum required volume.
- 8.2.3 Where market conditions allow, such as market liquidity and sufficient granularity of bids, UK Power Networks may seek to procure a proportion of the latter seasons' requirements in future Competitions rather than all within the 2019 Competition.
- 8.2.4 In addition to the over commitment already applied to the capacity requirements, UK Power Networks shall seek to cover the risk of the loss of the largest FU which may require that smaller but higher priced bids are preferred over larger sized but lower priced bids.

8.3 Assessment methodology

- 8.3.1 The assessment will follow these general steps:
- Order each bid by a Comparable Rate, the tenders with the lower rate being selected first;
 - Ensure that the two dimensional requirement (MW x hours) is met at the lowest overall cost; and
 - The total cost of the contracts has to be lower than the benefit to the network.
- 8.3.2 The Comparable Rate (in £/MW/h per Maximum Run Time) is derived from the Availability Fee and Utilisation Fee to allow simple comparison between tenders and is calculated as follows:
- $$\text{Comparable Rate} = (\text{estimated availability cost} + \text{estimated utilisation cost}) / \text{tendered service period hours} / \text{Maximum Run Time}$$
- Where:
- estimated availability cost = Availability Fee (£/MW/h) * service period hours
 - estimated utilisation cost = Utilisation Fee (£/MW/h) * estimated utilisation frequency * estimated utilisation hours
- 8.3.3 The above assessment methodology is a guidance to the general approach, but UK Power Networks may make reasonable variations to this calculation where there are material differences in technical restrictions between FUs.
- 8.3.4 Not all FPs will offer Availability in all periods (Service Windows), and for this reason, UK Power Networks will seek to find the most economic combination of bids, but some higher-price bids could be accepted ahead of lower-priced bids if the resulting combination is lower-cost overall.
- 8.3.5 The greater risk of non-delivery from solutions that has not yet met the Service Requirements by the time of the PQ submission deadline, compared to solutions that have means that if the

cost of both solutions are comparable but accepting both would exceed the requirements, then the latter solution will be preferred.

8.4 Competition result

- 8.4.1 FPs will be notified of the outcome of Competition via emails from UK Power Networks and Piclo Flex.
- 8.4.2 FPs awarded a contract need to sign the Framework Contract with the updated schedule and return it to UK Power Networks by the Signed Framework Contract deadline. This should be a single PDF emailed to flexibility@ukpowernetworks.co.uk, and two physical copies sent to the following address:
- UK Power Networks, Newington House, 237 Southwark Bridge Road, London, SE1 6NP
- For the attention of: Flexibility Team
- 8.4.3 Only FPs that have pre-qualified and awarded a contract award shall be allowed to sign the Framework Contract. Thereafter, if successful FPs wish to transfer any of their rights, benefits, duties and obligations under the flexibility contract to another company shall do this in accordance with the clauses in the Framework Contract.
- 8.4.4 Any information provided by the FP at any point during the procurement event is subject to the Procurement Terms and Conditions (Appendix 6).

9 Participant Check List

Key links

- Piclo Flex platform - <https://picloflex.com/>
- UK Power Networks' flexibility website - <https://www.ukpowernetworks.co.uk/internet/en/have-your-say/listening-to-our-connections-customers/flexibility-services.HTML>
- Flexibility Roadmap (Future Smart) - <http://futuresmart.ukpowernetworks.co.uk/>

Activity	When	Who	Complete
Registered on Piclo Flex - https://picloflex.com/	By the PQ submission deadline (08/10/2019) to be considered for pre-qualification	All	
Emailed the completed Company Questionnaire (Appendix 5)	By the PQ submission deadline (08/10/2019)	All FPs	
Emailed the completed Default Baseline Calculation (Appendix 4)		For FUs that has satisfied all Service Requirements	
Emailed the completed Delivery Plan template (Appendix 2)		For FUs that have not satisfied all Service Requirements	
Emailed a signed copy of the declaration form (Appendix 7)	By the Signed declaration deadline (06/11/2019)	Pre-qualified FPs with pre-qualified FUs	
Submitted bids on Piclo Flex	By Competition close (06/11/2019)	Pre-qualified FPs/FUs	
Received updated contract schedule and returned it signed	By the Signed Framework Contract deadline (11/12/2019)	Successful FPs	
Register onto SAP Sourcing Portal to be set up for payments	After Signed Framework Contract deadline (11/12/2019)	Successful FPs	
Deliver the solution in accordance with the Delivery Plan	Subject to the Post Tender Milestones in the Delivery Plan	Successful FPs with a Delivery Plan	
Arranged and passed the Proving Test	At least 1 month before the Delivery Season	All successful FPs	

* Emails should be sent to flexibility@ukpowernetworks.co.uk

10 Appendices

Key Term	Definition
Appendix 1	Framework Contract
Appendix 2	Delivery Plan template
Appendix 3	Delivery Plan Scoring Guidance
Appendix 4	Default Baseline Calculation template, with Reference Days
Appendix 5	Company Questionnaire
Appendix 6	Procurement terms and conditions
Appendix 7	Declaration Form

11 Version Control