

# Electricity Specification 281

Issue 13

August 2023

## Company-Specific Appendices to ENA Engineering Recommendation G81



## Amendment Summary

| ISSUE NO.<br>DATE                           | DESCRIPTION  |
|---|--|
| <b>Issue 9</b><br><br><b>July 2021</b>      | <p>Restructure and reformatting to the latest template for Model Electricity Specification. Parts 2 and 5 have been combined into one new document.</p> <p>Addition of 1kV and 11kV LSOH sheathed cables in Appendix 2/5.</p> <p>Prepared by: Philip Howell</p> <p>Approved by: Policy Approval Panel<br/>and signed on its behalf by Steve Cox, Engineering and Technical Director</p>  |
| <b>Issue 10</b><br><br><b>December 2021</b> | <p>400mm<sup>2</sup> versions of 11kV cable added to Parts 2/5</p> <p>Prepared by: Philip Howell</p> <p>Approved by: Policy Approval Panel<br/>and signed on its behalf by Steve Cox, Engineering and Technical Director</p>   |
| <b>Issue 11</b><br><br><b>December 2022</b> | <p>Underground Link boxes updated to Mk3 versions<br/>Tape specifications updated.</p> <p>Section 5.1 updated to include Lucy VRN2a approved relay.</p> <p>Sections 5.4 and 7 to include approved transformer suppliers.</p> <p>Prepared by: Philip Howell</p> <p>Approved by: Policy Approval Panel<br/>and signed on its behalf by Steve Cox, Engineering and Technical Director</p>   |
| <b>Issue 12</b><br><br><b>May 2023</b>      | <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 References to EPD307 removed, this document has been archived.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</p> <p>Approved by: Policy Approval Panel<br/>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.

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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 |
| <b>XLPE</b>                    | Cross-Linked Poly-Ethene   |

## 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.