

NEW CONNECTIONS

Customer Advice



ENERGY

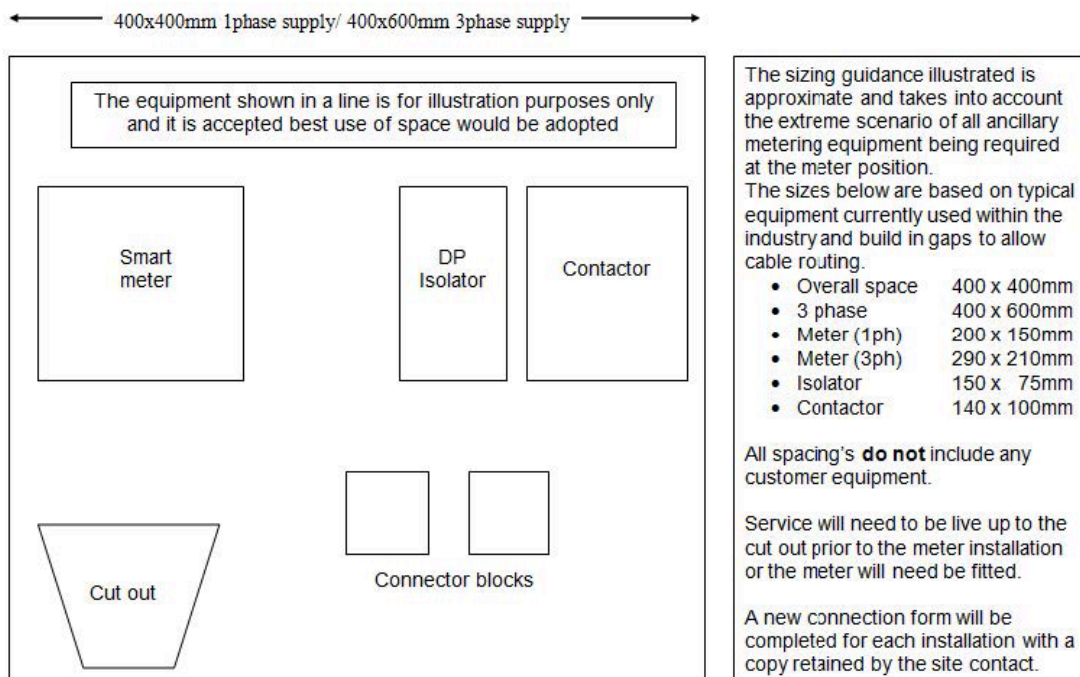
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1. WHOLE CURRENT NEW CONNECTIONS (SINGLE SUPPLY)

The following details what is required at site prior to IMServ attending to install a meter for a single whole current new supply (up to 100amps per phase, 23 KVA single phase, 69 KVA three phase) and what will be left after IMServ have completed the metering installation. (See below space required for multi occupancy supplies)

1. The space detailed below should be allowed for each metering new supply.



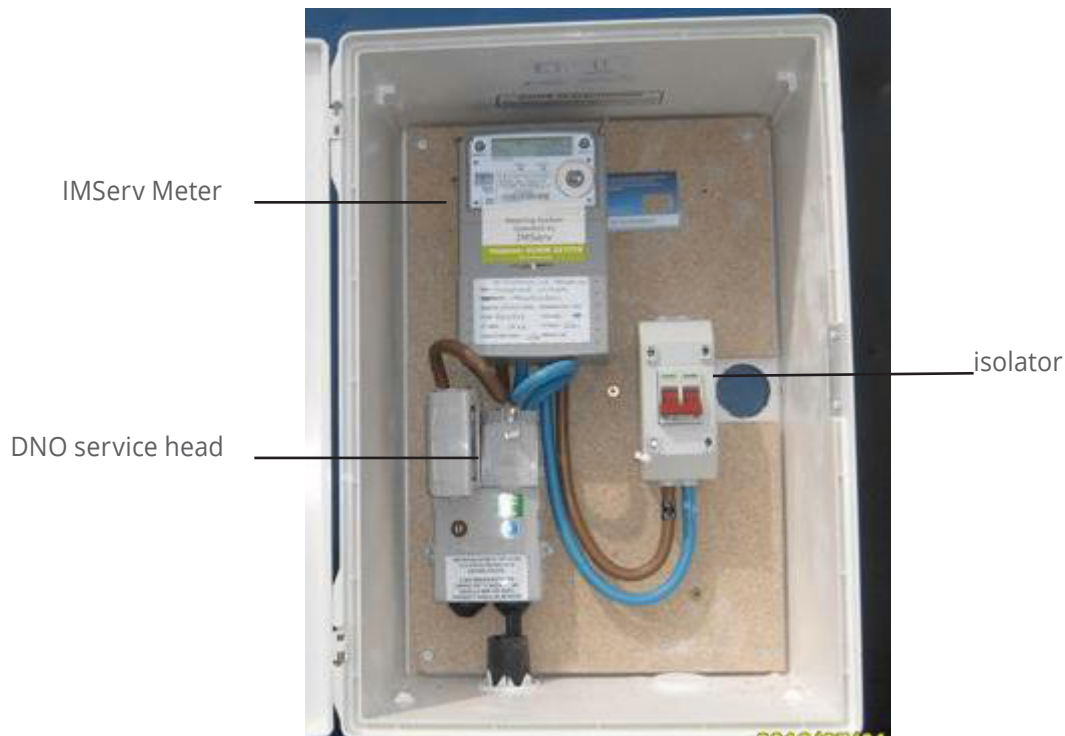
2. Single phase supply ready for new connection supply; cut out is installed by and is the property of the DNO (please note supply must be live up to the cut out/service head or the meter cannot be installed):



3. Three phase supply ready for new connection; cut out is installed by and is the property of the DNO (please note supply must be live up to the cut out/service head or the meter cannot be installed):



4. Single Phase supply after meter installation:



5. Three phase supply after meter installation:

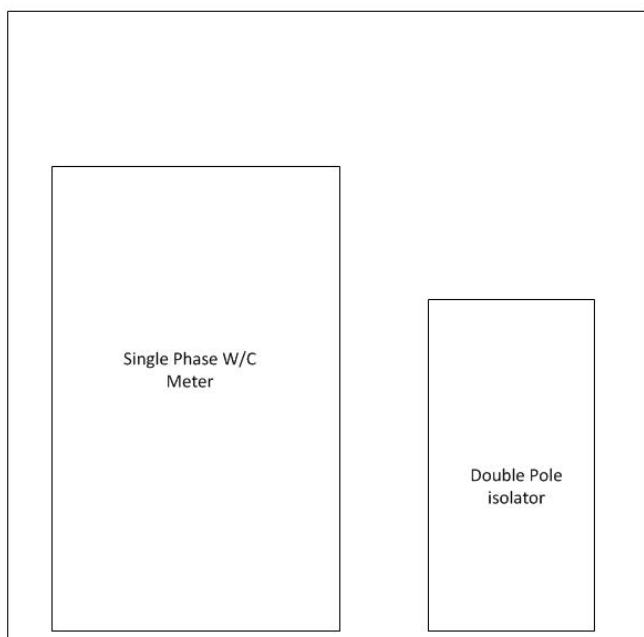


6. Once the metering has been installed, setup and tested by IMServ a new connection form will be provided to the customer. The metering will be installed by IMServ with an isolator ready for the customer's electrician to connect to. IMServ technicians will not connect metering directly to customers installations this final connection must be done by an approved electrician arranged by the customer.

WHOLE CURRENT NEW CONNECTIONS (MULTIPLE SUPPLIES)

The following details what space is required at site prior to IMServ attending to install a meter for a multiple occupancy whole current new supply (up to 100amps per phase, 23 KVA single phase, 69 KVA three phase) (if cut out is to be fitted on meter board as well see above for below space required)

Single Phase Installation



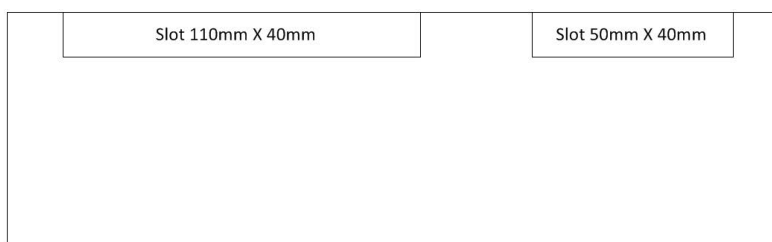
Space Required 300x
300mm
Single phase meter 150x
200mm
Double Pole isolator 170
x70mm

Back board must be made from fire retardant chip board.

Slots must be pre cut into any trunking to allow connection to metering and either have grommet strip or paxolin protecting slotted edges.

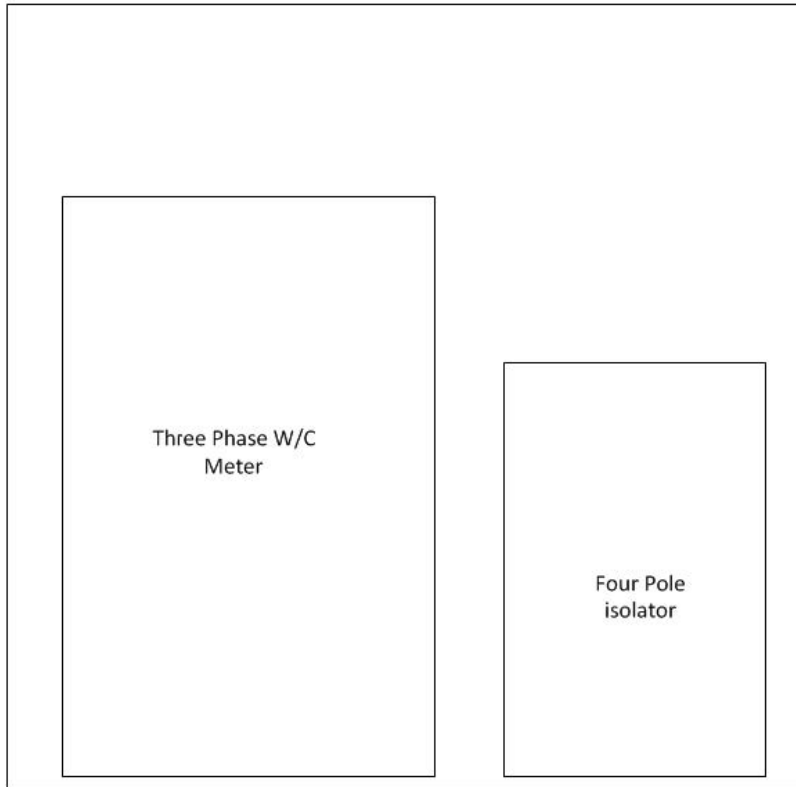
(Slot dimensions below)

Trunking slots below meter single phase



Measurements are from backboard out if no board is fitted, slots should be spaced 20mm from wall to allow for meter board and spacing.

Three Phase Installation



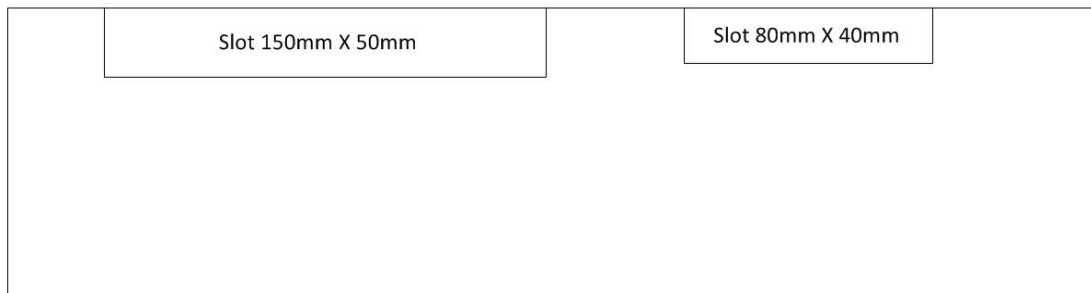
Space Required 400x
400mm
Three phase meter 290x
210mm
Four Pole isolator 170
x110mm

Back board must be
made from fire
retardant chip board.

Slots must be pre cut
into any trunking to
allow connection to
metering and either
have grommet strip or
paxolin protecting
slotted edges.

(Slot dimensions below)

Trunking slots below meter three phase

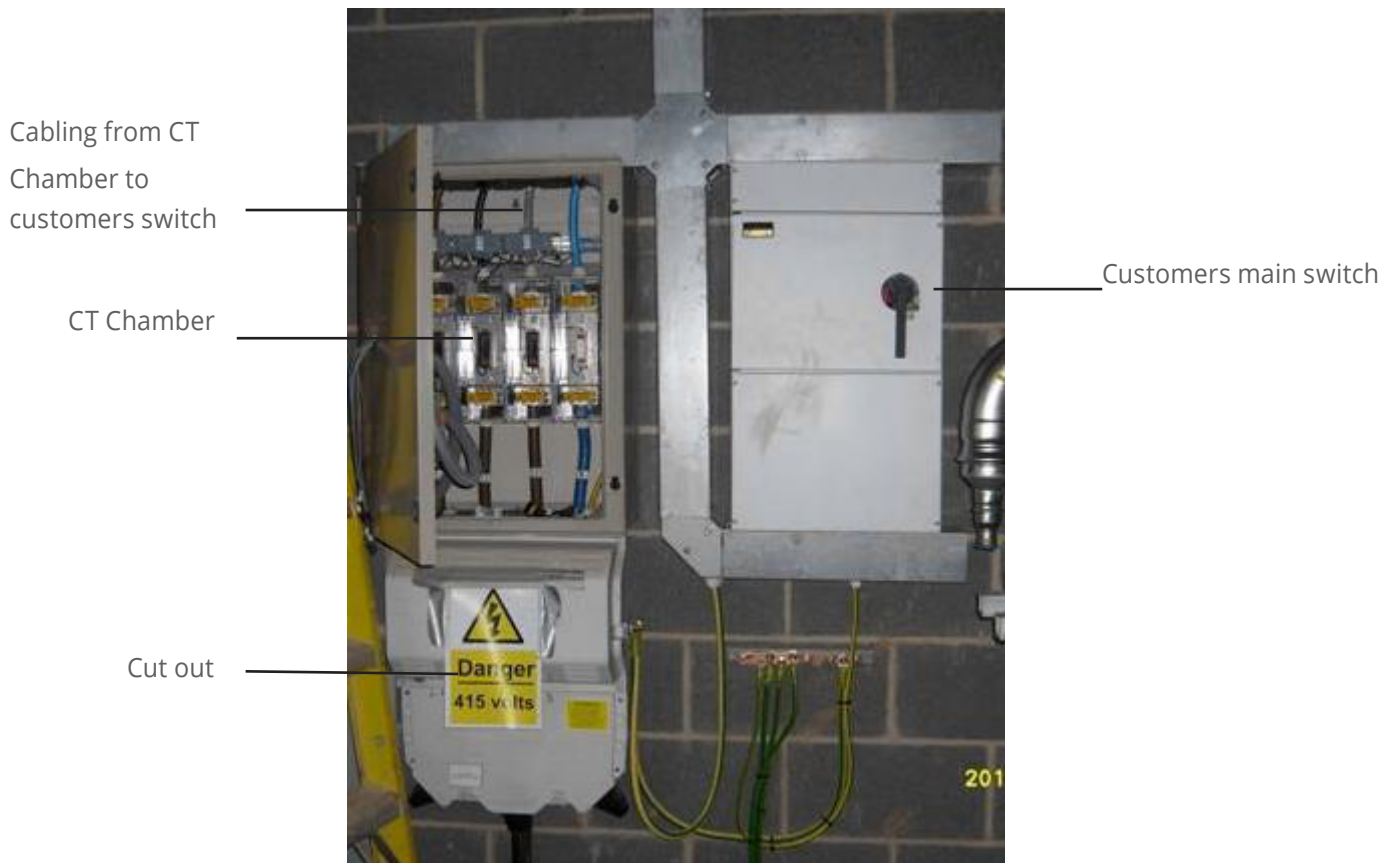


Measurements are from backboard out if no board is fitted, slots should be spaced 20mm from wall to allow for meter board and spacing.

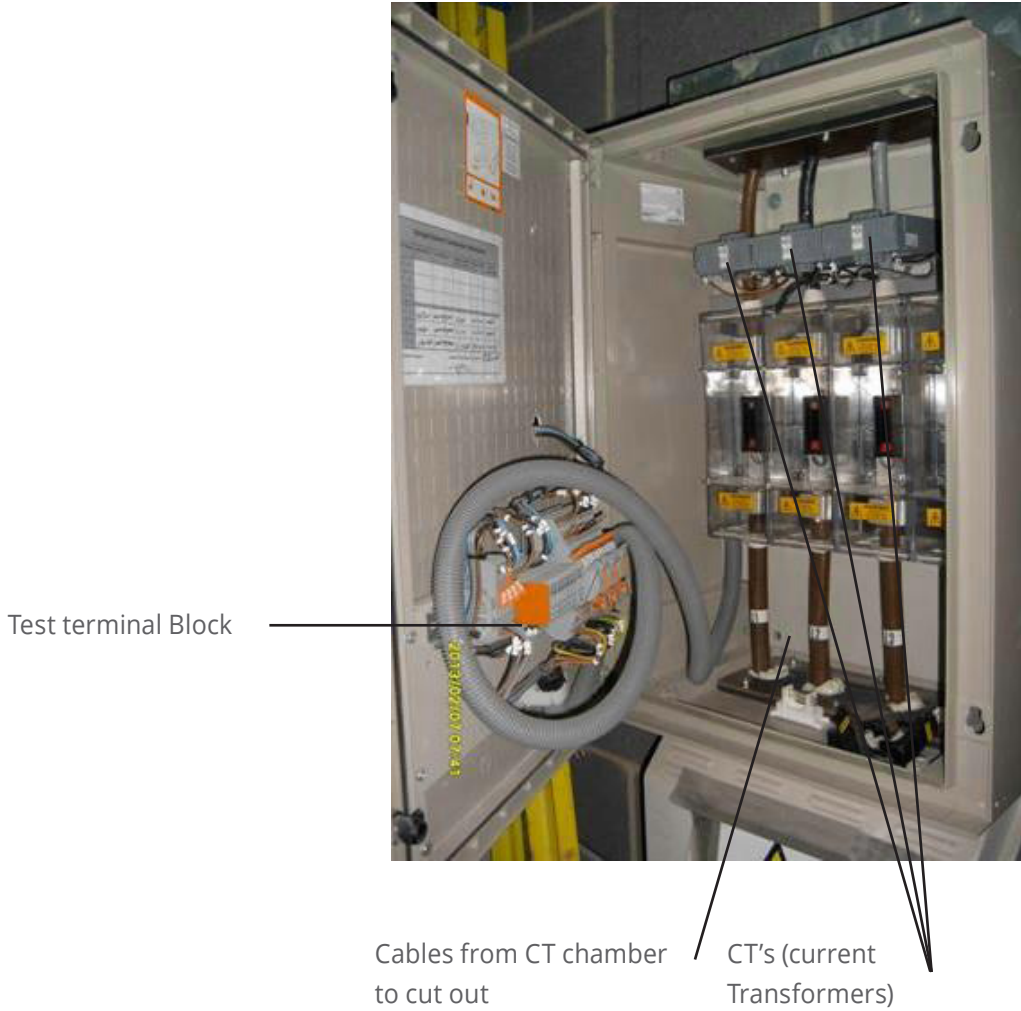
2. CT (CURRENT TRANSFORMER) NEW CONNECTIONS

The following details what is required at site when IMServ install a meter for a Low Voltage CT new supply (above 100amps per phase) and what will be left after IMServ have completed the metering installation.

1. The equipment below will need to be installed prior to IMServ attending to install CT operated metering.



2. The CT Chamber/meter panel must have the following equipment



3. The wiring prior to the test terminal block that connects to the CT's and the voltage fuses is the responsibility of the DNO or BNO depending on the site and must be complete prior to our visit. only the wiring between the test terminal block and the meter will be completed by IMServ



4. Imserv will install the new meter to the meter panel and connect the wiring from the test terminal block to the meter.



5. If the supply is fed from a DNO cut out (generally up to 600 amp), the fuse holders are present and all wiring between cut out, CT chamber and customers main switch has been completed by the DNO and the customer's electrician. IMServ will energise the supply up to the main switch.





6. If the supply is fed by DNO controlled switch panel IMServ are unable to energise these supplies and these will need to be energised by the DNO.



3. METER OPERATOR RESPONSIBILITIES WITHIN MOCOPA

NEW METERING POINTS

In the case of new Metering Points, the following principles shall be adopted:

- (A) The Distribution Business and the MOCOPA® Operator shall liaise with each other to ensure that new metering work and energisation is completed with the minimum delay;
- (B) The Distribution Business shall agree with the Customer or developer the position and space for the Metering Equipment, and shall, in so much as it is within its reasonable control, ensure it remains reserved. The location must be accessible to the Customer so they can read their meter and to the MOCOPA® Operator (via the Customer). Consideration shall be given to the accessibility of the location to all users. The Distribution Businesses' service termination equipment and the Metering Equipment should be located between 0.5 and 1.8m above finished floor level, subject to unavoidable constraints such as security, vandalism or fire risk mitigation;
- (C) For HV and LV CT metered supplies, the interface test/isolating facilities shall be installed in an accessible position near to the location of the proposed Metering Equipment. A label must be fitted in accordance with A2.3 of Appendix 2;
- (D) For whole current supplies, a means of isolating voltage supplies (e.g. cut-out) shall be installed in an area to which the MOCOPA® Operator has access (via the Customer);
- (E) For cut-out controlled supplies, the Distribution Business is responsible for providing the fuse carriers and fuses. Where these cannot be left on Site (e.g. risk of unlawful energisation), the Distribution Business shall be responsible for providing them to the MOCOPA® Operator in a timely and acceptable manner for the MOCOPA® Operator to perform the energisation (see A2.1 of Appendix 2);
- (F) It is the responsibility of the Distribution Business to determine the rating of the cut-out fuses. For whole current metered supplies, the Meter Operative shall check the conductors being provided by the Customer are suitably rated for the cut-out fuses provided before he connects them, or Energises the supply (this is limited to checking at the point of connection without needing to take into account any de-rating for thermal conditions within the installation);
- (G) the Distribution Business is responsible for commissioning the service (e.g. checking voltage, earth loop impedance, phase rotation, polarity and any protection settings, etc at the cut-out/switchgear);
- (H) The MOCOPA® Operator shall confirm the voltage, phase rotation and polarity at the supply terminals (metering output terminals or isolator switch terminals);
- (I) for whole current metered supplies, the MOCOPA® Operator shall make the necessary connections between the Distribution Business equipment, Metering Equipment and the Customer's equipment;

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(J) Where the Distribution Business is to provide an earth terminal for the Customer, the Distribution Business shall ensure the terminal is accessible to the Customer or contractor, or take responsibility for making the earth connection. (Note: The Customer should have ongoing access to the earth terminal in order to carry out routine tests of his installation);

(K) for HV and LV CT-metered supplies, before connecting Customer conductors, or facilitating the Customer's contractor safe access to suitable terminals, the Distribution Business shall check the conductors being provided by the Customer are suitably rated for the cut-out fuse or circuit breaker protection;

(L) For whole current and cut-out controlled LV CT metered supplies, the MOCOPA® Operator shall Energise the supply subject to the Distribution Business having previously satisfied (E) and (K);

(M) For circuit breaker-controlled LV and HV metered supplies, the Distribution Business shall Energise the supply, in response to a request from the Supplier;

(N) A MOCOPA® Party shall not agree to Energise a supply until it is appropriately metered;

(O) The MOCOPA® Operator shall not carry out energisation work unless and until authorised under the Use of System Agreement; and

(P) Conductors shall be coloured and marked in accordance with Appendix 11.

Items (C) and (D) above shall be provided by the Distribution Business, chargeable to the Customer, and shall be capable of being sealed to prevent unauthorised access.

Interface Definition and Requirements for Test/Isolating Facilities

As regards the interface between the Distribution Business equipment and the Metering Equipment:

- (A) for whole-current metering, the normal interface point will be the cables from a cut-out or switch at the outgoing terminals of the cut-out or switch. However, there will be occasions (e.g. with rising mains) where this is not the case, and guidance should be sought from the Distribution Business. Where a Distribution Business meter is to be left on Site, then the interface will be the outgoing terminals of that Distribution Business meter;
- (B) for CT and CT/VT metering, the normal interface point will be the outgoing connections from the test/isolating facilities and the voltage fuses. The test/isolating facility provided must allow the following operations to be carried out via a safe electrical connection and without the need to disturb any wiring:
 - (1) Short circuit individual current transformers
 - (2) Directly connect an ammeter
 - (3) Connect test equipment to inject current into the secondary circuit towards the meter
 - (4) Connect a testing device on each phase of the voltage circuit

For the purposes of meter connection the CTs, VTs, meter panel and associated cable, test/isolating facilities and voltage fuses will be provided by the Distribution Business or by an independent connections provider, providing an adoptable connection meeting the requirements of the relevant Code of Practice for the installation. Once commissioned, these CTs, VTs, meter panel and associated cable, test/isolating facilities and voltage fuses will become the property and the on-going responsibility of the Distribution Business. Meter panels will accommodate affixing of the meter(s) which should be situated behind a Customer accessible door or on the front of the panel, the rest of the panel will be sealed in accordance with Appendix 8. The surface of the meter panel should be of sufficient area for the fitting of all the meters required, in accordance with the relevant Code of Practice for the installation. The meter panel may be metal or plastic construction dependent on the Site conditions.