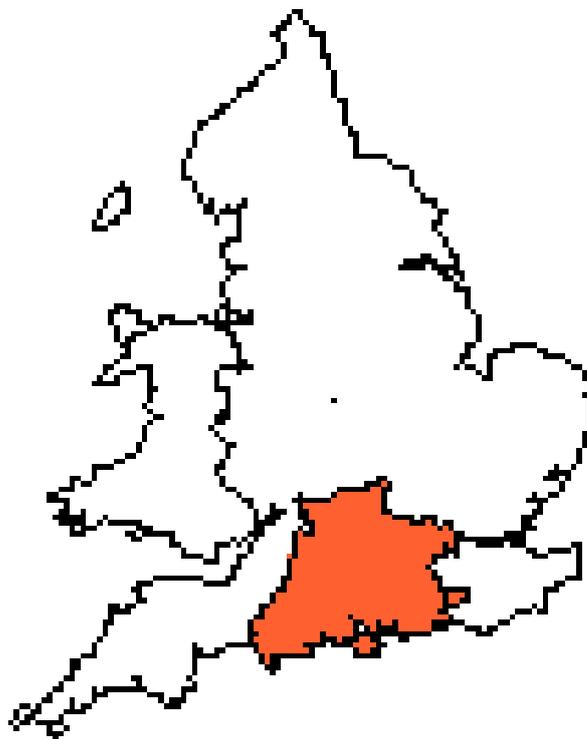




Scottish & Southern
Electricity Networks

LONG TERM DEVELOPMENT STATEMENT FOR SOUTHERN ELECTRICITY POWER DISTRIBUTION PLC'S ELECTRICITY DISTRIBUTION SYSTEM



NOVEMBER 2019

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SOUTHERN ELECTRIC POWER DISTRIBUTION PLC LONG TERM DEVELOPMENT STATEMENT

FOREWORD

Southern Electric Power Distribution plc (SEPD) is pleased to present this Long Term Development Statement (LTDS) for its electricity distribution network, both In-Area and Out-of-Area¹. It is produced by Southern Electric Power Distribution plc in accordance with its Electricity Distribution Standard Licence Condition (SLC) 25. The statement covers the period 2019/20 to 2023/24.

The main purpose of the LTDS is to assist our existing and prospective users in assessing opportunities available to them for making new or additional use of our distribution system.

The assets referred to in this document are in the ownership of Southern Electric Power Distribution plc. They deliver electricity to about 3 million customers.

Although all reasonable efforts have been made to ensure the accuracy of data, SEPD does not accept any liability for the accuracy of the information contained herein and in particular neither SEPD, nor its directors or employees, shall be under any liability for any errors.

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¹ Out-of-Area are those SEPD owned networks not within the Southern Electric Power Distribution regional electricity company area.



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INTRODUCTORY INFORMATION (PART 1)

1 PURPOSE OF STATEMENT

This Long Term Development Statement (LTDS) is prepared in accordance with the direction given by the Authority (OFGEM) in compliance with paragraph 3 of SLC 25.

The purpose of this statement is to:

- Provide sufficient information which will assist existing and prospective new users who contemplate entering into distribution arrangements with the licensee, to identify and evaluate opportunities.
- Ensure the general availability of such information in the public domain.
- Inform users of distribution network development proposals.
- Provide users of the correct point of contact for specific enquiries.

Users of the distribution system should also be aware that the main document which governs development and operation of the distribution system is the Distribution Code. This code covers all material technical aspects relating to connections to and the operation and use of the distribution systems of the Licensee.

2 CONTENTS OF STATEMENT

This LTDS is in two parts.

- Part 1 provides a brief overview of Southern Electric Power Distribution plc's distribution system in central southern England and in Out-of-Area networks.
- Part 2 gives detailed information of the system.

The statement contains a range of information associated with our EHV (132, 66, 33 and 22 kV) distribution system including the HV (11 and 6.6 kV) busbar of primary substations.

More specific Information relating to HV and LV systems is available on request. A price list for the provision of this data is included in Appendix 1.

Part 2 of the statement gives:

- Detailed information on the guiding principles for planning the distribution system, company internal standards, design policies and network characteristics.
- Schematic and geographical plans showing the EHV system including location of EHV/EHV and EHV/HV substations.
- Details of embedded generation.
- Planned network development proposals for which financial approvals have been given are shown in Appendix 3. They provide a summary of the work to be

carried out, timescale and area of the network impacted by each proposal. These exclude like for like replacement (as this does not change system capability) and system developments for new or existing users.

- Detailed information relating to:
 - Circuit Data, Part 2 Table 1
 - Transformer Data Part 2 Table 2
 - Demand Data Part 2 Table 3
 - Fault Level Data Part 2 Table 4a & 4b
 - Generation Part 2 Table 5
 - Connection Interest Part 2 Table 6
- Demand forecast methodology is formulated around a combination of important contributing factors impacting demand. Historic growth rates for each primary substation are calculated before being banded into four growth trends of Zero, Low, Medium or High. Individual future growth rates are based on the calculated historic trend and key drivers including committed connections, geographic economic factors derived from local authority development plans and demand forecast from large users with knowledge of major changes in connected load.
- The key assumptions included in the demand forecast are as follows:
 - The average cold spell (ACS) forecast assumed system peak demand is adjusted so the annual forecast references to a common temperature base. A weighted average temperature, where ambient temperature is considered over a three-day period, is used in the calculation and appropriate adjustments are made to demand readings to produce the ACS values, which is what the demand would have been if the ambient temperature had been 0° C.
 - The forecast includes contributions (power export) from embedded distributed generators (DG) running at the time of system peak. The projection includes an annual average of 8% contribution from DG.
 - Consistent running arrangement and system configurations are considered. Recorded substation peak demands are normalised to account for abnormal running arrangement to ensure the forecast is consistent with previous years running arrangement.
 - Individual demand forecast submissions from large consumers are factored into forecasts.
 - Committed new loads and new connections are assumed to materialise in the manner predicted i.e. user timing and usage is assumed to occur as advised/requested by customer.
- SEPD will undertake further assessments to determine whether intervention is required where the calculated planning fault levels, identified in Table 4, exceed 95% of the circuit breaker fault level rating. The additional assessments undertaken by SEPD include, but are not limited to, site specific protection settings analysis and circuit breaker trip testing.
- If further assessments confirm that intervention is required SEPD will determine the most economic, efficient and cost-effective solution to reduce the overall fault

level. Possible mitigation works include, but are not limited to, opening the bus-section circuit breaker, reconfiguring the network, installing fast response automation and extending circuit breaker trip times.

- Fault level information is published for planning purposes only. It should not be used for operational purposes and does not necessarily reflect current operational circumstances.

3 CONTACT DETAILS

The LTDS is available free of charge by sending an email to:

system.planning.south@sse.com

or by making a request through the Southern Electric Power Distribution website:

<http://www.ssen.co.uk/LTDS/>

For information relating to LTDS, or to provide feedback:

Head of Planning and Investment (South)
Southern Electric Power Distribution plc
1 Forbury Place
43 Forbury Road
Reading
RG1 3JH
E-mail: system.planning.south@sse.com
Tel: 0118 9534664

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

Connections and Engineering
Customer Service Centre
Scottish and Southern Electricity Networks
Walton Park, Walton Road
Cosham, Portsmouth
PO6 1UJ
E-mail: connections@sse.com
Tel: 0800 0483516

Enquiries relating to connection of generators should be addressed to:

- a. For enquiries involving greater than 50kW,

Major Connections Contracts (MCC)
Scottish and Southern Electricity Networks
Perth Training Centre
Ruthvenfield Way
Inveralmond Industrial Estate
Perth
PH1 3AF
E-mail: mcc@sse.com
Tel: 0845 0724319

- b. For enquiries involving less than 50kW,

Microgeneration Connections South
Scottish and Southern Electricity Networks
Walton Park
Walton Road
Portsmouth
PO6 1UJ
E-mail: south.microgen@sse.com
Tel: 03450786770

Enquiries relating to connection of generators should review the decision tree via the Southern Electric Power Distribution website or review the “My Generation” PDF for assistance:

<https://www.ssen.co.uk/GenerationConnectionsHome/>

(The generation connection section can be found from the connection home page.)
Guides are provided in this link to help you apply for your generator connection.

Application forms are available through the Energy Networks Association website:

<http://www.energynetworks.org/electricity/engineering/connecting-to-networks.html>

Alternatively, the different applications can be found here:

<http://www.ssen.co.uk/Offlineconnectionsapplications/>.

Enquiries relating to the provision of copies of the Statement of Charges for "Use of Distribution System" should be addressed to:

Distribution Pricing Team
Scottish and Southern Electricity Networks
Inveralmond House
200 Dunkeld Road
Perth
PH1 3AQ
Email: DistributionPricingTeam@sse.com

Enquiries relating to the provision of copies of the "Statement of Methodology and Charges for Connection to the Distribution System" should be addressed to:

Connections Policy Team
Scottish and Southern Electricity Networks
Inveralmond House
200 Dunkeld Road
Perth
PH1 3AQ
Email: connections.policy@sse.com

The Connection and Use of System charging statements can be viewed on our website. Our Connection charging statements are revised from time to time and our Use of System charging statements are revised at least annually. Revised Use of System charges normally take effect from 1 April of each year. The latest documents can be viewed via the link below:

<http://www.ssen.co.uk/Library/ChargingStatements/SEPD/>

4 OTHER INFORMATION SOURCES

Distributed Generation Connection Guide

The ENA produces connection guides to help users as an owner or developer of distributed generation to connect distributed generation to the UK's electricity distribution networks.

The guides can be viewed by following the link below:

<http://www.energynetworks.org/electricity/engineering/distributed-generation/dgconnection-guides.html>

Guaranteed Standards

In accordance with The Electricity (Standards of Performance) Regulations 2015, DNOs are obliged to meet guaranteed standards of performance.



OFGEM, the industry regulator, sets these standards. These guaranteed standards are laid out in three documents available from the ENA website.

The documents can be viewed by following the below links:

The Guaranteed Standards

http://www.legislation.gov.uk/uksi/2015/699/pdfs/uksi_20150699_en.pdf

Part 2 – Services and Standards for Metered Connections

Part 3 – Services and Standards for Unmetered Connections

Process to Request Additional Network Data

Enquiries relating to the provision of additional network data to that contained in the LTDS should be sent to:

system.planning.south@sse.com