

**ANNEX**  
**FORM OF LONG TERM DEVELOPMENT STATEMENT**

**INTRODUCTORY SECTION**

This is a stand-alone section that is part of the statement, but can be published on the Licensee's website or provided free of charge to people who are considering purchase of a copy of the statement. It contains sufficient information to enable any person to understand the scope of the information contained within the long term development statement and to assess if it would be of use to them.

This section describes the:

1. Purpose of Statement

This explains the purposes of paragraph 1 of standard condition 25 of the electricity distribution licence which include:

- Improving availability of distribution network information
- Furnishing developers with sufficient information to carry out initial assessments on network capability
- Informing users of development proposals for the distribution network
- Informing members of the public of the correct point of contact within distribution companies for specific enquiries

2. Content of Statement

2.1 Summary Information

This explains that the content of this section of the statement includes:

- High level information relating to the design and operation of all voltage levels of the distribution network
- Small scale geographic plan providing an overview of the 132kV (except in Scotland), EHV networks and substations described in the detailed information section

## 2.2 Detailed Information

The introductory section states that detailed information is provided for 132kV networks (EHV in Scotland) to the lower voltage busbars of primary substations but includes details of any interconnectors at lower voltages that are needed to assess the capability of the higher voltage networks. This explains that the content of this section includes:

- Schematic diagrams detailing normal operating configurations of the distribution network
- Circuit data
- Transformer data
- Load information
- Fault level information

## 2.3 Network Development Proposals

This explains that the content of this section includes:

- For network development proposals where finance has been secured, details of the:
  - Work that is intended to be carried out
  - Expected timescale
  - Impact on the distribution network
- 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 assess potential future development of the distribution network, based on the detailed information within the statement.

3. Cost

The introductory section clearly states that there may be a charge for the statement or part of the statement and if there is a charge the level of this charge as this will assist any person in deciding if they require this information source.

4. Contact Point Within the Distribution Company for Further Information

The introductory section should include details of the contact point within the distribution company to:

- 4.1 Request a copy of the statement
- 4.2 Discuss a specific enquiry relating to a new connection to the distribution network
- 4.3 Discuss a specific enquiry relating to an existing connection to the distribution network

## SUMMARY INFORMATION

This section includes information about:

- Design philosophies and practices
- Engineering recommendations and standards (references to information sources)
- High level summary of the structure of and design policies applied to the lower voltage networks (20kV and below)
- General network characteristics including descriptions of:
  - Standard plant and equipment sizes used
  - Harmonics (design standards and areas where harmonic levels are known to be an issue)
  - Method of earthing used on different voltage levels or regions
  - Protection systems used
  - Network automation (existing usage and strategy for extension)
  - Use of autoreclosers (design policy and preferred settings)
  - Operating voltages (target and bandwidth) for each voltage level of the distribution network
  - Use of line drop compensation
  - Load management areas
  - Areas where constraints or other restrictions are used to maximise network utilisation
- The approximate locations of 132kV and EHV circuits and substations are shown on geographic plan(s) of sufficient scale to allow a user to identify if there is network at these voltage levels in an area
- Other sources of network and charging information published by the distribution company including competition in connections information (references to other sources of information are sufficient provided that the method of obtaining the information is clearly identified)
- Any transmission or distribution networks connected to the distribution network detailed in the statement (with interface points clearly identified), together with a contact point within other companies for information (a website address could suffice or a company name and head office address)

## DETAILED INFORMATION

This section contains details of the 132kV networks (EHV in Scotland) to the lower voltage busbars of primary substation (including details of any interconnectors at lower voltages that are needed to assess the capability of the higher voltage networks).

Schematic diagrams are provided of sufficient scale and clarity to assist a user in interpreting and using the detailed network information.

Information is provided for:

- Circuits (Table 1)
- Transformers (Table 2)
- Load (Table 3)
- Fault level (Table 4)

Other information can be made available for a specified part of the distribution network on request. The main categories of this information are listed in the statement and include:

- Circuits - Zero sequence impedance data
- Circuits – Susceptance data for voltage levels other than 132kV
- Transformers – Zero sequence reactance data
- Transformers – Earthing details (including identification of hot substation sites)
- Load – Details of the limitation on the firm capacity of a substation
- Fault level – Details of each contribution to fault current at a node
- Calculated level of rms break currents decremented to the expected protection operation time
- Details of the limitation on the fault level rating at on or more specified nodes
- Indicative cost of relieving the limitation and the resulting increase in fault level headroom

The statement clearly describes the procedure for obtaining this information, which requires the:

Person making the request to define the specific:

- Areas of interest including details of the substation group and the substation or busbar node names
- Information required (selected from the options provided in the statement)

Distribution company to define the:

- Contact point for information requests
- Timescales for providing information
- Cost for providing additional information
- Format in which the information will be provided (tabular or narrative)

**TABLE 1 – CIRCUIT DATA**

S/S Group	S/S or Busbar Name		Operating Voltage	Positive Sequence Impedance		Susceptance	Rating Information	Circuit Length
	Node 1	Node 2		R	X			
			kV	% on 100 MVA base		Amps or MVA	km	
				Note 3		Note 4	Note 5	Note 6

Notes

- 1 Data should be clearly linked with transformer data, loading information and network schematic diagrams contained within the statement.
- 2 100 MVA is suggested as a convenient base for impedance data.
- 3 If X and R values are not stored separately within the licensee's distribution network model then an X/R ratio is an acceptable replacement for the X and R fields in this table.
- 4 Susceptance information should be included for 132kV networks and available on request at other voltage levels.
- 5 Rating information that is used by the licensee should be provided together with any explanatory note required to assist a user to interpret the information.
- 6 Details of circuit length should be included in this table or clearly marked on schematic diagrams unless this information can be estimated by the user from the geographic plans within the statement.

**TABLE 2 – TRANSFORMER DATA**

S/S Group	S/S or Busbar Name				Vector Group	Positive Sequence Impedance		Zero Sequence Reactance	Tap		Transformer Rating	Reverse Power Capability	Method of Earthing
	Node 1	Voltage	Node 2	Voltage		R	X	X	Minimum	Maximum			
		kV		kV		% on 100 MVA base			%	%	MVA	MVA	
							Note 2	Note 3	Note 4			Note 5	

Notes

- 1 Data should be clearly linked with circuit data, loading information and network schematic diagrams contained within the statement
- 2 100 MVA is suggested as a convenient base for impedance data.
- 3 Zero sequence reactances should be included for 132kV networks and available on request at other voltage levels
- 4 The tapping range can be expressed as a percentage provided that the voltage base is clearly defined.
- 5 If the reverse power capability of a transformer has not been assessed, this should be shown as "NOT KNOWN" in this table
- 6 This table should be supplemented by narrative that provides a clear explanation of the characteristics and model of any non-standard items of plant



**TABLE 3 – LOAD INFORMATION**

S/S Group	S/S or Busbar Name	Voltage Level	Maximum Load of Previous Year		Forecast Load Information					Firm Capacity of S/S	Minimum Load Scaling Factor
			Note 2	Note 2	Year 1	Year 2	Year 3	Year 4	Year 5		
		kV	Note 2	Note 2	Year 1	Year 2	Year 3	Year 4	Year 5		
			Notes 3 and 5	Notes 4 and 5	Note 6					Note 7	Note 8

Notes

- 1 Data should be clearly linked with network schematic diagrams
- 2 Maximum load information for the previous year would be detailed as a description of the existing system
- 3 Unit of measurement (MW or MVA) should be clearly defined (either is acceptable)
- 4 Reactive power requirement of the network can be recorded as reactive power demand (MVARs) or quoted as a power factor
- 5 Estimated values should be clearly identified within the table or by a generic statement  
Forecast load information (define unit as MW or MVA) for five years should be provided. Where this applies to a single customer, then the
- 6 distribution code submission (or equivalent) from the customer should be used.
- 7 A clear definition of firm capacity should be provided
- 8 Minimum load scaling factor can be defined within the table or by a generic statement

**TABLE 4 – FAULT LEVEL INFORMATION**

S/S Group	S/S or Busbar Name	Voltage Level	System Impedance		Existing System Fault Currents		Rating	
			R	X	Peak Make	rms Break	Make	Break
		kV	% on 100 MVA base				kA	kA
			Note 2	Note 2	Note 3	Notes 3 and 4		
			Notes 5 and 6					

Notes

- 1 Data should be clearly linked with network schematic diagrams contained within the statement.
- 2 100 MVA is suggested as a convenient base for impedance data.
- 3 Calculated fault currents should include all relevant contributions from synchronous and induction machines as well as other parts of the distribution network and other connected networks (transmission and distribution). A clear definition of the method used to calculate fault currents (including a description of the application of engineering recommendation G74) should be provided in this or the summary information section.
- 4 The undecrementd rms break current may be provided (as long as clearly defined with accompanying explanatory note)
- 5 Three phase fault legvel information should be provided for each node.
- 6 Single phase fault level information should be provided for any node where single phase faults are more onerous than three phase faults.

## **DEVELOPMENT PROPOSALS**

The statement clearly identifies areas of the network that are expected to reach or exceed their capability within five years of the date of publication of the information. This may be highlighted in Tables 3 and 4 (within the Detailed Information section) or shown separately within the Development Proposals section.

For development proposals on the network described in the detailed information section of the statement, where finance has been secured (either within the company or from a third party) and as such the proposal can be viewed as firm, the following details are included in the statement:

- Area of the network affected
- Outline of the planned works
- Reason for carrying out the works
- Expected timescale
- Expected impact on distribution network capability (including details of any network capability limitation that is relieved)

Where known, detailed information of planned additions to the network is provided in line with Tables 1 to 4, so that the user can make an assessment of future opportunities on the distribution network.

The statement contains a description of design policies and practices that are used by the licensee to assess the distribution network and identify likely options for its development. A user should have sufficient information to make a reasonable assessment of likely developments on the distribution network, using the detailed information within the statement about the current network and the firm development proposals. This includes a description of the process for managing network development at interface points with other transmission and distribution networks.

A high level summary of interest in demand and generation connections to parts of the distribution network described in the detailed information section is also be provided. This summary will be a snapshot of activity on a particular date that is clearly stated in the statement. A table is required for each substation group defined in the Detailed Information section. This is likely to be at the main interface points between the 132kV and EHV distribution networks (interface with transmission network in Scotland) or other similarly sized defined parts of the distribution network.

	<b>DEMAND</b>		<b>GENERATION</b>	
	Number received in previous year		Number received in previous year	
	Total Number	Total Capacity	Total Number	Total Capacity
Connection offers accepted by customer				
Connection offers made (not yet accepted by customer)				
Budget estimates provided				

This should inform the user of the statement of the level of interest in each area of the network and will assist in the analysis of future opportunities on the distribution network.

## APPENDIX 1 – PROCESS FOR ASSESSING TREATMENT OF CUSTOMER SPECIFIC INFORMATION

For information that the licensee considers to fall into the category referred to in paragraph 8 of standard licence condition 25 of the distribution licence, (“to relate to the affairs of a person where publication of that matter would or might seriously and prejudicially affect his interests”), then the following process should be adopted.

1.	Does the information need to be disclosed by the licensee to fulfil the obligations under SLC 25 of the distribution licence?		
	YES ↓	Not in breach of Section 105 of the Utilities Act 2000 or SLC 39 of the distribution licence	NO → Omit the information from the statement
2.	Does the information relate to an individual (i.e. not to a company)?		
	NO ↓	Data Protection Act does not apply	YES → Licensee must be satisfied that disclosure of the information complies with the Data Protection Act
3.	Does the customer object to disclosure of the information?		
	YES ↓		NO → Include the information in the statement
4.	Can the customer’s objection be resolved by the licensee presenting the information in a different format in the statement?		
	NO ↓		YES → Include the information in the statement in that format
5.	Would the customer accept that the information would be made available following a specific request from a user of the statement?		
	NO ↓		YES → Reference information in the statement and provide it to any user who specifically requests it
6.	Refer matter for determination by the Authority under paragraph 9 of SLC 25 of the distribution licence providing details of the:		
		<ul style="list-style-type: none"> <li>• Specific issue</li> <li>• Discussions between licensee and customer</li> </ul>	
	In considering its decision, the Authority may choose to contact the customer directly.		

Note:

Where such information may be involved, it is essential that this process is started early enough to enable any issues to be resolved without causing a delay to the publication of the long term development statement.