Long Term Development Statement

PART ONE – East Midlands

November 2024

Electricity Distribution

nationalgrid

Company Profile

NGED is an electricity Distribution Network Operator (DNO). We are responsible for the network of engineering assets that allows the distribution of electricity to customer's premises from the National Grid.

NGED employs over 6,500 staff across four Distribution Areas to distribute electricity from National Grid supply points to the distribution network areas of the East Midlands, the West Midlands, the South West of England and South Wales.

As a distribution business we own the distribution system assets including 229,000 km of network and 191,000 transformers plus associated switchgear.

We are responsible for:

- Maintaining the electricity network on a daily basis
- Repairing the electricity network when faults occur
- Reinforcing the electricity network to cope with changes in the pattern of demand
- Extending the network to connect new customers

NGED is not involved in either the buying or selling of electricity to end use customers, as this is the responsibility of electricity supply companies. For a list of supply companies please visit www.ofgem.gov.uk. NGED provides the electrical network to distribute electricity to these customers.

This statement covers the NGED network in the East Midlands

NGED is responsible for approximately 2.7 million customers in a 16,000 sq. km service area in East Midlands.

The region covered by NGED's distribution network includes the majority of the East Midlands conurbation along with the cities of Coventry and Warwick. It extends from the outskirts of Sheffield in the north to Milton Keynes in the south; and from Uttoxeter and Tamworth in the west to the Wash on the East Coast.

NGED's 132 kV networks in the East Midlands are mainly radial systems, although in a few instances, a mesh system is utilised. Most 132 kV networks are interconnected to adjoining groups, although they are not operated in parallel. The use of 132 kV interconnection between grid supply points for load transfer is strictly controlled to avoid detrimental effects to the transmission system and to ensure that fault levels are kept within safe limits.

NGED East Midlands has extensive 33 kV networks. These are mainly operated as radial networks, but in rural areas mesh networks may be utilised. Most 33 kV networks provide interconnection between neighbouring bulk supply points which are used to transfer load between bulk supply points during outages.

Bulk supply points are not normally operated in parallel at the primary voltage levels except in cases where this is necessary for compliance with ER P2/8. Primary substations may have transformers supplied from different bulk supply points.

Engineering depots are located in Mansfield, Derby, Nottingham, Lincoln, Grantham, Hinckley, Kettering and Northampton.

Contents

1. Summary / Introduction

The Long Term Development Statement is present in two parts:

- Part 1 - The Introductory Section
- Part 2 - Detailed Information
  - Summary Information
  - Detailed Proposals
  - Development Proposals

The Introductory section (Part 1) is published on the Licensee's website free of charge and without the need for registration. It provides an overview of the distribution network of an area licensed under the Electricity Act 1989. The Introductory Section also describes the detailed information contained in Part 2. Part 1 of the Statement contains sufficient information to enable any person to understand the scope of the information contained within the full Statement and to assess whether it would be of use to them.

Access to the full Statement (Parts 1 and 2) is also available free of charge from the Licensee's website following the registration of user details.

Apply for access to full statement

The Statement, and its accompanying data, is refreshed annually and published by the end of November each year. In addition to the November publication, the Statement is supplemented with a revision of Part 2 of the Statement, to update the Licensee's firm development proposals and generation data. The update is available at the end of May each year to registered users.

2. Purpose of the Statement

This Statement has been compiled in accordance with Licence Condition 25, to assist existing and future users of NGED's network in identifying and assessing opportunities available to them for making new or additional use of our Distribution System. It also gives contact details for specific enquiries.

The purposes of License Condition 25 are:

(a) To secure the provision of information by the licensee which will assist any person who contemplates entering into distribution arrangements with the licensee to identify and evaluate the opportunities for doing so; and
(b) To ensure the general availability of such information in the public domain.

3. Contents of the Statement

The statement contains data on the 132 kV and 33 kV systems and the transformation level to 11 kV. This statement may become outdated, so please contact NGED directly for the latest information. Due to the volume of data and speed with which it can become outdated, data on the 11 kV and LV systems has not been included in the statement. Data on the 11 kV and LV systems is available on request. A price list for the provision of this data is included in Attachment 1.

The statement also provides high-level information on the design and operation of all voltage levels of the NGED distribution network.

The detailed information section, in Part 2 of this statement, contains information/data on the following:

- Geographic plans showing NGED's 132 kV and 33 kV systems including the National Grid Transmission System within our geographic area of operation
- Schematic diagrams detailing normal operating configurations of the distribution network
- Circuit data
- Transformer data
- Load information
- Fault level information
- Connected generators with a capacity greater than 1 MW

The Network Development Proposals section includes planned major developments to the system at 132 kV or 33 kV that have financial authorisation to proceed and that are expected to change system capability after project completion. Details are provided for the:

- Area of the network affected
- Work that is intended to be carried out
- Impact on the distribution network
- Expected timescale

This section excludes like-for-like replacements (which will not change system capability) and changes to the system caused by a new user or by an existing user where they have yet to agree terms for connection.

The Network Development Proposals section also includes:

- A high-level summary of the interest in defined parts of the distribution network
- Summary details of design policies and practices to assist a user to assess the potential future development of the distribution network

If you wish to view or download information from Part 2 of this statement, then you will need to apply for full access. Apply for access to full statement.

The overall historic and future peak demand on the Distribution System is provided in Part 2 of this statement. It shows the winter peak and summer minimum daily demand curves for NGED and the annual load duration curve.

Information on the commercial terms for connecting to and using our network are contained in our Condition 5 Statements. These statements also give information on competition in connections. Technical requirements are detailed in our Distribution Code. Details of how to obtain these documents and useful contacts are shown in Attachment 2.

4. Contact details for further information

4.1. General

For requests relating to the full statement, to provide feedback on any aspect of the statement, or to make a request for further information / clarity relating to the statement, please contact:

Phil Lawson
Data Engineering and Process Manager
National Grid Electricity Distribution
Avonbank
Feeder Road
Bristol
BS2 0TB
Email: nged.ltds@nationalgrid.co.uk

4.2. Additional network data

To request network data in addition to that contained in the statement, please email nged.data@nationalgrid.co.uk.

4.3. New or existing connections

Enquiries relating to new or existing connections should be addressed to:

Records Team
National Grid Electricity Distribution
Toll End Road
Tipton
DY4 0HH
Tel: 0121 623 9007
Email: nged.newsupplies@nationalgrid.co.uk

Further information relating to New Connections within NGED can be found via the following link:

https://connections.nationalgrid.co.uk/get-connected.

4.4. Use of system agreements

Before an Authorised Electricity Operator can use the network to supply connected customers, they need to enter into a Use of System Agreement. Copies of our Use of System Agreement are available from:

Kester Jones
Head of Connections
National Grid Electricity Distribution
Herald Way, Pegasus Business Park
Castle Donington
DE74 2TU
Email: nged.ltds@nationalgrid.co.uk

4.5. Equipment specifications

Users who require more information on the specifications used for equipment which forms part of the distribution network should contact:

Carl Ketley-Lowe
Engineering Policy Manager
National Grid Electricity Distribution
Toll End Road
Tipton
DY4 0HH
Email: nged.ltds@nationalgrid.co.uk

4.6. Other contacts

New Guaranteed Standards of Performance for connections work began operation on 1st April 2015. These are set out in the Electricity (Standards of Performance) Regulations 2015 and the Electricity (Connection Standards of Performance) Regulations 2015. More information is also available from the NGED website.

The Energy Networks Association (ENA) also provide several Distributed Generation Connection Guides these are available from the ENA website.

Other related information sources can be found in Attachment 2.

5. Attachments

5.1. Attachment 1 – Standard Network Information Price List

5.1.1. Geographic maps

Table 1 Price List for Geographic Maps

Description	Price
1:1250 and 1:500 scale mapping in response to "site specific" requests	Free of charge at http://www.linesearchbeforeudig.co.uk
System Overview Map showing NGED 33/66/132 kV Network (single map per NGED DNO area in PDF or hard copy)	Free of charge on our website
Information Map with Distribution Areas and local contacts (single map per NGED DNO area in PDF or hard copy)	Free of charge
Small Scale Mapping – NGED HV & EHV Network referenced to OS Vector Map District (all 4 NGED DNO areas on a single disk in PDF format)	Free of charge to eligible organisations at http://www.nationalgrid.co.uk/Partners or by registering to access our Planning Data Portal http://nationalgrid.co.uk/planningdata

5.1.2. Network data

Table 2 Price List for Network Data

Description	Price
Fault Outage Data – 132 kV or 33 kV circuit	Free of charge
Circuit Impedance & Rating – 11 kV Circuits	Free of charge on our Connected Data Portal
11 kV Feeder Load Data - typical winter max and summer min (up to 5 circuits)	Free of charge
Protection Settings (up to 10 circuit breakers)	Free of charge

5.1.3. Plant data

Table 3 Price List for Plant Data

Description	Price
Circuit breaker rating – continuous and fault (up to 10 circuit breakers)	Free of charge
132 kV or 33 kV Transformer rating, impedance, tap range and tap step	Free of charge on our Connected Data Portal

5.1.4. Feasibility studies – illustrative costs

Prior to making a formal Application for a Connection Offer you may request we undertake a Feasibility Study to establish the viability of making a connection to our Distribution System. We will carry out preliminary network analysis and provide an indicative connection assessment which will include the results of the network analysis and an outline of the engineering scheme to allow the connection. We will require payment in advance of the study being made and will notify you of the relevant study charges prior to commencing work.

Our charges associated with the provision of Feasibility Studies involving design in advance of a formal Connection Application are set out in the table below. Charges for any other activities, such as excavation works will be individually assessed and agreed with you before these are undertaken. The Minimum Charge will always apply. Additional charges will only be applicable where the Applicant amends their connection requirement which necessitates us to carry out further analysis or assessment.

The Connections Charging Statement is published on our website at https://connections.nationalgrid.co.uk/connections-charging-statements and gives the basis of charges and the methodology under which customers will be charged for connection to the distribution network.

Table 4 Minimum Connection Feasibility Charges by Category

Category	Minimum Charge £
Demand	
Connection greater than 250 kVA and up to 1 MVA at LV	664
Connection up to 250 kVA at HV	664
Connection greater than 250 kVA and up to 1 MVA at HV	664
Connection greater than 1 MVA and up to 3 MVA at HV	849
Connection greater than 3 MVA and up to 10 MVA at HV	1,980
Connection up to 10 MVA at EHV and at 132 kV	2,970
Connection greater than 10 MVA and up to 50 MVA	2,970
Connection greater than 50 MVA	3,960
Generation	
Connection of a Small Scale Embedded Generator	207
Connection of other generation up to 20 kVA not covered by the above at LV	745
Connection of other generation greater than 20 kVA and up to 50 kVA at LV	923
Connection of other generation greater than 50 kVA at LV	1,292
Connection of generation up to 250 kVA at HV	1,477
Connection of generation greater than 250 kVA and up to 1 MVA at HV	1,846
Connection of generation greater than 1 MVA at HV	3,465
Connection of generation up to 10 MVA at EHV and at 132 kV	5,445
Connection of generation greater than 10 MVA and up to 50 MVA at EHV and at 132 kV	5,445
Connection of generation greater than 50 MVA	6,436

Note

“LV”, “HV”, or “EHV” in the table previous denotes the highest voltage of assets installed including any associated Reinforcement or diversionary works.

Small Scale Embedded Generation (SSEG) is defined as a source of electrical energy rated up to and including 16 Amperes per phase, single or multi-phase, LV and designed to operate in parallel with our Distribution System.

These charges are based on NGED's direct labour and overhead rates at the time of print. Charges are subject to change. The above Feasibility Study charges are exclusive of VAT which should be added at the prevailing rate.

Terms

The charge for carrying out a Feasibility Study will normally be provided within 10 working days. Following payment and provision of appropriate data, studies will typically require 2 – 10 weeks depending on the complexity of the study work required.

High volume requests may take longer to process and would be priced individually based on the time taken to compile the requested information but would not exceed the rates above.

In the event that enquiries need information from original equipment suppliers e.g., to seek enhanced ratings, reverse power flows etc. NGED will use its best endeavours to obtain this but cannot be held responsible for non-provision or delayed provision of information from such third parties. Where such third parties require payment for information, the costs of obtaining it will be advised.

Although all reasonable efforts will be made to ensure the accuracy of data provided, NGED shall have no liability in contract, tort or otherwise to the enquirer or any other person for any loss or damage resulting from any delay in providing the data or any reliance placed upon it whether or not NGED is proved to have acted negligently.

We reserve the right to exclude information that may be considered confidential to an individual customer.

Cheques should be made payable to National Grid Electricity Distribution (East Midlands) plc.

All prices above will be subject to VAT at the prevailing rate.

5.1.5. Application Assessment and Design – Illustrative Costs

From 1st May 2018 NGED began charging for expenses occurred during the preparation of connection offers for connections that require work at or above 22 kV. These costs are referred to as Assessment and Design (A&D) Fees.

These fees are now required even if the connection offer is not accepted, and when the scheme is accepted there will be additional costs to secure your connection and to cover immediate costs. If you require any further information, please visit https://connections.nationalgrid.co.uk/information-hub.

Table 5 Illustrative Costs for Application Assessment and Design

Category	Minimum Charge £	Additional Charge £	Charge at Connection Offer £	Charge at Acceptance £
Demand				
Connection greater than 250 kVA and up to 1 MVA at LV	1,017		0	1,017
Connection up to 250 kVA at HV	1,224		0	1,224
Connection greater than 250 kVA and up to 1 MVA at HV	1,224		1,224	0
Connection greater than 1 MVA and up to 3 MVA at HV	1,676		1,676	0
Connection greater than 3 MVA and up to 10 MVA at HV	2,846		2,846	0
Connection up to 10 MVA at EHV and at 132 kV	4,239		4,239	0
Connection greater than 10 MVA and up to 50 MVA	5,229		5,229	0
Connection greater than 50 MVA	7,116		7,116	0
Generation				
Connection of a single Small Scale Embedded Generator	187	N/A		
Connection of other generation up to 20 kVA not covered by the above at LV	620		0	620
Connection of other generation at LV greater than 20 kVA and up to 50 kVA	1,241		0	1,241

Category	Minimum Charge £	Additional Charge £	Charge at Connection Offer £	Charge at Acceptance £
Connection of other generation greater than 50 kVA at LV	1,674		0	1,674
Connection of generation up to 250 kVA at HV	2,003		0	2,003
Connection of generation greater than 250 kVA and up to 1 MVA at HV	2,251		2,251	0
Connection of generation greater than 1 MVA at HV	3,184		3,184	0
Connection of generation up to 10 MVA at EHV and at 132 kV	5,910		5,910	0
Connection of generation greater than 10 MVA and up to 50 MVA at EHV and at 132 kV	6,374		6,374	0
Connection of generation greater than 50 MVA	8,539		8,539	0

Note

"LV", "HV", or "EHV" in the table previous denotes the highest voltage of assets installed including any associated Reinforcement or diversionary works.

"Small Scale Embedded Generation" is defined as a source of electrical energy rated up to and including 16 Amperes per phase, single or multi-phase, LV and designed to operate in parallel with our Distribution System.

Payment

You will be contacted by us to confirm receipt of your application. Once we know works at EHV are required we will discuss this with you and follow it up by providing a written notice, normally via email. The notice will confirm that you will be required to pay the A&D Fee.

If we are unsure if your proposed connection will require works at EHV, we will discuss this with you to alert you to the fact. As soon as we know if EHV works are required we will inform you and give you the opportunity to withdraw your application at no cost. If you continue an invoice for A&D fees will be sent once the connection offer is complete and it will be payable in full. Additional charges may be applied in relation to the effect of the proposed connection on the transmission system, owned by National Grid.

If the connection falls within an Active Network Management (ANM) zone you are able to apply for either a Conventional Connection offer or an Alternative Connection offer. If you chose to have both offers you will be charged for the conventional offer as above and a reduced fee for the ANM connection offer which will be based on the work involved in creating the offer.

All prices above will be subject to VAT at the prevailing rate.

5.2. Attachment 2 – Other Related Information Sources

5.2.1. Useful documents and contacts

Ofgem

Ofgem regulates the electricity and gas markets in Great Britain. Their website includes consultation and decision documents relating to electricity and gas industries.

www.ofgem.gov.uk

Distribution Code

This sets out all the material technical aspects related to connections to and operation of the distribution system. Copies are available from either Ofgem's or NGED's website. For queries related to the distribution code contact:

Christian Hjelm
Network Design Manager
National Grid Electricity Distribution
Avonbank
Feeder Road
Bristol
BS2 0TB
Email: nged.ltds@nationalgrid.co.uk

National Engineering Recommendations

A number of National Engineering Recommendations are referenced in the Distribution Code. These are available from the ENA.

Energy Networks Association
4 More
London Riverside
London
SE1 2AU
0204 599 7700
www.energynetworks.org

Distributed Generation Connection Guides

The ENA also provides Distributed Generation Connection Guides, which can be obtained from ENA Document Catalogue (ena-eng.org).

Guaranteed Standards

Guaranteed Standards of Performance for connections are set out in the Electricity (Standards of Performance) Regulations 2015 and under the direction of Distribution Licence Conditions 15 & 15A. Further information regarding Engineering Recommendations, Distributed Generation and Guaranteed Standards is available from:

Energy Networks Association
4 More
London Riverside
London
SE1 2AU
0204 599 7700
Email: info@energynetworks.org
www.energynetworks.org

Statement of Methodology and Charges for Connection to National Grid Electricity Distribution (East Midlands) PLC's Electricity Distribution System

The Statement of Methodology and Charges for Connection consists of a Connection Charging Methodology that has been approved by the Gas and Electricity Markets Authority ('the Authority') and a Connection Charging Statement, the form of which has been approved by the Authority. The document also provides other information to explain the options available for obtaining a connection and the processes that must be followed.

The Connection Charging Statement provides the basis of charges for the provision of a connection whilst the Connection Charging Methodology describes the methodology under which Customers will be charged for a connection to NGED.

A copy of the statement is available from the NGED website National Grid - Charging Statements and Methodology.

For queries related to this document please contact:

Kester Jones
Head of Connections
National Grid Electricity Distribution
Herald Way, Pegasus Business Park
Castle Donington
DE74 2TU
Email: nged.ltds@nationalgrid.co.uk

Condition 5 Statements

Three statements are produced and updated annually in accordance with Condition 5 of our Licence that cover the following areas:

i) Charges for the use of the network including a schedule of adjustment factors to be made in respect of distribution losses. This statement also gives a list of demand-constrained zones where restrictions may be applied to the use of certain timeswitch regimes for off peak loads.
ii) Charges for the connection of new load or generation to the distribution network
iii) Charges for distribution Metering and Data Services. These include meter provision and meter operation.

Copies of the statements are available from our website www.nationalgrid.co.uk. For queries related to these documents please contact:

Kester Jones
Head of Connections
National Grid Electricity Distribution
Herald Way, Pegasus Business Park
Castle Donington
DE74 2TU
Email: nged.ltds@nationalgrid.co.uk

Use of System Agreement

Before an Authorised Electricity Operator can use the network to supply connected customers, they need to enter into a Use of System Agreement. Copies of our Use of System Agreement are available from:

Kester Jones
Head of Connections
National Grid Electricity Distribution
Herald Way, Pegasus Business Park
Castle Donington
DE74 2TU
Email: nged.ltds@nationalgrid.co.uk

Specifications

Users who require more information on the specifications used for equipment forming part of the distribution network should contact:

Carl Ketley-Lowe
Engineering Policy Manager
National Grid Electricity Distribution
Toll End Road
Tipton
DY4 0HH
Email: nged.ltds@nationalgrid.co.uk

5.2.2. Contact details for other interconnecting networks

National Grid Electricity Transmission
NGT House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

National Grid Electricity Distribution (West Midlands) plc
Avonbank
Feeder Road
Bristol
BS2 0TB

Northern Powergrid
98 Aketon Road
Castleford
WF10 5DS

UK Power Networks
Fore Hamlet
Ipswich
IP3 8AA

5.3. Attachment 5 – Geographic Network Diagrams

Please see separate file.

Registered Office: Avonbank, Feeder Road, Bristol BS2 0TB
nationalgrid.co.uk

nationalgrid