electricity north west

Bringing energy to your door

Flexible Service requirement in East Manchester

January 2019

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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.

2.1 East Manchester

We are currently seeking Flexible Services for one of our primary substations in East Manchester.

The Flexible Services target area for this requirement is located slightly east to Manchester City centre, within the Ancoats and Bradford areas, as illustrated in Figures 2.1 and 2.2.

Figure 2.1: Flexible Services target area

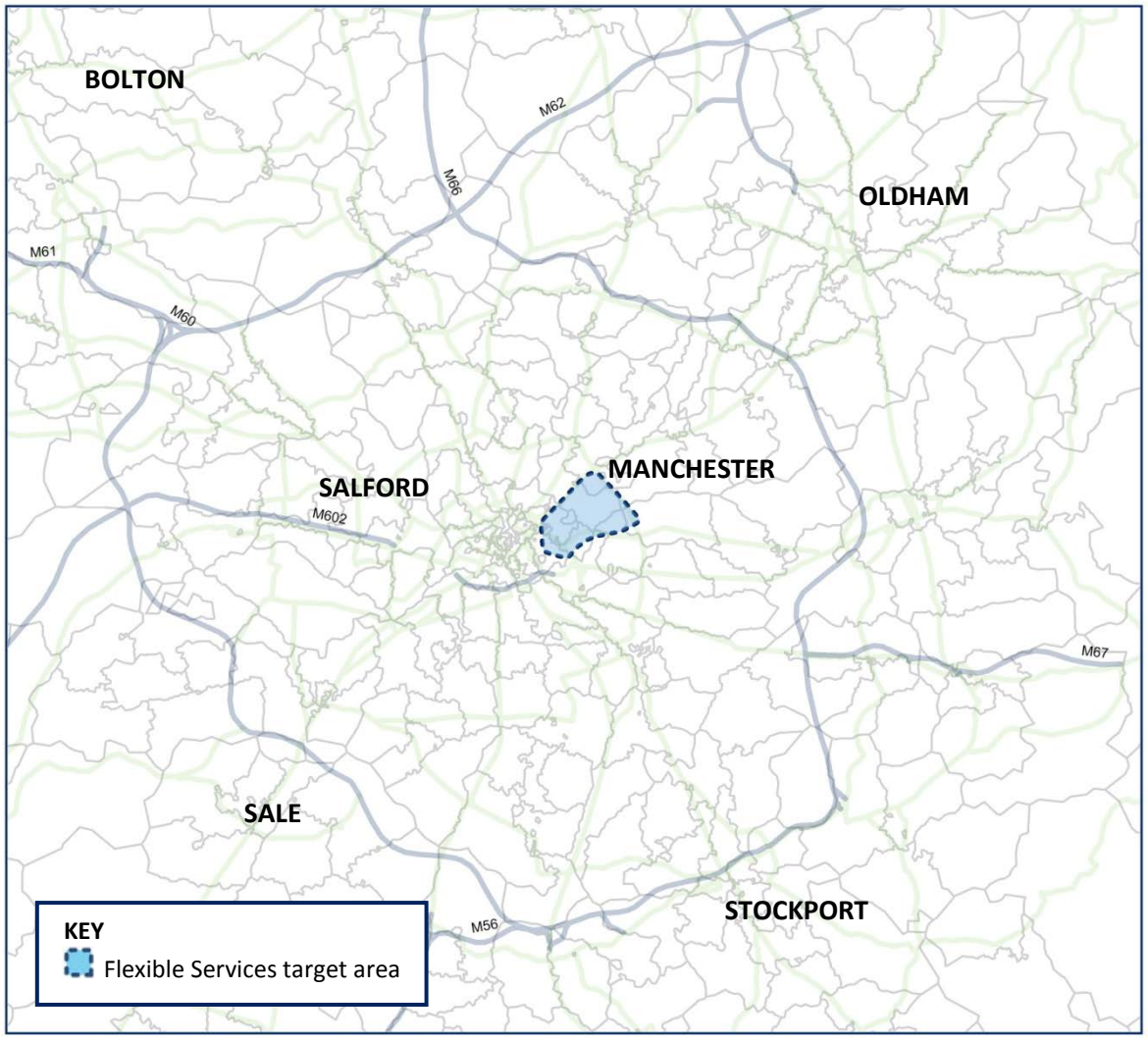
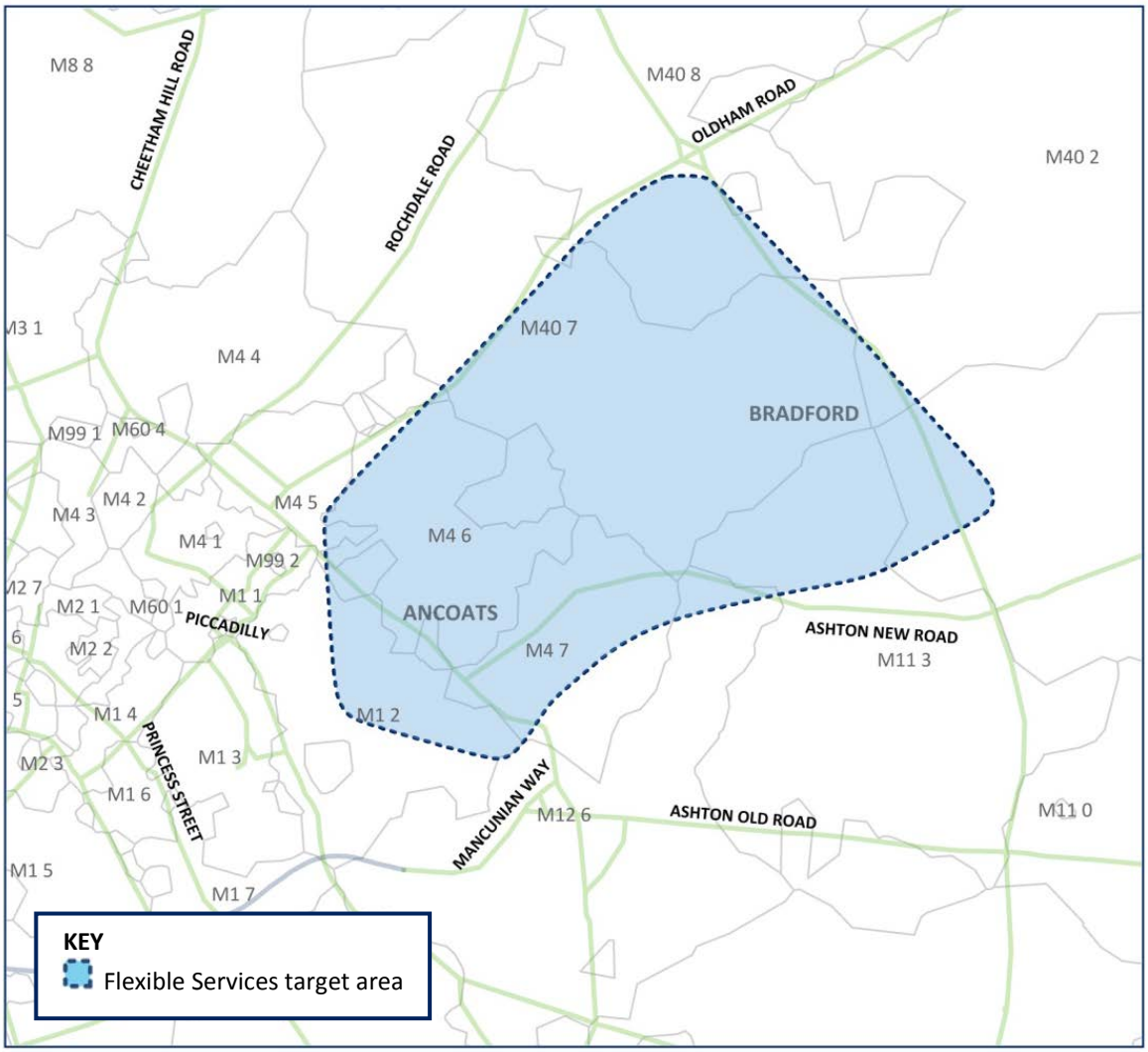


Figure 2.2: Flexible Services target area in further detail



The following three pages contain additional charts that further detail our requirement; each chart contains estimated values.

As illustrated by Figure 2.3, we anticipate that by FY21, the substation will be overloaded during peak times due to high electricity demand.

Figure 2.4 shows our forecasted flexible service requirement for each price control period and by financial year (FY).

Figure 2.5 and 2.6 illustrate the maximum flexible service requirement by month and week day for the first year of the requirement (FY21).

Figure 2.7 illustrates the time profiled flexible service requirement by weekday for FY21.

Figure 2.8 summarises our indicative requirements for FY21, including the availability window and estimated utilisation rate.

Fig 2.3: Estimated maximum daily profile for FY21

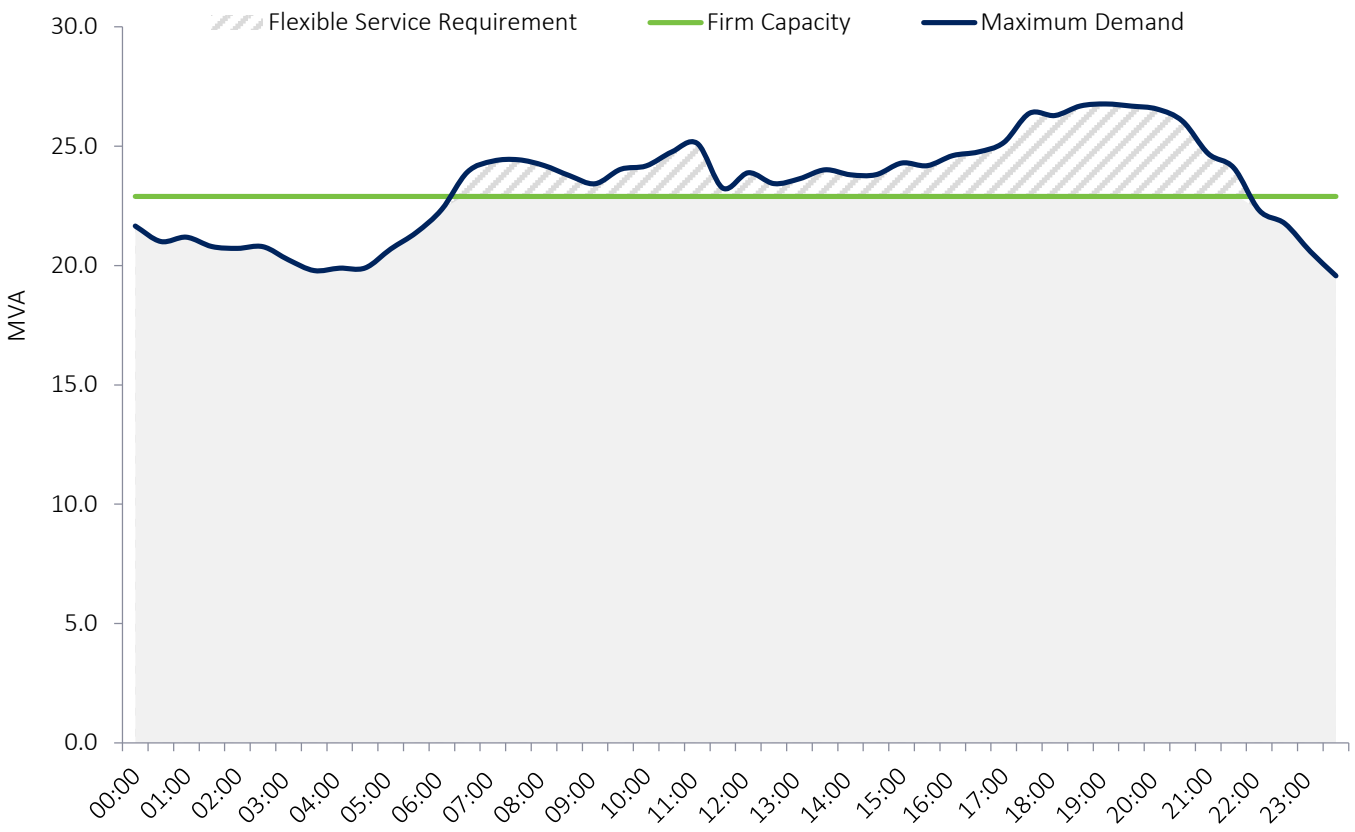


Figure 2.4: Forecasted flexible service requirement up to FY33

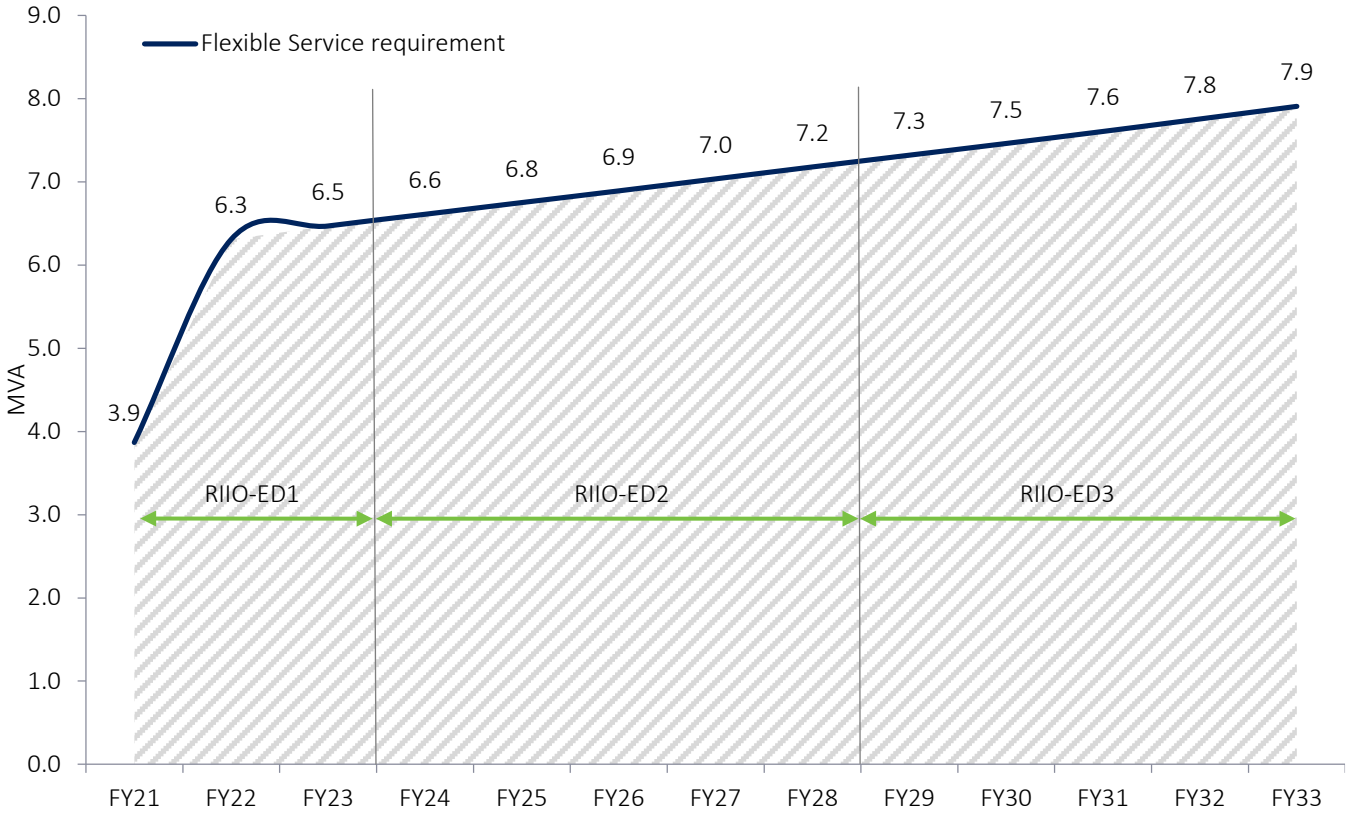


Figure 2.5: Maximum estimated flexible service requirement by month for FY21

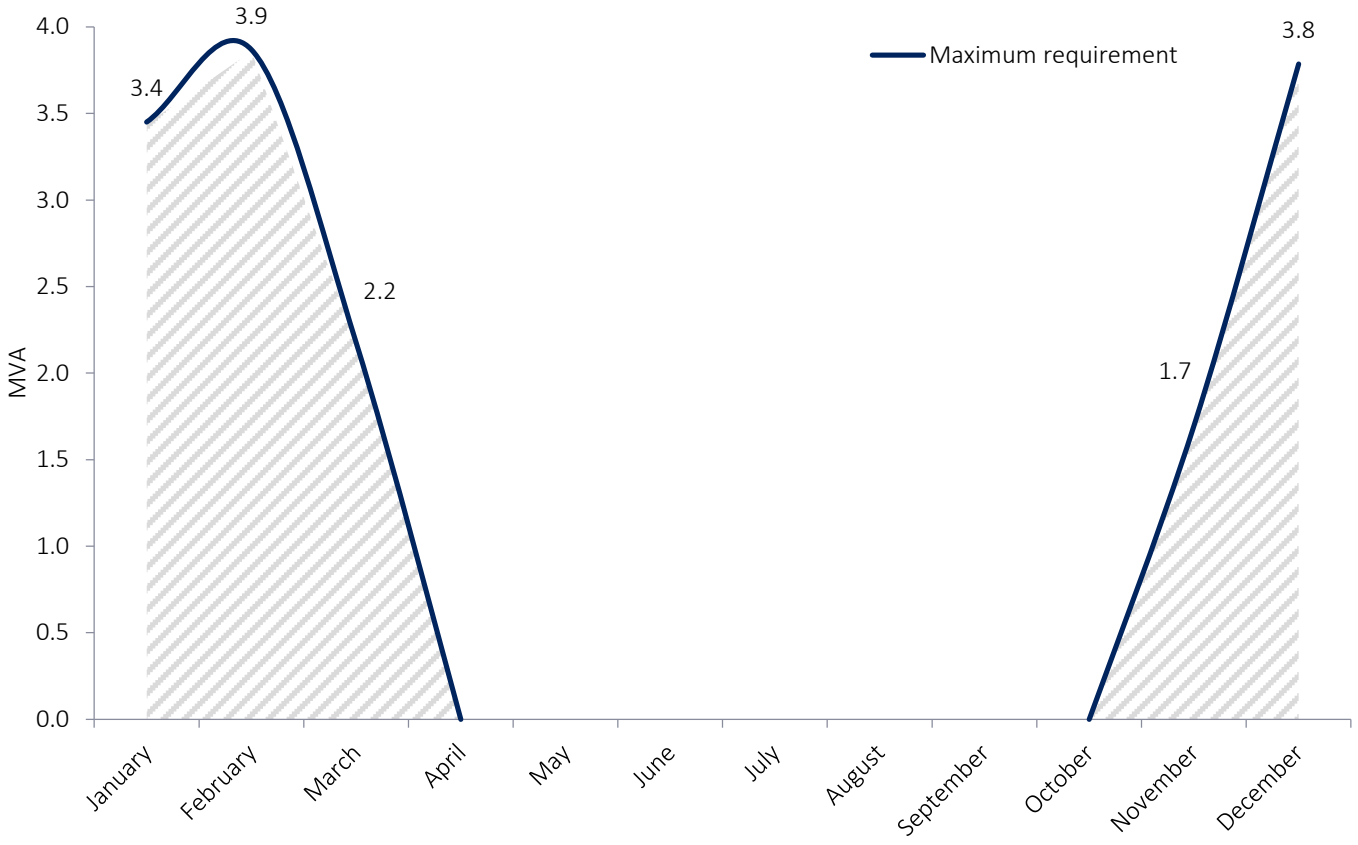


Figure 2.6: Maximum estimated flexible service requirement by week day for FY21

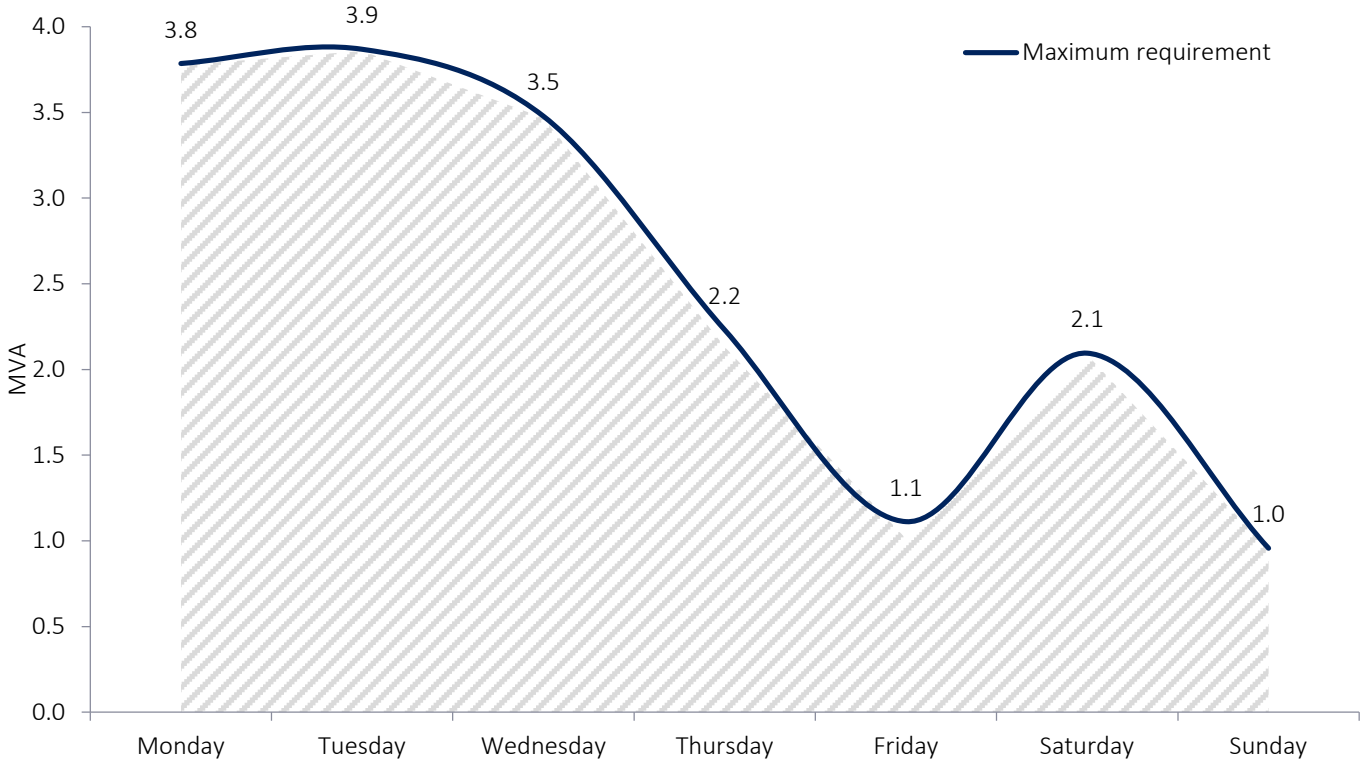


Figure 2.7: Estimated time profiled flexible service requirement by week day for FY21

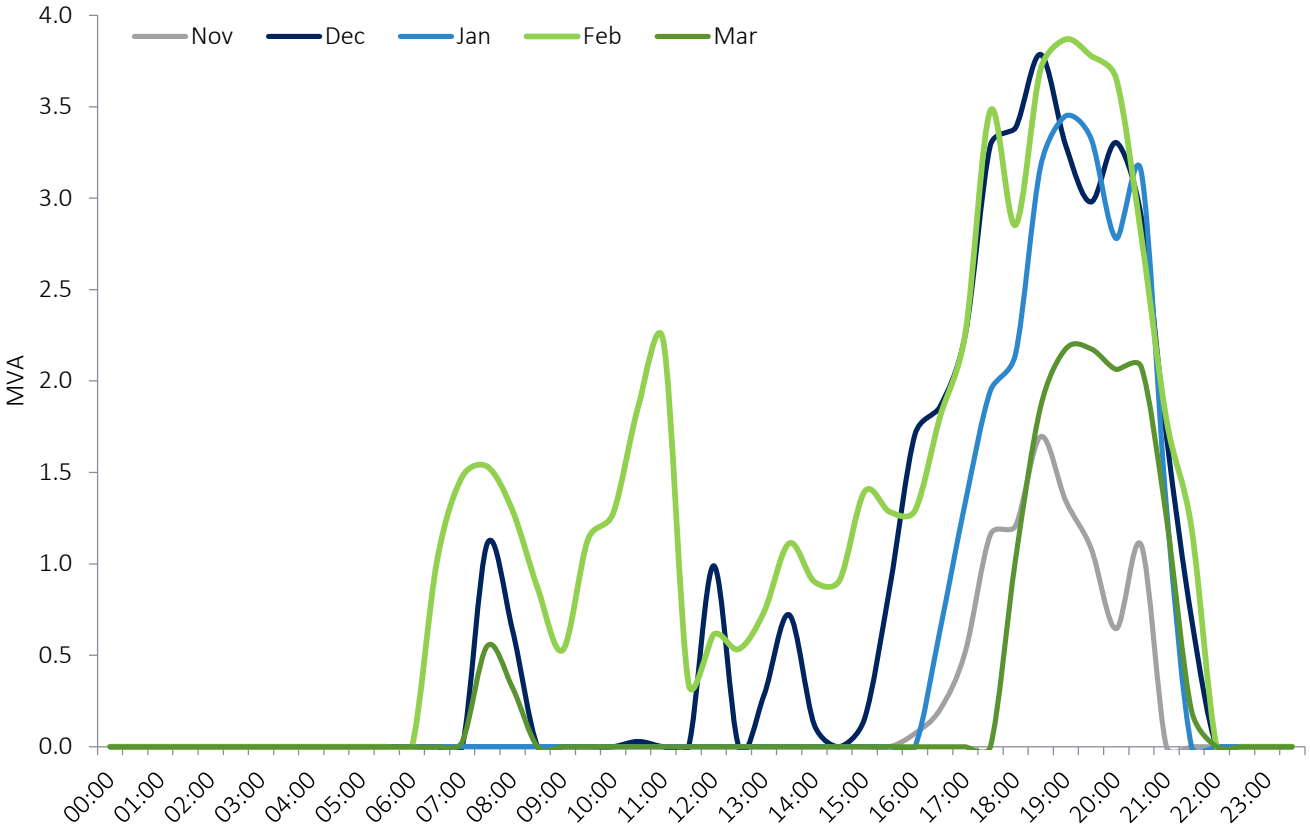


Figure 2.8: Summary of indicative requirements for FY21

Network Location	Voltage of connection	Maximum Flexible Service requirement (MVA)	Availability window					Estimated utilisation rate
			Months	Earliest start date	Latest end date	Times	Days	
East Manchester	LV or HV	3.9	Nov-Mar	Nov-20	Mar-21	06:00-22:00	All week	Up to 450 hrs pa

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 map (*Fig 2.1*) as an indication of whether the resource is in the right geographic location[1],

  or

  be able to locate (i.e. install, commission, and deliver) the Flexible Resource in the locality of the network asset being supported by summer 2020[2] .

- There are no restrictions on the size of sub-sites of aggregated portfolios, but the total portfolio size needs to be at least 250kW (flexibility capability and not capacity). Similarly, the minimum size for directly contracted resources should also be at least 100kW.

- 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 Services suppliers should be able to deliver the service during winter 2020/21 (starting November 2020).

[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 8 February 2019 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:

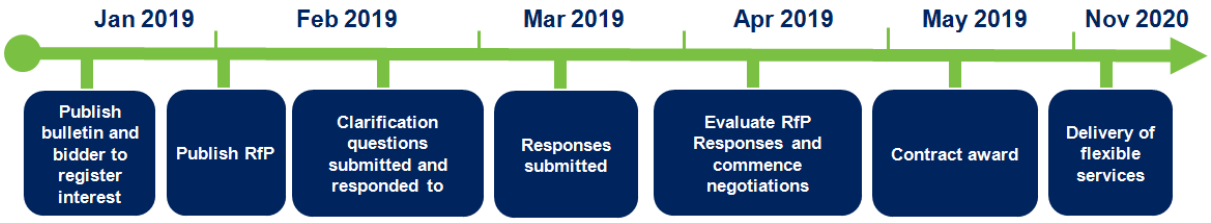
- Technical Specification,
- Template contract, and
- Terms and Conditions.

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 (starting from November 2020). The proposed process is set out below.

Figure 5.1: Indicative procurement timeline



6 GLOSSARY

Abbreviation	Definition
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