

1. SCOPE

This document details the Company's requirements for inspection and testing of new Low Voltage supplies at the time of first energisation. Whilst inspection and testing of all new supplies is undertaken to the same standard this document specifically relates to LV supplies constructed under Ofgem's Competition in Connections regime.

The document forms the Appendix to, and must be read in conjunction with, G81 part 3 - Framework for design and planning, materials specification, installation and record for low voltage housing development installations and associated new HV/LV distribution and/or G81 part 6 - Framework for Installation and Records of Commercial and Industrial Underground Connected Loads up to and including 11kV

This document only applies to new developments and is not to be applied retrospectively.

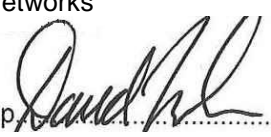
2. ISSUE RECORD

This is a **Controlled** document. The current version is held on the EN Document Library.

It is your responsibility to ensure you work to the current version.

Issue Date	Issue No	Author	Amendment Details
September 2014	1	Carl Woodman	Created to capture inspection and testing requirements to fill a void caused by archiving old documents (EPS-04-001 and EPS-01-006)
March 2020	2	Matthew Jones	Updated data capture procedure, reference to Radar connections platform. Removed redundant hyperlinks, updated formatting throughout.

3. ISSUE AUTHORITY

Author	Owner	Issue Authority
Matthew Jones Senior Asset & Design Engineer	Malcolm Bebbington SPM Distribution Network Manager David Neilson SPD Distribution Network Manager	Jim McOmish Head of Distribution Networks  pp. Date:13/05/2020.....

4. REVIEW

This is a **Controlled** document and shall be reviewed as dictated by business / legislative change but at a period of no greater than 5 years from the last issue date.

5. DISTRIBUTION

This document is not part of a Manual maintained by Document Control and does not have a maintained distribution list. This document is published to the SP Energy Networks Internet.

6.	CONTENTS	
1.	SCOPE.....	1
2.	ISSUE RECORD.....	1
3.	ISSUE AUTHORITY	1
4.	REVIEW	1
5.	DISTRIBUTION.....	1
6.	CONTENTS	2
7.	DEFINITIONS AND ABBREVIATIONS.....	3
8.	RELATED DOCUMENTS	4
9.	GENERAL.....	5
10.	INSPECTION AND TESTING.....	5
11.	APPENDIX 1	6
	11.1 PROPERTY DETAILS	6
	11.2 INSPECTION	6
	11.3 TESTING	6

7. DEFINITIONS AND ABBREVIATIONS

Applicant	The company wishing to undertake the contestable work.
Approved	Equipment approved in accordance with the Company's Equipment Approvals Procedure, and which is considered suitable for installation on the Company network.
Company	SP Distribution and SP Manweb
Housing Estate	A development consisting of domestic dwellings.
RAAdAR	Register of Adopted Asset Requests, the RAAdAR system manages the Competition in Connection activities.
SP Distribution (SPD)	The holder of the Distribution Licence for the network predominantly contained within southern Scotland.
SP Energy Networks (SPEN)	Part of the Scottish Power group of companies comprising those parts of the business responsible for the distribution and Transmission Networks within the SP Manweb, SP Distribution and SP Transmission areas.
SP Manweb (SPM)	The holder of the Distribution Licence for the network predominantly contained within Merseyside and North Wales.

8. RELATED DOCUMENTS

This document is one of a suite of specifications relating to this subject area and should be read in conjunction with the latest issues, versions or editions of the following documents:

(a) Energy Networks Association Documents:

Engineering Recommendation G81	Framework for design and planning, materials specification, installation and record for low voltage housing development installations and associated new HV/LV Distribution Substations.	Part 1: Design and Planning Part 2: Materials Specification Part 3: Installation and Records
Engineering Recommendation G81	Framework for Design and Planning, Materials Specification and Installation and Record of industrial and Commercial Underground Connected Loads Up to and Including 11kV.	Part 4: Design and Planning Part 5: Materials Specification Part 6: Installation and Records

(b) Company Internal Documents:

ESDD-02-012	Framework for Design & Planning of LV Housing Developments, including U/G networks and associated HV/LV S/S.
EPS-03-027	Materials Specification Framework for Greenfield Low Voltage Housing Estate Underground Network Installations and Associated New HV/LV Distribution Substations
EPS-03-031	Materials Specification Framework of Industrial and Commercial Underground Connected Loads Up To and including 11kV
ASSET-01-015	New Connections Independent Connection Provider (ICP) Approval Policy
CON-04-007	Operating Regime for Contestable Network Construction on Greenfield Housing Sites

(c) Other:

ESQCR	The Electricity Safety, Quality and Continuity Regulations 2002 (Statutory Instrument 2002 No 2665) and any subsequent additions/amendments
BS7671	Requirements for Electrical Installations. IET Wiring Regulations

9. GENERAL

The data and guidance contained within this document remains the property of the **Company** and may not be used for purposes other than that for which it has been supplied and may not be reproduced either wholly or in part, in any way whatsoever, nor may it be used by, or its contents divulged to, any other person whatsoever, without the prior written permission of the **Company**.

This document applies to new installations only and is not to be applied retrospectively.

The **Company** reserves the right to change the data contained within this document without notification. Although specific network extensions will have designs proposed by third parties. The **Company** retains the responsibility for the design of the distribution system and since the guidance cannot cover every eventuality, reserves the right to apply other criteria where necessary. The **Company** accepts no responsibility for any inaccuracies in, or omissions from the document.

The **Applicant** is responsible for ensuring they have all relevant information to undertake the work. Only **Applicants** possessing the appropriate skills, training, experience and accreditation as detailed in **ASSET-01-015**, shall use the data and guidance contained within this document.

The data and guidance contained within this document gives details on materials and does not embrace the physical design and construction of the distribution system or the associated safety, environmental and legal requirements.

Electrical testing shall only be carried out by suitably authorised, trained and qualified persons

Further **Company** documentation is accessible at:
https://www.spenergynetworks.co.uk/pages/document_library.aspx

10. INSPECTION AND TESTING

When new Equipment is to be connected to the system for the first time then prior to connection to the system, the Equipment shall be inspected and electrically tested in accordance with Appendix 1.

Records of all tests shall be retained for a minimum period of 5-years and shall be made available to the **Company** on request.

Records of inspection and testing shall be submitted using the form contained in Appendix 1 to the following address for **Housing Estates** in the SPD, or SPM licence areas respectively:

SP Energy Networks, SPD Network Connections, 55 Fullarton Drive Cambuslang Glasgow G32 8FA	Or	SP Energy Networks SPM Network Connections PO Box 290 Lister Drive Liverpool L13 7HJ
---	----	---

Alternatively, The **RAdAR** system provides an interface for ICPs to provide the required information to the **Company**.

For any further information please contact: GettingConnected@scottishpower.com

11. APPENDIX 1

11.1 Property Details	
Housing Estate Development Address:	
Plot Number/Name	

11.2 Inspection	
Prior to energisation the cut-out and service position shall be visually inspected to ensure it is secure and will not present a source of danger to staff or the public. Steps shall be taken to make evident to anyone approaching the equipment that the service position is or will be 'live'.	
Service Position Secure	Yes / No
PME Label required	Yes / No
PME Label attached to Cut-Out lower chamber cover:	Yes / No

11.3 Testing			
Complete and record results of the below tests. <i>(Complete/Delete as appropriate)</i>			
Service Cable Continuity Checked:	Yes / No		
Insulation Resistance of Service Cable:	MΩ	(min acceptable 5 MΩ)	
Phase Connected to (1ph services only):	R / Y / B		
Polarity Checked to be correct at Cut-Out:	Yes / No		
Polarity Checked to be correct at Meter:	Yes / No / Not Present		
Polarity Checked to be correct at Switch:	Yes / No / Not Present		
Correct polarity Labels fixed to Cut-Out:	L-N	L-N-E	
	L-L-L-N	L-L-L-N-E	
Correct polarity Labels fixed to Meter:	L-N	L-N-E	
	L-L-L-N	L-L-L-N-E	
	Not Present		
Correct polarity Labels fixed to Tails:	L-N	L-N-E	
	L-L-L-N	L-L-L-N-E	
	Not Present		
Voltage measured at Cut-Out Terminals:	V	(nominal 230V 1ph)	
Earth Loop Impedance (PME):	L-E	Ω	(max acceptable 0.35 Ω)
Earth Loop Impedance (SNE):	L-E	Ω	(max acceptable 0.8 Ω)
	L-N	Ω	
<i>Note: On SNE supplies an additional impedance test shall be undertaken using the Earth Loop test instrument. This shall be undertaken between L and N to determine the supply source impedance and the result recorded above.</i>			
Three Phase Supplies: Phase Rotation Checked Correct:		Yes/No	

Inspection & Testing Completed by	
Company name	
Name (Print)	
Signature	
Date	