



Flexible Service requirement

Spring 2020



1 WHAT ARE FLEXIBLE SERVICES

1.1 Local flexibility needs

Distributed Energy Resources (DERs) are companies or individual customers capable of adjusting how much they consume or generate electricity. These adjustments can support the local distribution network due to high electricity demand or when the network is operating abnormally, and DERs receive payment from Electricity North West in return. These DERs can be generators, consumers, and electricity storage connected to our networks that can increase exports (generate more) or reduce imports (consume less) when instructed.

As the distribution network operator in the North West of England, we are looking to use this flexibility to support how we operate our local networks, as an alternative to traditional approaches. The aim is to reduce the cost for electricity distribution networks in customer energy bills while ensuring that our network remains resilient, reliable and meets our customers' needs.

2 NETWORK REQUIREMENTS

This section provides information regarding the network location where flexibility could potentially be of benefit to the network.

Figure 2.1: Flexible Services requirement areas



All three of our requirements are for a RESTORE response, which means that we only require flexible services in the event of a network abnormality. Figure 2.2 shows the service characteristics of this type of response.

Figure 2.2: Service characteristics








| Type of Response | When to Act | Trigger | Certainty of Utilisation | Risk to network assets | Frequency of use |
|---|-------------|---------------------|--------------------------|------------------------|------------------|
|  SECURE | Pre Fault | Scheduled | Certain | Med | High |
|  RESTORE | Post Fault | Network abnormality | Uncertain | High | Low |

Figure 2.3 summarises our requirements for each of the areas in which we are seeking flexible services.

Figure 2.3: Flexible Services requirements in Cumbria in FY21

| Network Location | Voltage of connection | Maximum Flexible Service requirement (MVA) | Availability Window | | | | Estimated Availability Rate | Estimated Utilisation Rate |
|---|-----------------------|--|---------------------|----------|----------|-----------------------------------|-----------------------------|----------------------------|
| | | | Start date | Months | Days | Times | | |
|  Cloughton | LV or HV | 0.05 | Sep-20 | Sep-Mar | All week | 07:00 – 09:30 & 17:00-20:00 | Up to 1100 hours pa | Up to 40 hours pa |
|   Golborne | LV or HV | 7.80 | Nov-21 | Oct-Mar | All week | 07:00 – 21:30 | Up to 2700 hours pa | Up to 310 hours pa |
|  Higher Walton | LV or HV | 7.40 | Nov-20 | All year | All week | All day | Up to 7000 hours pa | Up to 40 hours pa |
|  Sebergham | LV or HV | 0.15 | Nov-22 | Nov-Mar | Mon-Fri | 08:30-09:30 & 17:30-19:00 | Up to 375 hours pa | Up to 40 hours pa |

The following pages provide further detail for each of our requirement areas. Maps are provided that show each area individually at a smaller scale in addition to charts which indicate the loading and indicative flexible service requirements by year, month, week and day.

2.1 Claughton

We are currently seeking flexible services for our primary substation in Claughton.

The flexible services target area for this requirement is located around the village of Claughton which is to the North East of Lancaster, as illustrated in Figure 2.2.1.

Figure 2.1.1: Flexible services target area for Claughton

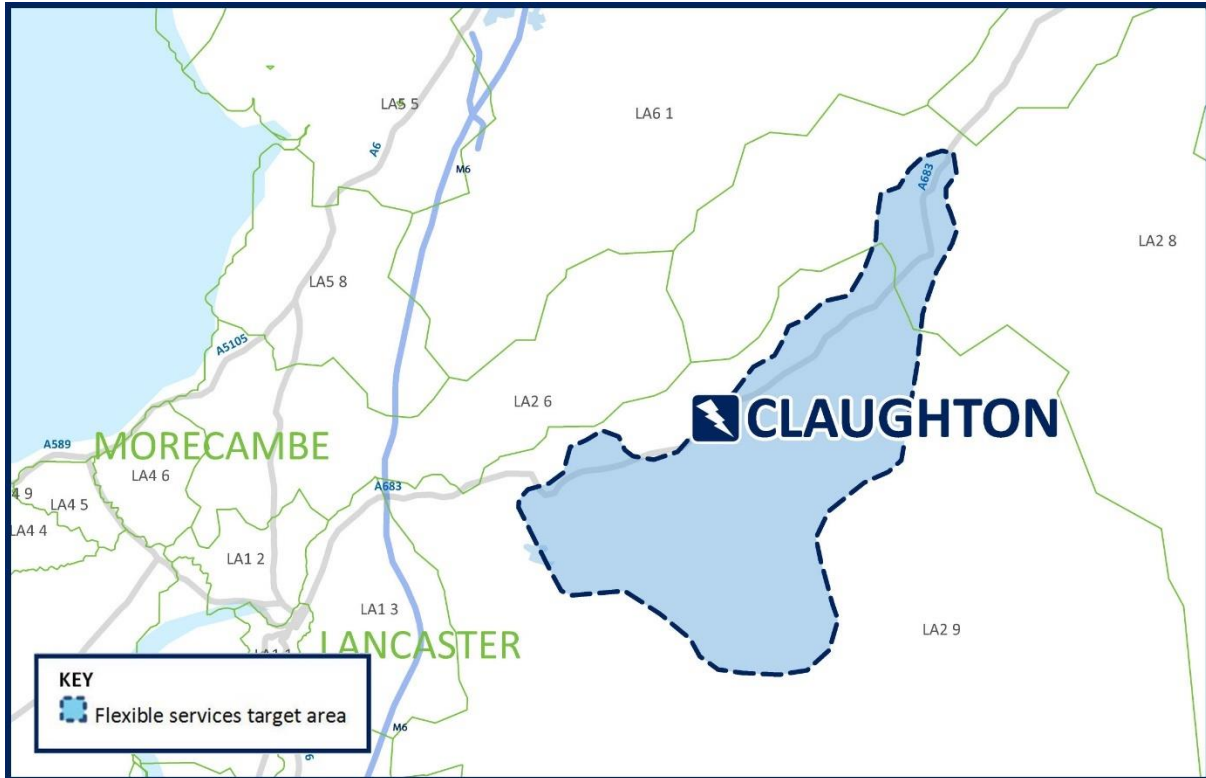


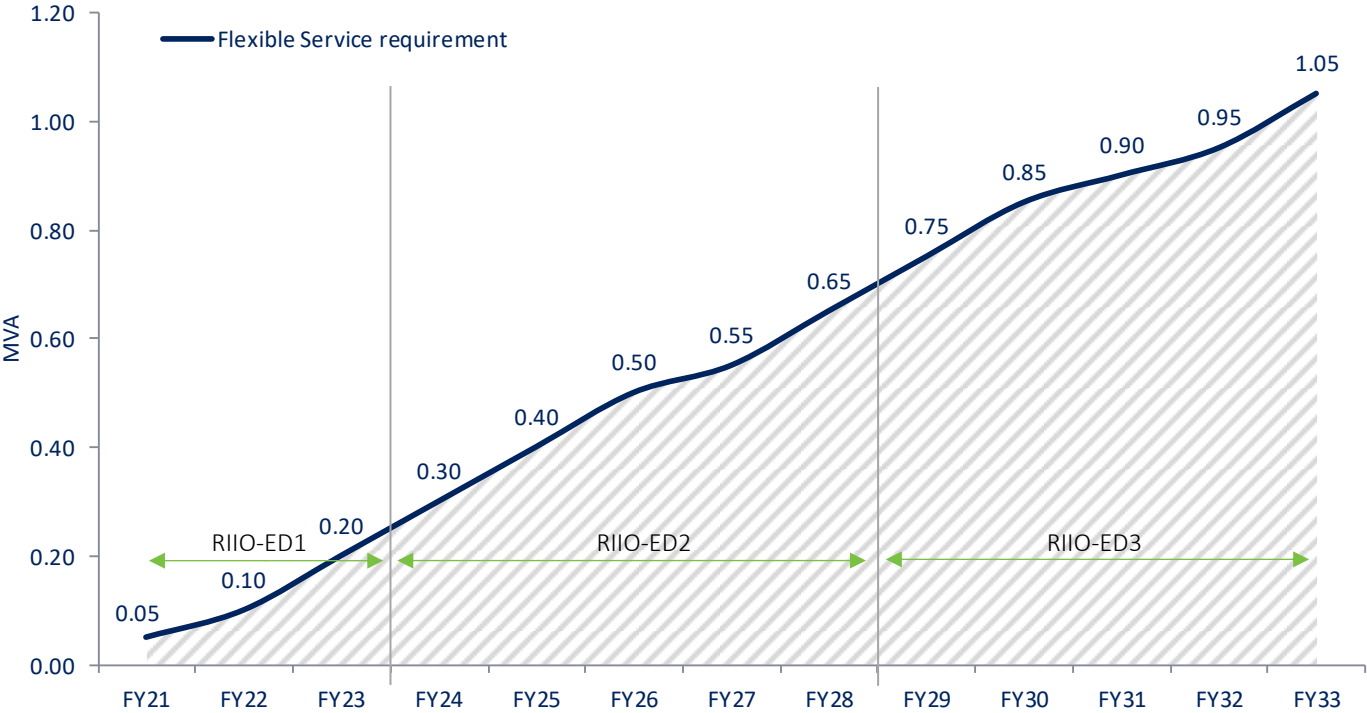
Figure 2.1.2: Flexible service requirements for Claughton

The below table details the requirement in this area.

| Year | Feeding postcodes | MVA required | Period | Time of day | Service window | Days | Service type |
|-------------|-------------------|--------------|--------|-------------|----------------|-----------------|--------------|
| 2020 / 2021 | LA2 8, LA2 9 | 0.05 | Winter | Morning | 07:00 - 09:30 | Monday - Friday | Dynamic |
| | | | | Evening | 17:00 – 20:00 | All week | Dynamic |

The below chart shows how we expect the flexible service requirement may increase over the course of time.

Figure 2.1.3: Forecasted flexible service requirement up to FY33



2.2 Golborne

We are currently seeking flexible services for our primary substation in Golborne.

The flexible services target area for this requirement is located around the town of Golborne which is South of Wigan as illustrated in Figure 2.2.1.

Figure 2.2.1: Flexible services target area for Golborne

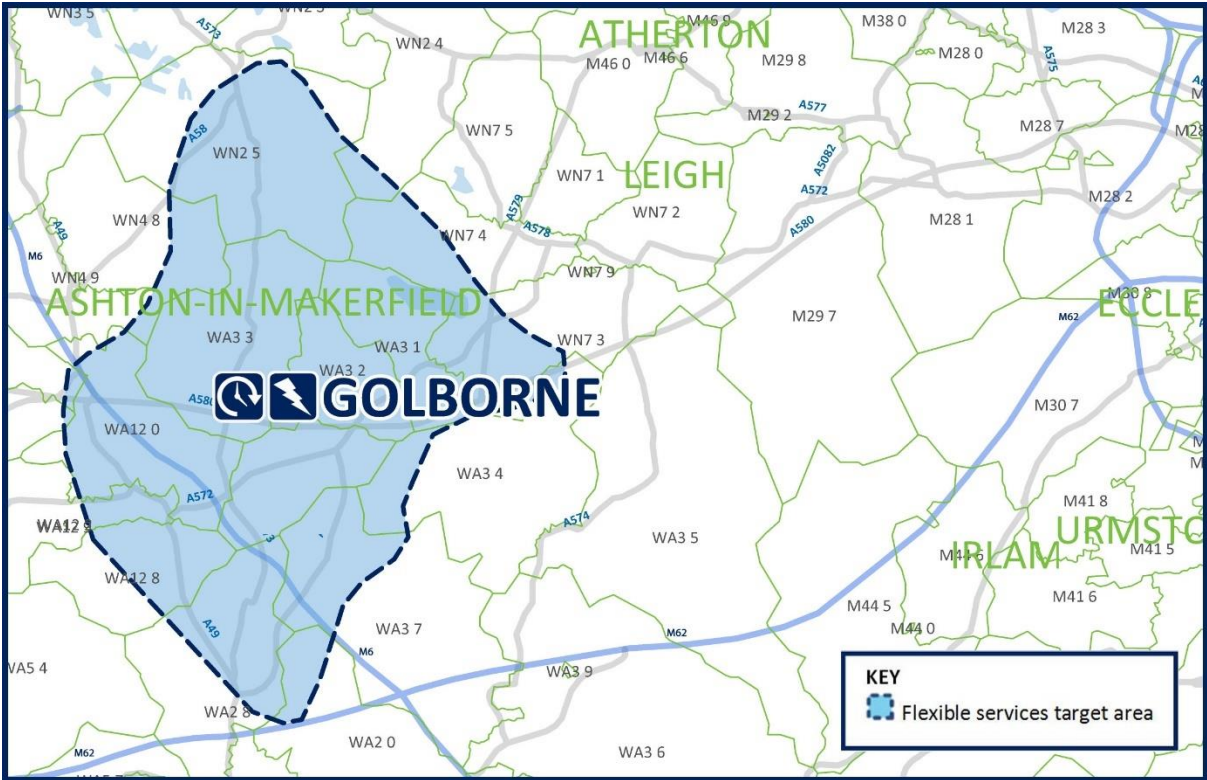
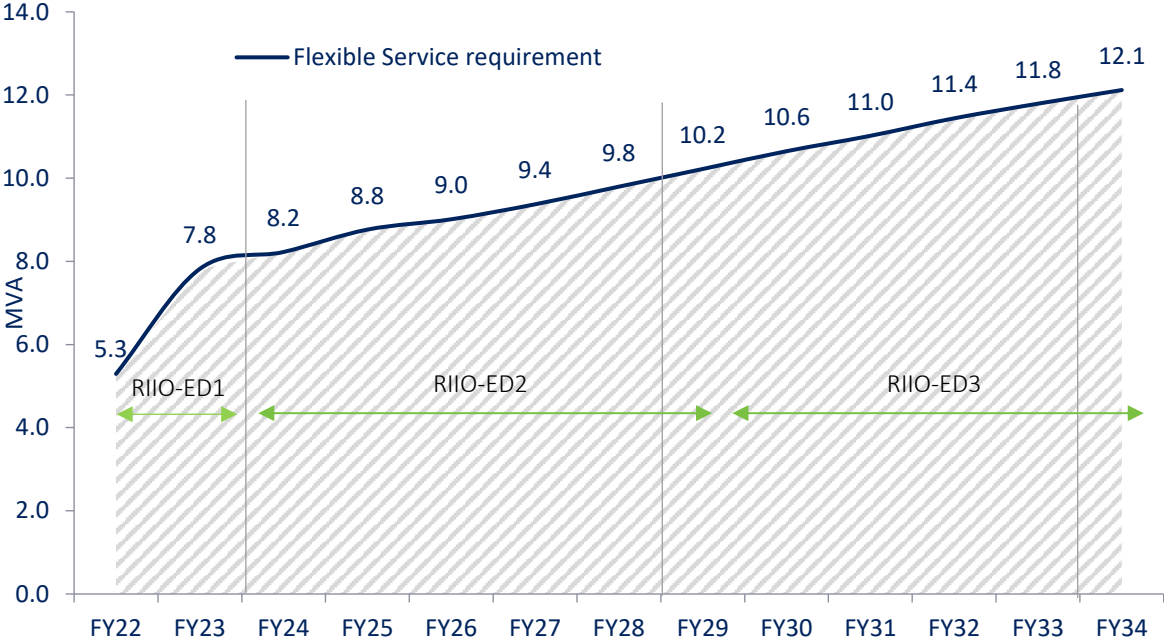


Figure 2.2.2: Flexible service requirements for Golborne

| Year | Feeding postcodes | MVA required | Period | Time of day | Service window | Days | Service type |
|-----------|---------------------------------------|--------------|---------|-------------|----------------|----------|--------------|
| 2021 / 22 | | 5.30 | Nov-Mar | Evening | 15:30 – 21:00 | All week | Dynamic |
| 2022 / 23 | WA12 0, 8&9, WA3 1-8, WN7 3&4 & WN4 8 | 5.50 | Oct-Mar | All day | 07:30 – 21:30 | All week | Dynamic |
| | | 2..30 | Nov-Jan | Evening | 16:30 – 19:00 | All week | Secure |

Figure 2.2.3: Forecasted flexible service requirement up to FY33



2.3 Higher Walton

We are currently seeking flexible services for one of our primary substations in Higher Walton.

The flexible services target area for this requirement are the regions of Higher Walton and Samlesbury which are to the east of Preston, as illustrated in Figure 2.3.1.

Figure 2.3.1: Flexible services target area for Higher Walton

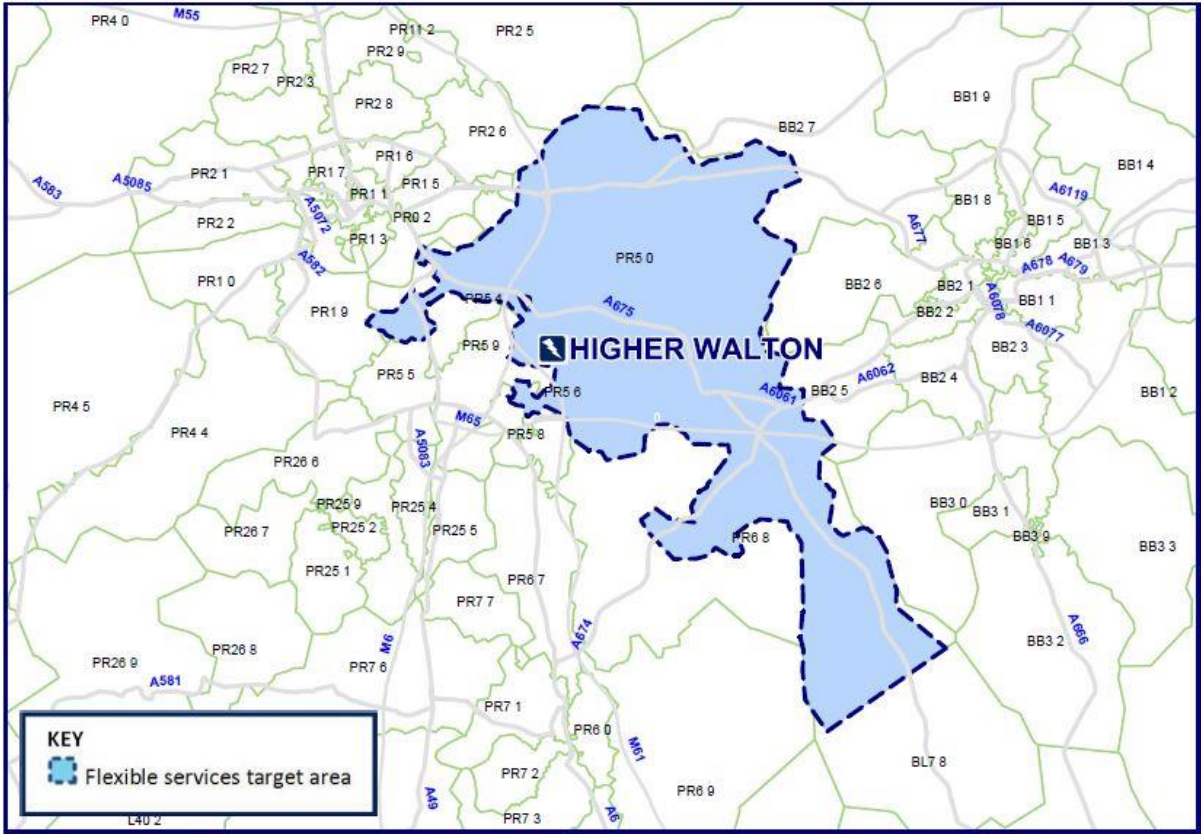
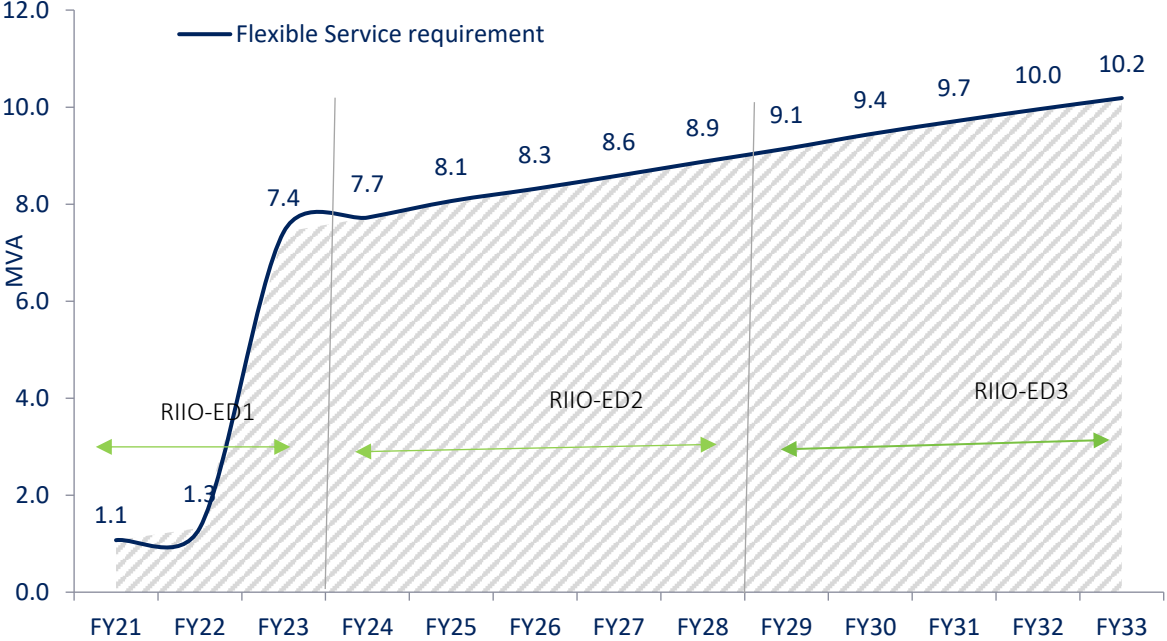


Figure 2.3.2: Flexible service requirements for Higher Walton

| Year | Feeding postcodes | MVA required | Period | Time of day | Service window | Days | Service type |
|-----------|--------------------------|--------------|--------|-------------|----------------|----------|--------------|
| 2020/21 | BB 2 7, PR5 0,4&8, PR6 8 | 1.1 | Winter | Evening | 17:00 – 22:00 | All week | Dynamic |
| 2021 / 22 | | 1.3 | Winter | Evening | 16:30 – 22:00 | All week | Dynamic |
| | | 4.5 | Summer | All day | 07:00 – 00:00 | All week | Dynamic |

| | | | | | | | |
|-----------|--|-----|--------|---------|-------------------------------|----------|---------|
| 2022 / 23 | | 7.4 | Winter | All day | 00:00 – 04:00 & 07:00 – 00:00 | All week | Dynamic |
|-----------|--|-----|--------|---------|-------------------------------|----------|---------|

Figure 2.3.3: Forecasted flexible service requirement up to FY33



2.4 Sebergham

We are currently seeking flexible services for one of our primary substations in Sebergham.

The flexible services target area for this requirement is located in the village of Sebergham which is south of Carlisle in Cumbria, as illustrated in Figure 2.5.1.

Figure 2.4.1: Flexible services target area for Sebergham

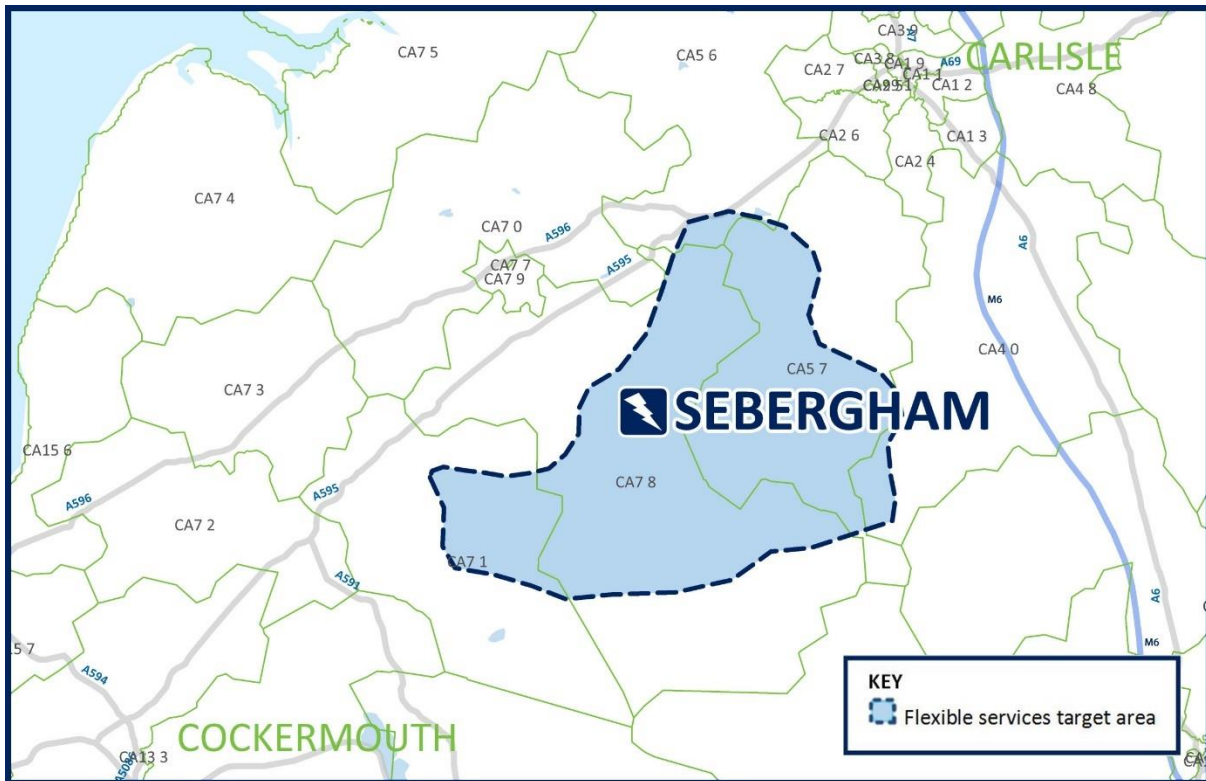
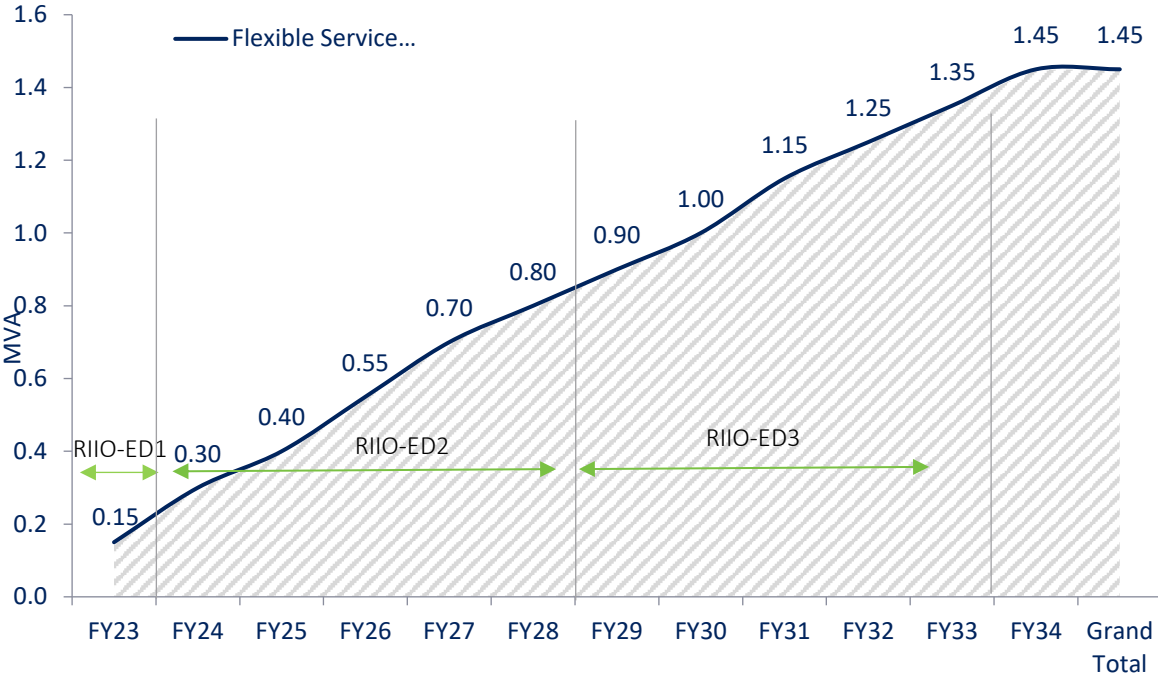


Figure 2.4.2: Flexible service requirements for Sebergham

| Year | Feeding postcodes | MVA required | Period | Time of day | Service window | Days | Service type |
|------|-------------------|--------------|----------|-------------|----------------|-----------|--------------|
| 2023 | CA5 7, CA7 1 & 8 | 0.15 | Nov -Mar | Morning | 08:30 – 09:30 | Mon - Fri | Dynamic |
| | | | | Evening | 17:30 – 19:00 | | |

Figure 2.4.3: Forecasted flexible service requirement up to FY33



For further details please see the specific appendices.

3 CONDITIONS PRECEDENT

The Bidder will need to meet the following high level conditions in order to provide a Flexible Service to the Company:

- The Flexible Resource must:
 - either be already connected to the network location being supported; providers should use the highlighted area on the maps provided (*Fig 2.1.1, 2.2.1 and 2.3.1*) as an indication of whether the resource is in the right geographic location¹,
 - or
 - be able to locate (i.e. install, commission, and deliver) the Flexible Resource in the locality of the network asset being supported two months prior to the delivery start date².
- The minimum size for directly contracted resources should be at least 50kW. There are no restrictions on the size of sub-sites of aggregated portfolios, but the total portfolio size needs to be at least 100kW (flexibility capability and not capacity).
- The Supplier should be able to deliver and manage, upon the Company's request, a net reduction in the demand or an increase in the export, as seen by the distribution network.
- The Flexible Resource should have the ability to act (provide a response) reliably and consistently, in both magnitude and duration, throughout the contracted windows.
- Generators and electrical Storage, greater than 16A per phase, looking to export to the network will need to have a long-term parallel connection and be compliant with the requirements of EREC G59 or EREC G99.
- Flexible service suppliers should be able to deliver the service by the specified delivery start date (specific start dates are stated for each site in figure 2.3).

¹ If you would like the Electricity North West to verify that the electrical connection is suitable prior to submission of your proposal, please email flexible.contracts@enwl.co.uk with your meter point administration numbers (MPANs).

² Further information on connection to Electricity North West's distribution network is available at [Get connected](#). All connection charges will be payable by the connectee in accordance with our [common connection charging methodology](#).

4 REGISTERING YOUR INTEREST

For further details or to register your interest for this requirement for flexible services, visit our [website](#). Alternatively you can confirm your company name and contact information via email to flexible.contracts@enwl.co.uk. Please register your interest by noon on the 15th April 2020 to guarantee participation.

You will be registered on our e-procurement portal, WAX digital, where the full Request for Proposal will be available, which includes:

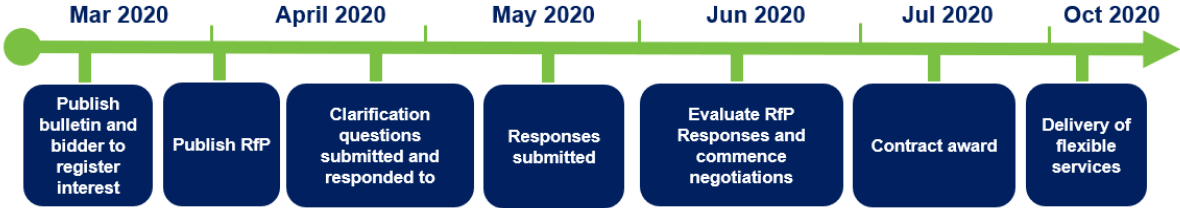
- Technical Specification,
- Template contract, and
- Terms and Conditions.

The portal also contains the response template which you will be required to complete as part of your submission.

5 PROCUREMENT TIMELINE

We are seeking to contract for services to deliver during winter 2020/2021. The proposed process is set out below.

Figure 5.1: Indicative procurement timeline



6 GLOSSARY

| Abbreviation | Definition |
|-------------------------------------|---|
| Availability Rate | This defines the maximum number of hours that we may seek flexible services from the provider |
| Availability Window | This defines the likely time periods when we expect to seek flexible services support from the provider |
| Distributed Energy Resource (DER) | Resources like generators, consumers, and electricity storage connected to the distribution network |
| Distribution network operator (DNO) | The owner and operator of a distribution network licensed by the Gas and Electricity Markets Authority |
| Feeding area | The geographic area that is supplied electricity by the cables and/or overhead lines connected to the local substation |
| Flexible Services | The provision of a change in import and/or export when instructed. This is also sometimes referred to as demand side response |
| Flexible Resource | Resources like generators, consumers, and Electricity Storage connected to the distribution network. |
| Flexible Service supplier | The company providing the Flexible Service |
| High voltage (HV) | The voltages of 6.6kV or 11kV in Electricity North West's distribution network |
| Low voltage (LV) | The voltages of 400V / 230V in Electricity North West's distribution network |
| Utilisation Rate | This defines the maximum number of hours that we expect to seek flexible services from the provider |