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Bringing energy to your door

Distribution Business Information for Meter Operators

Date: September 2024



REVIEW AND REVISION HISTORY

Date	Action/sections affected	By
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1. INTRODUCTION

This document provides the Distribution Business Information for Meter Operators relating to the activities they undertake at premises connected to the Electricity North West electricity network.

The information is provided in accordance with the Meter Operation Code of Practice, otherwise known as MOCOP.

Electricity North West Limited holds a distribution licence under the Electricity Act to distribute electricity serving the North West of England.

Metering point administration numbers (MPANs) for exit points of the Electricity North West distribution system commence with the following two digits: 16.

Exit points provided by other licensed Independent Distribution Network Operators (IDNOs) may exist and their assigned MPANs will commence with other digits. Any enquiries associated with those MPANs should be made to the licensed IDNOs as appropriate. The MPAN digits and contact numbers for IDNOs are stated in the MOCOP guide for service termination issue reporting.

2. DEFINITIONS

Registration Certificate	The certificate issued by the MOCOP Operator authorising their Meter Operative
Distribution Business	Electricity North West distribution business
Network	The distribution network owned and operated by Electricity North West
MOCOP Operator	A company which is a signatory to the Retail Energy Code (REC) and holds a Registration Certificate as defined in MOCOP
Meter Operative	An employee, agent or subcontractor appointed by the MOCOP Operator who performs the functions of the MOCOP Operator
MPAN	Metering Point Administration Number
MPRS	Metering Point Registration System
Work	Any activity associated with the installation, modification or removal of metering equipment including the energisation or de-energisation of the metering equipment.
CT	Current transformer
VT	Voltage transformer
Our, we, us	Pertaining to Electricity North West
You, your	Pertaining to the Meter Operator

3. GENERAL REQUIREMENTS

3.1 All Meter Operators who wish to work on the Network must be signatories to the REC, or be working on behalf of a REC meter operator company and hold a valid registration certificate before undertaking any works.

3.2 Meter operator companies who are not signatories to the REC or who are not working on behalf of a REC meter operator company will not be entitled to work on the Network.

3.3 All Meter Operators must comply with the Balancing and Settlement Code's (BSC) Metering Codes of Practice.

3.4 All meter operator companies must ensure that their meter operatives are aware, as necessary, of the requirements of all relevant legislation so as to secure their own safety and the safety of others.

3.5 Prior to commencing work on the Network, you shall ensure that your operatives possess the necessary skill, knowledge, attitude, technical knowledge and experience to work on the Network safely and to an acceptable standard of workmanship. They should be authorised in writing.

3.6 All Meter Operators shall provide a named contact, address and telephone number where a responsible person can be contacted at all reasonable times for the notification of accidents/incidents and the discussion and resolution of other safety matters.

4. SAFETY AND OPERATIONAL MATTERS

4.1. Contacts

4.1.1. A list of contacts, email addresses and telephone numbers for Electricity North West are given in Appendix 1 – Contact Details.

4.2. Distribution Safety

4.2 1 It is the responsibility of the Meter Operators to ensure that all work on or in the vicinity of electrical equipment undertaken by the Meter Operator is carried out in a safe and competent manner to a level complying with or exceeding the requirements of health & safety and electricity related legislation and, in particular, relevant requirements of the Electricity Act 1989 (as amended), the Utilities Act 2000, Electricity At Work Regulations 1989 (as amended) and the Electricity Safety, Quality and Continuity of Supply Regulations 2002 and the Model Distribution Safety Rules as published by the Energy Networks Association.

4.2.2 It is the responsibility of the Meter Operator to take note of distribution business information provided by Electricity North West and to circulate all relevant aspects to their operatives including, not exhaustively, such aspects as Electricity North West's emergency contact phone numbers, equipment risk assessments and notices of equipment defects and notifications of unsafe areas where special access arrangements through Electricity North West may apply.

4.2.3 Electricity North West's responsibilities as asset owner, having no contractual client relationship with Meter Operators who have separate licensed rights of access in fulfilling electricity supplier activities, are broadly limited to the provision of appropriate safety information relating to distribution equipment in relation to electrical, physical or other risks of which Meter Operators should be aware so as to ensure the safety of their operatives.

As such, Electricity North West will:

- Provide emergency contact information for reporting of dangerous occurrences and for reporting of defective distribution equipment.
- Provide safety and defect information so far as deemed relevant and appropriate to the service termination assets upon which meter operators are entitled to work.
- Reserve the right to audit Meter Operator organisations, including management, safety officers, competency appointing officers and meter operatives.

4.2.4 As asset owner and distribution metering point administrator, Electricity North West will also:

- Provide contact information for essential site commissioning information.
- Provide contact information for return of Electricity North West's meters.

4.2.5 Technical aspects associated with the Network are contained in ENWL Code of Practice 503 'Guidance Notes for Meter Operators Working at Service Terminations'.

4.3 Competent Persons

4.3.1 UK Legislation requires that all persons put to work on electrical equipment must be 'Competent Persons'. The nationally accepted definition related to work control is that:

"No person shall be engaged in any work activity where technical knowledge or experience or supervision is necessary to prevent a danger or where appropriate, injury, unless he possesses such knowledge or experience or is under such supervision as may be appropriate having regard to the nature of the work."

4.3.2 The Meter Operator has a duty to its employees of ensuring their competence for particular tasks they may be instructed to undertake.

4.3.3 As the employing organisation it is the responsibility of the Meter Operator to determine safe systems of work, assess competence of their own employees and sub-contractors, including initial and refresher assessments and any other form of validation and supervision that the Meter Operator deems necessary to ensure compliance with their processes and legislative requirements.

4.3.4 As Electricity North West has no client responsibility for uncontracted Meter Operator organisations, no responsibility towards assessing the competence of meter operatives exists and undertaking such assessment and certification would increase Electricity North West's liability in the area of assessing uncontracted third parties where such liability upon Electricity North West need not exist.

4.3.5 The Meter Operator's prime client contractual relationship is with the contractually appointing electricity supplier. It is through the existence of a contract with an electricity supplier that a Meter Operator may undertake activities on the Network. The responsibility for assuring competence of meter operatives and sub-contractors resides fully with the relevant Meter Operator and with their contracting electricity supplier client.

It is therefore Electricity North West policy that it will not assess or certify the competence of operatives of independent uncontracted Meter Operator organisations.

4.3.6 Electricity North West does, however, fully reserve distribution network operator rights to suspend or prohibit any activities of registered Meter Operators and any other parties with legitimate rights/licence to work upon Electricity North West's distribution system equipment and to eject such persons from site in such cases that dangerous activities, unacceptable condition of completed works or evidence of serious deficiency in competence are observed, assessed or reported by, or to, Electricity North West. The implicated party(parties) will not be allowed to complete any further work on the Network unless exonerated by a formal inquiry undertaken jointly by Electricity North West and the Meter Operator and / or following satisfactory further training / retraining and assessment to the satisfaction of Electricity North West.

4.4 Risk Assessment

4.4.1 The Meter Operator is responsible for determining and implementing a safe system of work for any activity or operation that is carried out.

4.4.2 The Meter Operator is responsible for ensuring risk assessments are carried out in according to their company process.

4.5 Tampering and Interference

4.5.1 Any signs of tampering with or interference to any equipment owned by us shall be reported immediately to us.

4.5.2 Meters fitted by a Meter Operator shall not show signs of damage, distress or interference.

4.6 Distribution Substation Access

The vast majority of service termination and metering equipment are housed in customers' buildings rather than in distribution or shared substations.

4.6.1 Equipment in Customer Buildings

Where service termination and metering equipment are housed in customer buildings access should be made by arrangement with the customer, as controller of the premises, and with supervision provided by the customer as appropriate according to the nature of their property and their installation. In such cases Electricity North West will generally not provide supervised access.

4.6.2 Equipment in Shared Substations with Independent Customer Access Arrangements

Access should be made by arrangement with the customer where service termination and metering equipment are housed in shared substations with independent customer access arrangements.

Supervision should be provided by the customer as appropriate according to the nature of the property and the installation.

4.6.3 Equipment in Distribution Substations

Access should be made by arrangement with Electricity North West where service termination and metering equipment are housed in distribution substations. Where access is required, we will provide an Authorised Person to accompany the Meter Operative.

Requests for supervised access should be made through the general enquiries contact number.

4.6.4 Unsupervised access to distribution substations by parties not undertaking contracted works on behalf of Electricity North West will not be granted under any circumstances.

4.6.5 Distribution keys will not be issued to any party other than for the purpose of allowing a party to conduct distribution network activity under contract to Electricity North West.

4.7 Reporting Requirements

Whilst we endeavour to maintain all our apparatus in a satisfactory condition, circumstances will arise where apparatus has deteriorated, or has been overloaded or has suffered damaged without the Distribution Business being immediately aware.

4.7.1 Incidents, Accidents and Dangerous occurrences

It is a requirement under relevant safety legislation to report incidents, accidents and dangerous occurrences to the relevant reporting authority and such incidents, accidents and dangerous occurrences that relate to Network must also be reported to Electricity North West at the earliest possible opportunity. Note that the remit of the ENW Call Handler is to record the fact that an incident has taken place and to initiate appropriate ENW reactions, commensurate with the nature of the incident. It does not extend to assuming control of the incident or contacting emergency services and the like.

The requirements for you to report to us do not remove any statutory reporting requirement that you may have nor do they remove any of your internal reporting requirements.

Points of contact and telephone numbers are given in appendix 1.

4.7.2 Defect Reporting

Service termination issues have been described, categorised, coded and agreed by all signatories to MOCOP. The reporting of supply point defects must be carried out in strict compliance with the guidance provided in MOCOP®.

This can be found at:

Project Dashboard: EMAR Project Dashboard - Requirements Management (RM)
(requires sign in)

Under these guidelines issues to be reported fall into three categories, which are:

A Emergency - these are to be reported to Electricity North West immediately by phone.

B Remedial work - these prevent meter exchange work occurring and are to be reported to Electricity North West via D0135 data flow.

C Asset Condition notification - metering work can be undertaken but a MOCOP® Operator is required to notify Electricity North West of specific identified issues via D0135 dataflow.

Principles of Reporting

The general principles for reporting defects are:

- Only report one code per MPAN.
- Where there are multiple defects at one MPAN, report the most serious one using the relevant code, and refer to other defects via telephone (for category A defects) or in the free text field (for category B and C defects).
- Ensure that safety and other issues are properly resolved.
- You must seek to resolve all problems within your remit.

Note that the codes only apply to Network equipment. If an issue relates to Supplier or Customer owned equipment, you must follow your own organisation's procedures for managing such occurrences.

4.7.3 A list of known defects on service termination equipment for which the Meter Operator should make their operatives aware is contained within the MOCOP Service Terminations Issues Guide. In addition more specific asset type information relating to Electricity North West is contained within the document entitled CP503 - Guidance Notes for Meter Operators Working at Service Terminations, which is held within the Electricity North West section of Distribution Business Information area of the REC web site.

4.8 Removal and Replacement of Cut-out Fuses

Where work is to be done on behalf of the appointed electricity supplier, by their registered meter operator, and requires the removal and subsequent replacement of the main supply cut-out fuse(s) then this may take place without reference to Electricity North West (other than the requirement of paragraph 4.6 above) provided that:

- The network equipment does not appear to be unsafe or in a damaged or distressed condition;
- Where a cut-out is found to be shared by more than one customer (for example, where a property has been split into flats, or a flat above a shop) consent to de-energise has been obtained from all affected customers;
- After the LV fuses have been replaced, a check is made that the supply has been properly re-established, i.e. a fuse has not failed through being mechanically disturbed, for example, if accidentally dropped on the floor;

Meter operatives removing or replacing main supply cut-out fuse(s) must be:

- assessed and certified as competent by the meter operator to carry out the task;
- the appointed meter operator of the electricity supplier for the MPAN concerned;
- in receipt of formal work instructions from, or arising from, instructions from the property's supplier
- appointed electricity supplier to undertake activity that necessitates the operation of the main supply cut-out fuse(s); and
- Re-seal all distribution service termination equipment in accordance with MOCOP.

4.9 Operation of Electricity North West's Service Termination Switchgear/Isolators

4.9.1 Whilst the majority of Electricity North West's service terminations are cut-out fused, there are other types of service termination at low voltage, high voltage and extra-high voltage that have switchgear or isolators as the exit point's means of energisation and de-energisation of the main current carrying electrical circuit to the customer's installation.

4.9.2 Where the meter operator is instructed to conduct works that require the de-energisation or re-energisation of an Electricity North West's service termination, whose isolation device for the main current carrying electrical circuit is a distributor locked switchgear or isolator, the meter operator should refer the request back to their supplier and not proceed with their works. The appointed electricity supplier must arrange for Electricity North West to effect the de-energisation or energisation of service terminations with these types of isolation equipment.

4.10 Sites with Multiple Customers

Where there is more than a single customer on a service, and you require a shutdown you should agree the arrangements with all affected customers (and with us if you need us to temporarily disconnect the supply).

4.11 Testing of customer electrical installations prior to connection or energisation

Electricity North West requires that all Appointed Electricity Suppliers and all appointed Meter Operators ensure, given the nature of installation being connected, energised or re-energised, that the installation is safe to connect and complies with the British Standard Requirements and the ESQC Regulations.

5. TECHNICAL MATTERS

5.1 General

5.1.1 There are a very wide variety of metering arrangements in existence on the Network.

5.1.2 A customer may have more than one supply point. These may, or may not, be summated using a variety of means. A voltage selection scheme may be fitted.

5.1.3 A supply point may be used to supply more than one customer, although they would be separately metered.

5.1.4 You must determine, as necessary, the actual wiring arrangements at individual installations.

5.1.5 It is your responsibility to trace and identify wiring.

5.1.6 We have several areas of non-standard phase rotation on both our HV and LV systems. The method by which this has been "corrected" for metering purposes has varied. Transposition of phases may be located between primary and secondary systems, between measuring transformers and the test terminal block, between the test terminal block and the meter(s) or at each polyphase meter position.

5.1.7 In certain instances a customer may receive signals from metering equipment (eg load switching, MD alarm resets, kWh impulses). These may be direct or via interposing relays. Typical operating voltages may vary from logic levels to 240 V. These circuits are often supplied from the customer's installation and so remain live when the metering potential fuses are removed.

5.1.8 It is the responsibility of a new Meter Operator to agree with an existing Meter Operator the use of any previously installed communications link.

5.1.9 If a Paknet aerial is to be fitted to the outside of a building its position must be agreed with the owner prior to installation. It should be fitted in a manner which does not affect the integrity of the building and with regard to public safety and potential vandalism.

5.1.10 Communication equipment fitted inside a building should be installed in a safe and secure manner and shall not obstruct access our equipment.

5.2 Whole Current Metering

5.2.1 For the avoidance of doubt we own the service cable and cut-out.

5.2.2 Your equipment must not obstruct or restrict access to our equipment.

5.2.3 Whole current meters may be fitted to individual services and cut-outs or be part of a unit containing CT operated meters.

5.2.4 Some arrangements may have whole current equipment fitted to hinged doors (eg meters, timeswitches, fuses). It is not our practice to open doors of this type without first making the supplies to the door dead.

5.3 CT Metering

5.3.1 For the avoidance of doubt, we own the service termination, CT chamber, measuring transformers, test terminal block, secondary wiring, potential fuses and the metering cubicle (where this houses other equipment belonging to us).

5.3.2 There may be a very small number of instances where CT operated metering equipment does not include a test terminal block. In such cases you should advise us and we will rectify the situation. As these are likely to occur on very old installations it may be necessary to replace the termination / metering cubicle. Costs will normally be borne by us. However, where the termination is no longer appropriate to the customer's agreed capacity it may be appropriate to make a connection charge in accordance with the Statement of Charges for the Connection to Electricity North West's Distribution System.

5.3.3 Your equipment shall not obstruct or restrict access to our equipment.

5.3.4 Installation shall be in accordance with the appropriate Metering Code of Practice especially in respect of separation of fusing. The integrity of the test facility on the test terminal block must be retained. All holes in the metering cubicle must be made good.

5.3.5 Some metering cubicle doors may be secured using one of several types of padlock. We are unable to issue you with keys but you may remove the padlock. Following completion of your work, you should secure the door using a specified seal and wire rope. (You may need to incorporate a suitably sized plain washer into this arrangement to overcome excessive clearance between the "lock peg" and the hole in the door. Excessive clearance can allow the door to be opened despite the presence of the seal).

5.3.6 Subject to suitable safety precautions, Meter Operatives may drill the metering cubicle door to provide suitable fixings for the meter. Even though space may permit you should not create additional meter positions on our cubicle door.

5.3.7 Meter Operator's equipment (eg Paknet radio pads, modems, associated power supplies, etc) shall not be fitted inside the body of a metering cubicle where primary circuits are located. Supplies to communication equipment shall not be via socket outlets connected to metering potential supplies, irrespective of fusing arrangements or location. Power supply and communication leads shall not be routed via enclosures housing high energy circuits. Paknet aerials shall not be fitted to our equipment.

5.3.8 Should you choose to fit a separate metering panel it shall not be fixed to our cubicle, but adjacent to it. You should keep the interconnecting wiring as short as possible and connect it in accordance with the COP to ensure that the full functionality of our test terminal block is retained.

5.3.9 Where you choose to install additional equipment they must ensure that the total burdens imposed on the CT and / or VT secondaries are not excessive.

5.3.10 Additional information relating to CT metering is contained in Appendix B.

5.3.11 Any information provided will only be as accurate as the records which we hold. If when you attend site you find that the information appears inaccurate (eg wrong CT ratio) or incomplete (eg additional metering systems) please contact us.

5.3.12 Test certificates for many of our LV CTs are unavailable. An analysis of manufacturers and in house test results has been carried out. Appendix C gives average errors which should be used in the absence of specific certificates.

5.3.13 For CT / VT operated metering, copies of CT and VT test certificates will be provided where these are available. In the absence of specific certificates test results from similar instrument transformers or statistically derived values will be provided. Your meter should be calibrated to compensate for the CT and VT errors.

5.3.14 Commissioning / Incomplete Tests

Metering should be commissioned in accordance with the Balancing and Settlement Code - P Code of Practice 4.

Modification P283 requires LDSO's to commission and provide records for CTs within a fixed time period. If you need these records, please email p283commissioning@enwl.co.uk

5.4 Service Termination Access – Meter Operator Obligations

5.4.1 The Meter Operator shall not allow, nor do anything so as to allow, any third party access to the distributor's equipment, including, not exhaustively service fuse cut-outs, service isolator switches, multi-way service distribution panels and any associated distribution service termination equipment and conductors.

5.4.2 Where the Meter Operator is fitting an isolating switch on the installation side of the metering system, whereby a third party may connect wires into the fitted isolator, the Meter Operator shall ensure that all appropriate arrangements are made such that the third party can perform all his work without touching the distributor's equipment. The Meter Operator will have responsibility for any such occurrence unless the supplier has otherwise accepted it. Where the Meter Operator fits customer accessible isolating switches, or customer accessible PME terminal blocks, he shall leave a clear safety notice or label with the equipment describing the state in which it has been left.

5.5 Communications Links

5.5.1 Any equipment which is required to be installed by the Meter Operator for communications must be installed in a proper manner and not obstruct or restrict access to Electricity North West equipment or the customer's installation.

5.5.2 Under no circumstances shall Electricity North West's equipment or communications links, if present, be disconnected without permission. Any resultant costs incurred by Electricity North West from such unauthorised disconnections will be charged to the party responsible for the disconnection.

5.5.3 Under no circumstances shall Electricity North West's communication links be utilised by a Meter Operator without prior written agreement of Electricity North West.

5.5.4 In all circumstances, where an existing communication link is not owned by Electricity North West, the Meter Operator should gain prior written agreement from the owner if utilisation of that communications link is desired.

5.5.5 Where a radio/wireless communication system needs to be fitted to a substation, the position is to be agreed with the owner of the substation prior to installation. The fitting of radio/wireless communication systems and associated cabling must be carried out with care to ensure that it does not impair the building structure or weatherproofing or proper functioning of existing distribution equipment or metering equipment in any way whatsoever

5.6 Site-specific information

5.6.1. Site-specific information will be provided only where the request for information is received by data flow D0170.

5.6.2 The information will be provided using data flow D0215.

5.6.3 Any information provided will only be as accurate as the records which we hold. If when you attend site you find that the information appears inaccurate (eg wrong CT ratio) or incomplete (eg additional metering systems) please contact us.

5.7 Sealing

5.7.1 Meter Operatives may remove uncertified seals from our equipment to allow work to proceed. Meter Operatives shall reseal all equipment and dispose of used or surplus seals / wire rope as required by MOCOP.

5.7.2 If, following any work carried out by a Meter Operator, we find any equipment unsealed, we will re-seal it and may make a charge.

6. COMMERCIAL

6.1 Removed Equipment

6.1.1 If you remove any metering equipment labelled "North Western Electricity Board", "Norweb", "NWEB", "United Utilities" or "UU", then such equipment may be retained and / or disposed of by you without further reference to us.

6.1.2 We do not own gas meters. If you require confirmation that removed electricity meters belong to ENWL, contact enwl.meter.returns@enwl.co.uk.

6.1.3 For the return of **up to 8 pallets of meters**, please notify:

Whitebirk.Security1@enwl.co.uk;
Scrap@enwl.co.uk; and
enwl.meter.returns@enwl.co.uk

with the date you propose to make the delivery and the number of pallets. Please do not return meters without confirmation that we can accept them on the date planned.

Returns can be accepted on any **normal working weekday morning** [so we have a fork lift operator available if needed]. The delivery address is:

Electricity North West
Whitebirk Depot
Whitebirk Drive
Whitebirk
Blackburn
BB1 3HT

Meters must be delivered into the site. There is a barrier and a security gatehouse at the entrance to the depot. The driver must book in to gain access.

6.1.4 For the return of **more than 8 pallets of meters** in one consignment, please contact enwl.meter.returns@enwl.co.uk to make arrangements for delivery to Electricity North West's service provider:

C. Soar & Sons
Tank Row
Barnsley
S71 5AD.

6.1.5 If with the agreement of another Meter Operator you remove any of their equipment, you should follow their requirements for removing metering equipment under MOCOP.

6.1.6 If it becomes necessary for us to remove your equipment from site we will notify you of its whereabouts and hold it, free of charge, pending collection for up to 1 month.

6.2 Rechargeable Costs

6.2.1 We may ask you to pay our costs if you want us to carry out any work which is not required under the terms of MOCOP (including the charges referred to within this document).

6.2.2 We may ask you to pay our costs if you want us to carry out work outside of our normal working hours.

6.2.3 We may ask you to pay our costs if there are any problems (eg loss of supply) which arise and are attributable to your activities.

6.2.4 Meter boxes are customer-owned fixtures to their premises and any repairs or replacement conducted by Electricity North West may be subject to a charge.

6.2.5 Meter boards are customer-owned fixtures to their premises and any replacement conducted by Electricity North West may be subject to a charge.

6.3 Use of Existing Panels or Cubicles

Electricity North West agree that access is permitted to cubicles used for metering. Meter Operatives are also permitted to fit meters and communication equipment to meter panels taking care to ensure that all unused holes are adequately and securely covered. The removal of ENW metering equipment is permitted except where the metering equipment is subject to an Ofgem dispute.

6.4 Audit and investigation

6.4.1 We reserve the right to carry out audits of Meter Operatives carrying out work on or in the vicinity of the Network. Where we observe operatives working and if the operative is deemed not to be working safely then they will be immediately prohibited from working on or in the vicinity of the Network pending the outcome of further investigations.

6.4.2 You shall assist us in any safety related investigations.

6.4.3 We reserve the right to carry out audits of completed work. Any defects found will, in the first instance, be reported to you unless immediate action has to be taken with regard to safety. We will charge you for any work necessary to make an installation safe.

6.4.4 We are prepared to discuss working methods where these appear to cause persistent defects or poor workmanship. If not resolved these will be reported to the Registration Authority.

7. NEW CONNECTIONS

7.1 General

7.1.1 The customer must not be energised unless a Supplier is registered on MPRS and the metering is fitted and is expected to be fully operational when the supply is switched on.

7.2 CT metering

7.2.1 For **LV (up to 300A) exit points**. When we make a new connection live in the termination module, we will leave the fuses on site for the Meter Operator to install.

7.2.2 For **LVS (dedicated way(s) from an LV board in a substation) exit points**. We will insert the fuses in co-ordination with the Meter Operator.

7.2.3 For **HV exit points**. The ENWL authorised person will carry out the electrical switching to energise the supply in co-ordination with the Meter Operator.

7.2.4 We will continue to ensure that metering CTs (and VTs where appropriate) are fitted together with a test terminal block, potential fuses and secondary wiring. Our standard arrangements include secondary wiring to a polyphase meter position located on our meter panel door. You may fit and connect your meter at this point.

7.2.5 Meters without a correctly programmed CT ratio are not acceptable.

7.3 Whole current metering

7.3.1 It is normal procedure for the Meter Operator to energise the connection at the time the meter is fitted.

7.3.2 When we make a new connection live to the cut-out, we will leave the cut-out fuse(s) in a sealed bag attached to the meter board for the Meter Operator to install.

7.4 Independent Connection Providers

Where the new connection is not provided by ENWL, arrangements for energising the supply should be made with the service provider.

8. DOCUMENTS REFERENCED

ESQCR – Electricity Safety, Quality and Continuity Regulations 2002 (as amended)
MOCOP – Meter Operation Code of Practice
BSC
CP330
ES510
CP503

9. KEYWORDS

Ct; Cut-out; Meter; Vt.

APPENDIX A CONTACT INFORMATION

A1.	Meter Operator's pre-work information System Operations		systemoperations@enwl.co.uk
A2.	Urgent operational and safety problems (24hrs)		0800 195 4141
A3.	Reports of tampering / interference Revenue Protection	0800 0015 269	revenueprotection@enwl.co.uk
A4.	Network Disconnections Infrastructure Solutions	0800 988 1730 or 0800 195 4141	disconnections@enwl.co.uk
A5.	Substation access Electricity Service Desk	0800 195 4141	enquiries@enwl.co.uk
A6.	Commissioning test issues Connections	0800 988 1730	connectionapplications@enwl.co.uk
A7.	Provision of test terminal blocks Via email		enquiries@enwl.co.uk
A8.	New connections queries Connections	0800 988 1730	connectionapplications@enwl.co.ukk
A9.	General matters and other technical queries System Operations		systemoperations@enwl.co.uk

APPENDIX B CT METERING ADDITIONAL INFORMATION

B1. Larger supplies at LV may have CTs fitted on or in items of Electricity North West LV switchgear eg LV distribution cabinets. Metering, test terminal block and potential fuses are normally fitted on a "remote" meter panel. Some supplies of this type have CTs fitted in customers LV equipment (these may include some low ratio CTs eg 100/5). LV equipment may, or may not, be part of a substation.

B2. Other arrangements fitted with CT operated metering are usually part of a composite arrangement with incoming service cable, cut-out and main fuses, CT housing and meter panel. There are various types in use eg meter cubicles, meter modules etc.

B3. Some meter cubicles have the CTs, test terminal block and potential fuses fitted in a large trunking immediately above a 3 phase cut-out. This trunking may contain exposed busbars or offer inadequate segregation from the connections in the cut-out. It is not our practice to carry out any work in the trunking without first removing the main fuses. This type of arrangement often referred to as a "Preston" or "Slimline" panel.

B4. Almost all CT and all CT / VT operated metering systems are fitted with local test terminal blocks and metering potential fuses.

B5. Where CTs are remote from the meter cubicle additional fuses (16A) will normally be located adjacent to the CT housing.

B6. CT / VT operated metering is normally fitted to a "remote" meter panel which is connected via a multicore cable to the measuring transformers in the HV switchgear. This switchgear is normally owned by us and located in our substation but may be customer owned and may be under the operational control of the customer.

B7. The meters, test terminal block, fuses, etc, are not normally fitted in our substations.

B8. Most metering arrangements have the meters and test terminal block fitted to an opening hinged door. Potential fuses may be on the door, behind the door or under a separately removable cover at the bottom of or below the door.

B9. Many older meter cubicles are fitted with a door manufactured from a black composite material known as Sindanyo. Sindanyo contains up to 50% chrysotile (white asbestos). We restrict site machining activities by our staff to the minimum number of small holes necessary; holes to be drilled at slow speed using a sharp drill. Disposal of waste is in accordance with current regulations.

APPENDIX C LV CT ERRORS

These figures should be used in the absence of specific test certificates. The CT error given is the % Combined Error (CE) derived from the % Ratio Error (RE) and the Phase Difference (PD) at average working burden and typical load.

CT Ratio	Combined Error (%)
100/5	0.3 -
150/5	0.2 -
200/5	0.4 -
300/5	0.2 -
400/5	0.0
500/5	0.2 -
750/5	0.3 -
800/5	0.0
1000/5	0.2 -
1500/5	0.1 -
2000/5	0.1 -