

Flexibility Services

Ref: NPg24285

Scope and Specification

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1. Introduction

We are dedicated to delivering a network and energy system that serves our region, in a safe, efficient and economical way and supports enabling decarbonisation for our customers and stakeholders. As such we are committed to the use of flexibility solutions instead of or to defer network reinforcement solutions wherever appropriate.

Flexibility solutions ensure the most efficient and economical outcome for our network customers. Our Flexibility First Policy¹ ensures we employ Flexibility Services, Flexible Connections and Network Flexibility over traditional Network reinforcement wherever we can demonstrate this is possible.

We are dedicated to enabling a local market for Flexibility Services by creating a level playing field for all flexibility service providers and supporting competition with network solutions, by promoting fair competition and demonstrating decision-making transparency.

As an indication of scale of the value of flexibility services, in the Distribution System Operator (DSO) strategy section of our ED2 business plan², we project net benefits of up to £156 million could be delivered by avoiding traditional reinforcement costs over the course of 2023-28.

In this document we set out our specification for flexibility services in 2024/25 and 2025/26 for the network areas where interventions are needed to meet the needs of rising load growth.

In total, our needs are up to 2.94MW of flexibility services across 2 high voltage (HV) sites and 26 low voltage (LV) sites to defer or avoid network reinforcement, where it is economic and efficient to do so. We have no preference as to whether the service is delivered from dispatchable generation turn up, demand turn down or battery discharge.

2. Flexibility Services Overview

In our 'Distribution Flexibility Services Procurement Statement 2024/25'³, we set out:

- Detail on the flexibility requirements that we may tender for during the year 1 April 2024 to 31 March 2025;
- Detail on our tendering process and pricing strategy for flexibility procurement;
- How we plan to engage with stakeholders to further develop markets and capability for flexibility services; and
- An explanation of the detailed quantitative assessments we have undertaken to evaluate our existing and forecast network loading and where necessary our flexibility requirements.

We use the standard flexibility services products developed through the Open Networks project⁴.

¹ <https://www.northernpowergrid.com/downloads/59658>

² Page 4 of https://ed2plan.northernpowergrid.com/sites/default/files/document-library/DSO_strategy.pdf

³ <https://www.northernpowergrid.com/downloads/12370>

⁴ [ON Flexibility Products Review and Alignment \(Feb 2024\) – Energy Networks Association \(ENA\)](#)

3. Eligibility

In order to be eligible for participation, bidders must;

1. Pass the Dynamic Purchasing System (DPS) on Pico.
2. Register their assets on Pico. These assets must be qualified by Northern Powergrid for inclusion in a competition.

4. Testing

In order to satisfy Northern Powergrid that the Distributed Energy Resource (DER) is capable of providing the flexibility services to meet the 'Flexibility Needs' set in this document, following contract award the bidder may be required to prove the DER prior to the scheduled delivery period.

This consists of:-

1. Evidence that the DER has been built and energised and a connection agreement is in place, and that it meets all the service requirements set out in the Eligibility section above.
2. A proving test of the communications link as set out in the contract.

Northern Powergrid reserves the right to require testing as required, at its discretion.

This may include:-

- Site visits to verify/carry out testing to demonstrate that the bidder has the capacity and capability to meet the requirements of the contracted service, including being able to change the import/export of the DER from the point of notification to the commencement of the service window and maintain this to the end of the service window. The Provider will not be reimbursed for testing periods.
- Further tests of the API link, for example in the event of a change to the API system, or in the case of any API communication issues at either end

5. Operations

See Annex 1 to the service terms of the contract.

6. Payment Calculations

6.1 Scheduled Utilisation

The utilisation payment is made based on a DER providing flexibility services as agreed at the point of contract.

Utilisation payments will be based on a utilisation fee in £/MWh set out in a contract between the provider and Northern Powergrid.

The maximum utilisation fee that Northern Powergrid will pay in any zone is set out in the tables in section 9 below.

Note: It is the Provider's responsibility to ensure that the DER can provide the services as agreed. Under no circumstances will Northern Powergrid take responsibility for loss of earnings that the DER may have earned if it were not in contract with Northern Powergrid.

For this flexibility product, there is no availability payment.

For more information see clause 5 of the service terms of the contract.

7. Baseline for Scheduled Utilisation Product

7.1 Accepted Methodologies

Northern Powergrid accepts the following baselining methodologies as standard:

7.1.1 Reference Class – Domestic Households

For DERs that comprise in part or in whole, a domestic household, unless the requirements set out in section 7.1.3 can be met, Northern Powergrid requires any portion of the baseline that is attributed to general domestic household load to be set based on our published reference baseline. The reference baseline is called “Northern Powergrid – Reference Class Baselines” and is available in the supporting documents here: [Profile — Northern Powergrid \(piclo.energy\)](#).

7.1.2 Reference Class – Domestic EV Chargers

For DERs that are Domestic EV Chargers, Northern Powergrid has produced an optional reference baseline which may be used by the bidder. The reference baseline is called “Northern Powergrid – Reference Class Baselines” and is available in the supporting documents here: [Profile — Northern Powergrid \(piclo.energy\)](#).

7.1.3 Self-Nominated

Northern Powergrid allows bidders to submit self-nominated baselines where any of the following criteria are met:

- The DER is a Domestic Household and the bidder can provide sufficient evidence to satisfy Northern Powergrid that our reference class baseline does not provide an appropriate baseline for their specific, submitted asset(s). An example of this could be half hourly smart meter data from the asset being included in the bid submission;
- The DER is a Domestic EV Charger and the bidder opts to provide a self-nominated baseline rather than use Northern Powergrid’s reference class baseline; or
- The DER is any other Asset Type not listed in Northern Powergrid’s Reference Class baselines, detailed above.

7.2 Submission of Baseline to Northern Powergrid

Wherever possible, bidders should submit their baseline at point of bid submission. The format in which the baseline is submitted can be chosen by the bidder subject to meeting the following minimum standards:

- Where bidders propose to use Northern Powergrid’s reference class baselines, this should be clearly stated;
- Where bidders propose to use a self-nominated baseline, accompanying narrative to explain the proposed baseline must be provided with supporting evidence where appropriate;
- The submission must cover the full service period covered by the bid submission;
- Baseline data must be submitted for the full duration of the service window, even if the bid specifies a max runtime that is less than the full duration of the service window.

If the bidder is unable to submit a baseline at point of bid submission, Northern Powergrid will allow bidders to submit their baseline post-bid submission provided that the bidder:

- Includes supporting narrative in their bid submission as to why they have been unable to submit a baseline at point of bid submission, and when they expect to be able to provide the data; and
- The baseline is submitted to Northern Powergrid no later than 14 days prior to the first service period.

Bidders must upload the baseline and/or the supporting narrative via "the Piclo Flex Messaging Service - support@picloflex.com" at point of bid submission.

7.3 Validation and Setting of Baseline

Northern Powergrid will use the baseline submission to verify the capability of the DER to provide flexibility. We reserve the right to not accept a submitted baseline and require the bidder to use an alternative baseline which will be used to calculate the actual service delivered and payments due.

We will notify of the acceptance or rejection of their submitted baseline.

The baseline shall be set prior to the first service period. It may be reviewed and updated in the light of relevant material changes e.g. a change to the asset portfolio or new evidence such as actual meter readings.

8. Payment Terms

See clause 5.4 of the service terms of the contract.

9. Flexibility Needs

In this section we set out the flexibility services that we expect to tender for. The actual flexibility services that we will tender for will be signposted on the Piclo⁵.

9.1 Scheduled Utilisation

We are seeking to procure this product at some or all of the locations set out in **Table 1 Flexibility Needs High Voltage (HV)** and **Table 2 Flexibility Needs Low Voltage (LV)**, below. The flexibility could be provided through any of: generation turn up, demand turn down, or battery discharge. Flexibility can be provided by a single DER or by an aggregation of multiple DERs.

The table also sets out the likely capacity requirements and time windows for flexibility services

We are interested in receiving bids even if a bidder can deliver flexibility services for only part of the required capacity or for part of the time window at a location.

⁵ [Dashboard - Piclo Flex](#)

Table 1 Flexibility Needs HV

Flexibility Services to be provided by assets connected at or below 11kV

Location	Zone (Substation)	Capacity Requirement (MW)	Year	Service Start Date	When flexibility is required			Utilisation ceiling price £/MWh
					Months	Days	Hours	
Driffield	Kirkburn 66/11kV	0.300	2024/25	25-Nov-24	Nov-Jan (1)	Mon - Fri	14:30-18:00	£1,200
		0.300	2025/26	24-Nov-25	Nov-Jan (2)	Mon - Fri	14:30-18:00	£1,200
Scunthorpe	Crowle 66/11kV	0.287	2024/25	01-Dec-24	Dec, Jan	Everyday	10:30-20:30	£141
		0.520	2025/26	01-Dec-25	Dec, Jan	Everyday	17:00-21:00	£248

Table 2a and 2b Flexibility Needs LV

Flexibility Services to be provided by assets connected at or below 415V

Table 2a: Capacity requirements for Flexibility Services by location

	Location	Zone (Substation)	Capacity Requirement (MW)	
			2024/25	2025/26
1	Beamish	Lime Street	0.078	0.062
2	Bradford	Thornbury Avenue	0.090	0.083
3	Chester Le Street	Chester Le Street	0.078	0.062
4	Chester Le Street	Whitehall Park North	0.090	0.083
5	Chester Le Street	Birtley Windsor	0.100	0.100
6	Cramlington	Barras	0.100	0.100
7	Doncaster	Hazel Road	0.083	0.070
8	Doncaster	Westfield Park	0.083	0.072
9	Doncaster	Yarborough Terrace	0.080	0.064
10	Durham	Woodbine Road	0.090	0.083
11	Gateshead	Makepeace Terrace	0.100	0.100
12	Gateshead	Wardley Hall	0.078	0.062

	Location	Zone (Substation)	Capacity Requirement (MW)	
			2024/25	2025/26
13	Gateshead	Winlaton East	0.085	0.075
14	Leeds	Bellbrooke Avenue 2744	0.100	0.100
15	Leeds	Cowper Terrace	0.100	0.100
16	Leeds	Hamilton Place 2757	0.100	0.100
17	Leeds	Maxwell Street 2938	0.100	0.100
18	Seahouses	Seahouses South	0.100	0.100
19	South Shields	Boldon Lane South	0.083	0.072
20	South Shields	Marlborough Street	0.090	0.085
21	Stanley	Pontop Pike	0.100	0.100
22	Stockton on Tees	Barwick Lane	0.075	0.057
23	Sunderland	Barnes Park	0.088	0.079
24	Sunderland	Boldon Drive	0.090	0.083
25	Sunderland	Southend Road	0.067	0.045
26	York	Garden Street	0.088	0.079

Table 2b: Service windows and pricing for LV Flexibility Services at zones specified in table 2a

Year	Service Start Date	When Flexibility is Required			Utilisation Ceiling Price £/MWh
		Months	Days	Hours	
2024/25	01-Nov-24	November to February	Monday to Friday	16:00 - 20:00	£17
2025/26	01-Nov-25	November to February	Monday to Friday	16:00 - 20:00	£17

10. Minimum DER Requirements

In order to be eligible to provide flexibility services to Northern Powergrid, it is necessary that DERs are able to meet the technical standards that will ensure the DER can provide the level of service that is required.

1. The DER must be metered at a minimum frequency of half hourly.

2. Capacity available must be at least 10kW per zone (note this is capacity of the flexibility service from the DER, not the capacity of the DER). If the DER is an aggregation of sites, the minimum capacity requirement applies to the aggregate, not to the individual sites.
3. The metering point shall be at the boundary between the site on which the DER is located and the distribution network.

11. Contract Duration

Up to 24 months (two years) dependent on the service windows awarded, plus optional 24 months (two year) extension by mutual agreement. Service start dates set out in Tables in section 9 above.