

ANNEX 1 - QUALIFYING STANDARDS

This Annex forms part of the **Distribution Code** technical requirements.

Distribution Code Requirements Implemented via Electricity Supply Standards

Copies of the following Engineering Recommendations and Technical Specifications are freely available from the **Distribution Code** website at <http://www.dcode.org.uk/> or from Energy Networks Association, 4 More London Riverside, London SE1 2AU, <http://www.energynetworks.org/>. A copy of Engineering Memorandum PO-PS-037 is available from Scottish Hydro Electric Power Distribution Ltd on request.

- 1 **Engineering Recommendation G5 Issue 5**
Harmonic voltage distortion and the connection of harmonic sources and/or resonant plant to transmission systems and distribution networks in the United Kingdom.
- 2 **Engineering Recommendation G59 Issue 3 Amendment 7**
Recommendation for the connection of generating plant to the distribution systems of licensed distribution network operators
- 3 (a) **Engineering Recommendation P2 Issue 7**
Security of Supply.
 (b) **PO-PS-037**
Distribution planning standards of voltage and of security of supply. (Parts of Scottish Hydro Electric Power Distribution Ltd Area).
- 4 **Engineering Report 130 Issue 3**
Guidance on the application of Engineering Recommendation P2, Security of Supply
- 5 **Engineering Recommendation P24**
AC traction supplies to British Rail.
- 6 **Engineering Recommendation P28 Issue 2**
Voltage fluctuations and the connection of disturbing equipment to transmission systems and distribution networks in the United Kingdom.
- 7 **Engineering Recommendation P29**
Planning limits for voltage unbalance in the United Kingdom for 132kV and below.
- 8 **Engineering Recommendation G83 Issue 2 Amendment 3**
Recommendations for the connection of type tested Small-Scale Embedded Generators (up to 16 A Per Phase) in parallel with low-voltage distribution systems.
- 9 **Engineering Recommendation G98 Issue 1 Amendment 4**
Requirements for the connection of type-tested micro generators (up to and including 16 A per phase) in parallel with public low voltage distribution networks on or after 27 April 2019.
- 10 **Engineering Recommendation G99 Issue 1 Amendment 6**
Requirements for the connection of generating equipment in parallel with public distribution networks on or after 27 April 2019.

11 Engineering Recommendation G100 Issue 2

Technical Requirements for Customers' Export and Import Limitation Schemes

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DPC6.7.3 Telemetry

The **User** shall provide such voltage, current, frequency, **Active Power** and **Reactive Power** pulses and outputs and status points from his **System** as are considered reasonable by the **DNO** to ensure adequate **System** monitoring. The telemetry outstation in such a situation will be provided, installed and maintained by the **DNO**.

DPC6.7.4 Telecontrol Outstation

If it is agreed between the parties that the **DNO** shall control the switchgear on the **User's System**, the **DNO** shall install the necessary telecontrol outstation. Notwithstanding the above, it shall be the responsibility of the **User** to provide the necessary control interface for the switchgear of the **User** which is to be controlled.

DPC6.7.5 Instructor Facilities

Where required by the **DNO**, the **User** shall provide accommodation for special instructor facilities specified by **DNO** for the receipt of operational messages.

DPC6.7.6 Data Entry Terminals

The **User** shall accommodate the **DNO's** data entry terminals for the purpose of information exchange.

DPC6.7.7 System Monitoring

Monitoring equipment is provided on the **DNO's Distribution System** to enable the **DNO** to monitor dynamic performance conditions. **Power Generating Modules** and **Power Generating Facilities** will need to provide signals for monitoring purposes. Where this monitoring equipment requires input signals from the **User's** side of the **DNO/User Ownership Boundary**, the **User** shall be responsible for the provision of suitable signals in accordance with the **Connection Agreement**.

For **Power Generating Modules** commissioned on or after 27 April 2019, additional monitoring equipment in accordance with Engineering Recommendation G99, as applicable, shall be provided by the **Generator**.

DPC6.7.8 Access to DNOs' Current and Voltage Signals from DNOs' Instrument Transformers and/or Transducers

DPC6.7.8.1 DPC6.7.8 applies where **Customers** need access to current and voltage signals at the **Connection Point** for their own purposes, such as energy management or for export or import limitation schemes.

DPC6.7.8.2 Current

In general **Customers** will not have access to the **DNO's** current transformers.

Where the **Connection Point** is at Low Voltage **Customers** shall generally provide their own current transformers. At all voltages **DNOs** will look to provide accommodation for appropriate current transformers in the **DNO's** termination equipment if possible.

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As an alternative the **DNO** may provide transducers with agreed outputs, or in some cases, be able to accommodate the **Customer's** ring current transformers on the **DNO's** secondary wiring. In all cases this is only possible if:

- **BSC** Code of Practice 1 or Code of Practice 2 metering is not supplied from those current transformers; and
- the burden can be shown to be acceptable.

Split current transformers where the components of the magnetic circuit are clamped or held secure in a similar way are acceptable. Clip-on current transformers and any current transformer that depends on spring pressure to maintain the magnetic circuit are deprecated because of the risks of the magnetic circuit becoming air gapped and the consequential inaccuracies.

DPC6.7.8.3 Voltage

Where the **Connection Point** is at **Low Voltage Customers** will generally be able to provide appropriate voltage signals themselves.

Where the **Connection Point** is at **HV Customers** will generally provide their own voltage transformers. For existing installations only, the **DNO** may be able to provide voltage signals from the **DNO's** voltage transformer if:

- **BSC** Code of Practice 1 or Code of Practice 2 metering is not supplied from those voltage transformers;
- the voltage supply is sub fused; and
- the burden can be shown to be acceptable.

In the case where a voltage supply is provided from the **DNO's** voltage transformer the **Customer** shall not make or change any connections or connected equipment without prior agreement with the **DNO** as this could adversely affect the **DNO's** equipment.

DPC6.8 Technical Requirements for Customers' Export and Import Limitation Schemes

Where the **DNO** and the **User** agree to the use of an export or import limitation scheme commissioned on or after 01 September 2022, that scheme shall be designed, installed, commissioned and operated in accordance with Annex 1 Item 11 EREC G100/2. EREC G100/2 complaint schemes will be accepted before that date, but compliance with EREC G100/2 is mandatory for such schemes on or after that date.