

# Electricity Specification 281

Issue 14

August 2024

## Company-Specific Appendices to ENA Engineering Recommendation G81



## Amendment Summary

ISSUE NO. DATE	DESCRIPTION
<p><b>Issue 9</b> <b>July 2021</b></p>	<p>Restructure and reformatting to the latest template for Model Electricity Specification. Parts 2 and 5 have been combined into one new document. Addition of 1kV and 11kV LSOH sheathed cables in Appendix 2/5.</p> <p>Prepared by: Philip Howell Approved by: Policy Approval Panel and signed on its behalf by Steve Cox, Engineering and Technical Director</p>
<p><b>Issue 10</b> <b>December 2021</b></p>	<p>400mm<sup>2</sup> versions of 11kV cable added to Parts 2/5</p> <p>Prepared by: Philip Howell Approved by: Policy Approval Panel and signed on its behalf by Steve Cox, Engineering and Technical Director</p>
<p><b>Issue 11</b> <b>December 2022</b></p>	<p>Underground Link boxes updated to Mk3 versions Tape specifications updated. Section 5.1 updated to include Lucy VRN2a approved relay. Sections 5.4 and 7 to include approved transformer suppliers.</p> <p>Prepared by: Philip Howell Approved by: Policy Approval Panel and signed on its behalf by Steve Cox, Engineering and Technical Director</p>
<p><b>Issue 12</b> <b>May 2023</b></p>	<p>All lists of approved equipment have been removed. This detail is now contained on a spreadsheet hosted on Electricity North West's website. References to EPD307 removed, this document has been archived.</p> <p>Current version of approved equipment spreadsheet is <b>enwl-approved-equipment-list-14-04-23</b></p> <p>Prepared by: Peter Twomey Approved by: Policy Approval Panel and signed on its behalf by Steve Cox, Engineering and Technical Director</p>

**Issue 13**

Addition of Sicame LV jointing materials to approved material spreadsheet

**August 2023**

Current version of approved equipment spreadsheet is **enwl-approved-equipment-list-Aug2023**

Prepared by: Philip Howell

Approved by: Policy Approval Panel

and signed on its behalf by Paul Turner, PAP Chairperson.

**Issue 14**

ES 281 Part 2&5 combined has been updated to remove dated link to approved material spreadsheet.

**August 2024**

Current version of approved equipment spreadsheet is **enwl-approved-equipment-list-Aug2024** . The following changes have been made :

Correction of approved supplier for underground marker tapes

Addition of LV transformer tails

Addition of missing LV general wiring

Addition of missing Multipair and control cables

Prepared by: Philip Howell

Approved by: Policy Approval Panel

and signed on its behalf by Paul Turner, PAP Chairperson.

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## 1 Introduction

The design and installation of new connections to electricity distribution networks, provided by Independent Connections Providers (ICP), is governed by a nationally agreed document, prepared by the Energy Networks Association (ENA) and endorsed by the Office for Gas and Electricity Markets (Ofgem). That document, Engineering Recommendation (ER) G81, provides a “Framework for design and planning, materials specification, installation and records” and covers low voltage housing development installations and associated, new, HV/LV distribution substations, and industrial and commercial underground-connected loads up to and including 11kV. ER G81 requires licensed Distribution Network Operators (DNO) to provide, in addition, their own company-specific appendices, setting out in more detail their own requirements and specifications, for installations, which they will adopt.

ER G81 comprises 7 parts, covering the following aspects:

Part 1: Design and planning of new low voltage underground cable electricity networks, including their new associated HV/LV distribution substations, for housing developments;

Part 2\*: Materials specification for new low voltage underground cable electricity networks, including their new associated HV/LV distribution substations, for housing developments;

Part 3: Installation and records of new low voltage underground cable electricity networks, including their new associated HV/LV distribution substations, for housing developments;

Part 4: Design and planning of new underground connections at voltages up to and including 11kV for industrial and commercial loads;

Part 5\*: Materials specification for new underground connections at voltages up to and including 11kV for industrial and commercial loads;

Part 6: Installation and records of new underground connections at voltages up to and including 11kV for industrial and commercial loads;

Part 7: Design and planning, materials specification, inspection and records requirements for contestable diversionary and reinforcement works on underground cables and overhead lines not exceeding 33kV and on HV/LV distribution substations.

Electricity North West Limited has prepared its own appendices to Parts 1 to 6 of ER G81. These take the form of Parts 1 to 5\* respectively of this Electricity Specification (ES).

\*Parts 2 and Parts 5 of ER81 have been combined to avoid extensive duplication and make the document easier to read.

## 2 Definitions

<b>CP</b>	Electricity North West Code of Practice
<b>Distribution Substation</b>	11kV to LV, or 6.6kV to LV substation
<b>DNO</b>	Distribution Network Operator
<b>ENA</b>	Energy Networks Association
<b>Engineer</b>	Electricity North West's Competitive Adoptions Manager, or his delegated representative
<b>EPD</b>	Electricity North West Electricity Policy Document
<b>ER/EREC</b>	ENA Engineering Recommendation
<b>ES</b>	Electricity North West Electricity Specification
<b>HV</b>	High Voltage, i.e. either 11kV or 6.6kV
<b>ICP</b>	Independent Connection Provider
<b>NJUG</b>	National Joint Utilities Group
<b>NRSWA</b>	New Roads and Street Works Act 1991
<b>Ofgem</b>	Office of Gas and Electricity Markets
<b>Primary Substation</b>	33kV to 11kV, or 33kV to 6.6kV substation, or, for the purposes of this document, 132kV to 11kV substation

## 3 Documents Referenced

<b>New Roads and Street Works Act 1991.</b>	
<b>ENA ER G81</b>	Framework for design and planning, material specification, installation and record for LV housing development installations and associated HV/LV distribution substations and industrial and commercial underground connected loads up to and including 11kV.
<b>See also the documents referenced in each Part of this ES281.</b>	

## 4 Keywords

See the keywords listed in each Part of this ES281.