

UN-METERED SUPPLIES

SERVICE AND INSTALATION RULES

NEW CONTENT

Section 6 Supply Types,
Use and Protection

6.10 Un-metered Supplies

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6.10 Un-metered Supplies

6.10.1 General

These Rules shall apply to all un-metered supplies connected to the electrical distribution network including those un-metered connections that are to be upgraded or altered after the original connection date.

AMEO have classified un-metered supplies as either:

(a) Type 7 "Predictable Loads"

Which require prior agreement of a device type and load table with AEMO and evidencing via NATA reports. In Victoria, only public lighting is permitted to be a type 7 contestable un-metered load under the National Electricity Rules (NER). or

(b) NONCONUML "Agreed Loads"

All other un-metered loads must be connected as a non-contestable un-metered load (NCONUM) and must buy their energy from the default Retailer of the relevant distribution network area. Within the National Electricity Market (NEM), the load and load profile for an un-metered device is needed to facilitate billing. The customer, Retailer and Distributor must have obtained an agreement of the load and load profile for each device type prior to any request for connection of the device type to the network.

These Rules do not include un-metered supplies that are AEMO approved as type 7 for which a load table exists.

Un-metered supplies consist of a small electrical installation with an energy consumption that can be determined without the need for a billing meter. The load shall be determined as the total connected wattage (or name plate rating) of the un-metered installation at the point of supply.

The Distributor will provide the maximum size in their distribution area for an un-metered supply during the approval process. Generally, loads less than 500 watts (2 amperes single phase) will be considered for an un-metered connection of a load that is predictable and flat in nature.

	AusNet	CitiPower	Jemena	Powercor	United Energy
Maximum total 1Ø load	2 amps	2 amps	2 amps	2 amps	2 amps

Un-metered supplies are typically located in public land or council reserves.

6.10.2 Eligibility

6.10.2.1 Eligible

An un-metered connection and supply in a public space is available to eligible customers subject to the conditions and requirements detailed in the Rules and any associated Distributor requirements. Eligible customers are generally statutory and government bodies who can own and operate electrical installations within public spaces.

6.10.2.2 Ineligible

A load subject to customer-controlled variations in usage duration is not permitted as an un-metered supply (i.e. water pumping). No temporary un-metered supplies will be made available (i.e. festival lighting and Christmas lighting), any such supplies shall be metered.

No socket outlets where an appliance can be plugged into shall be permitted as an un-metered supply, or as a part of an un-metered supply, unless the installation is located on a distribution pole and is not accessible to the public. An un-metered connection must be dedicated to the primary device being supplied.

6.10.2.3 Classification

Un-metered supplies subject to the load requirements typically apply to:

(a) General classification

- (i) Parking ticket machines
- (ii) Surveillance systems
- (iii) Automated public toilets
- (iv) Sewerage, drainage, water pressure and pipe alarms
- (v) Irrigation controllers
- (vi) Public lighting

(b) Communication classification

- (i) Basic public telephone/communication sites
- (ii) Communication devices. (i.e. Multiplexers, NBN cabinets)
- (iii) Transmitter and antenna sites, Wi-Fi or 5G
- (iv) Transport and communication shelter combinations
- (v) Cable TV systems

(c) Traffic classification

- (i) Variable speed signs
- (ii) Traffic alerts signs
- (iii) Parking availability space signs
- (iv) Pedestrian crossings
- (v) Bus shelters

6.10.3 Connection requirements

6.10.3.1 Connection process

6.10.3.1.1 Approval

Approval is required to be obtained for an un-metered supply. The approval process will determine:

- (a) Eligibility for the electrical installation to be classified as an un-metered supply;
- (b) The establishment of a point of supply, normally a distribution pole or a service pit;

- (c) Any costs to establish the point of supply;
- (d) Any conditions for works in public land.

Any installation work should not commence until confirmation has been obtained from the Distributor for the terms and conditions of the un-metered connection.

The following information will be required at the time of the initial approval request:

- (a) Location of the electrical installation on public land or on a distribution pole. Note: electrical installations mounted on a distribution pole require a Facilities Access Agreement with the Distributor.
- (b) Full technical specifications for the proposed equipment and operational/physical arrangements.
- (c) A single line diagram of the electrical arrangement.
- (d) Proposed route plan of any underground consumer mains. Note: clause 5.7 Private Electric Lines on Public Land.

6.10.3.1.2 Connection

The connection application of an un-metered supply is made by the customer or their agent to the Retailer who will raise a B2B request to the Distributor for connection. The Registered Electrical Contractor via the Distributor's connection process will need to provide the following information at the time of the connection request:

- (a) Certificate of Electrical Safety COES
- (b) As built plans for any underground consumer mains in public land
- (c) A completed Facility Access Agreement if approved to mount any equipment on a distribution pole

Once submitted the connection will be assessed and scheduled for completion upon the Distributor receiving the Retailer B2B connection request.

6.10.3.2 Facility Access Agreement

Before any third-party equipment is placed on or within a distribution asset, a Facility Access Agreement (FAA) must first be in place which addresses technical, safety, indemnity, insurance, liability and other commercial requirements associated with the equipment.

The applicant shall install and manage their attachments according to Distributor safety and technical requirements which reflect the Victorian Electricity Safety Act, regulatory obligations and Distributor standards and codes.

Distribution assets include distribution poles, public lighting poles, underground conduits and cableways, substation buildings, associated real estate within distribution owned facilities and communications fibre huts.

6.10.4 Technical requirements

6.10.4.1 Electrical installation

6.10.4.1.1 General

The customer must ensure that the customer's installation is wired by a licensed electrician installation worker in accordance with the requirements of the Electricity Safety Act, Electrical Safety (General Regulation) 2019 including the Australian Standard AS/NZS 3000

A consumer's switchboard, main earth stake and MEN connection shall be established prior to, or at the consumer's equipment/device unless the un-metered electrical installation is double insulated throughout. The consumer's un-metered supply and installation shall be earthed in accordance with the requirements of AS/NZS 3000.

6.10.4.1.2 Compliance

The installation shall comply with all applicable regulations, codes, rules and acts. Failure to meet these requirements will delay the connection of supply. If at any time the installation is found to be non-compliant with any regulations, codes, rules and acts, it will be subject to disconnection without notice and a defect notice will be issued.

Mandatory clearances between un-metered equipment and distribution assets are specified in the Shared Use of Poles Code that apply to all new Shared Use attachments on distribution poles

6.10.4.1.3 Maintenance

Where the customer's electrical installation is mounted on a distribution asset, the un-metered supply arrangement shall be routinely checked and tested by the party responsible for the installation. Testing and checking is to ensure the installation is safe to remain on supply and presents no risk to the safety of the public or electrical workers. Routine checks shall be performed no less than at a minimum once every five years and evidence provided to the Distributor upon request that the installation is in good condition and safe to leave on supply.

As a function of the routine maintenance checks, a record of inspection activities undertaken at the site demonstrating that the installation has been tested and is safe to remain connected to the network is required. Record of inspections shall be retained by the customer and made available to the Distributor upon request. All other requirements of section 8 of AS/NZS 3000 shall be met together with the requirements of AS/NZS 3019.

6.10.4.1.3.1 Tests

Tests are to be performed at routine maintenance checks in accordance with AS/NZS 3000 section 8 and shall include, but are not limited to:

- a) Continuity of the earthing system in accordance with AS/NZS 3000 8.3.5
- b) Insulation resistance of wiring and equipment in accordance with AS/NZS 3000 8.3.6

c) Polarity in accordance with AS/NZS 3000 8.3.7

If any of the above tests do not satisfy the requirements of AS/NZS 3000, the installation shall be disconnected from supply immediately and notification to the Distributor provided within 1 working day.

6.10.4.1.3.2 Frequency

Testing and checking of the installation shall be performed at a minimum once every five years

6.10.4.1.3.3 Reporting

Testing and checking reports and evidence shall be provided to the Distributor upon request.

6.10.4.1.4 Alteration to installation

Any proposed changes to the configuration of the un-metered installation shall be requested by the customer to the Distributor and Retailer.

Scenarios to notify the Distributor and Retailer:

- d) Alterations to customer equipment on Distributor poles that may impact the FAA.
- e) Change to equipment in public land – requires new as built drawings and/or ESV exemption.
- f) Increase or reduction in proposed consumption – network billing changes.
- g) Increase in energy consumption that requires change to a metered supply.

6.10.4.1.4.1 Configuration

Changes to the electrical installation including equipment mounted on distribution poles shall not be undertaken unless approval has first been granted by the Distributor.

6.10.4.1.4.2 Load

No change to the supply demand shall be made unless it is still within the rating of the 2 amp supply capacity device and has been approved by the Distributor.

Legacy un-metered connections outside of the 2 amp requirement shall be converted to metered supply if being upgraded or modified.

6.10.4.1.5 Removal of connection

Until such time as the un-metered supply is removed or the customer advises in writing that the un-metered supply is no longer required, the customer shall continue to pay all connection, supply and usage charges.

To arrange disconnection and removal of an un-metered supply, the applicant shall complete a request via the Retailer and Distributor's processes for the abolishment of the connection.

6.10.4.2 Distributor – Technical requirements

6.10.4.2.1 Point of supply

In accordance with Clause 6.2 as a condition of supply the Distributor is responsible to determine the point of supply.

The point of supply is the point at which the electricity Distributors service cable or supply main connects to the consumer's terminals.

The determination of the point of supply will include the location, the supply capacity and electricity supply configuration.

For an un-metered supply, the point of supply will generally be on a distribution pole or in a distribution service pit. In some cases, an overhead service to a gantry may be an option.

Distribution poles that include high voltage distribution devices such as transformers, switches and high voltage underground cable terminations are not suitable for a customer point of supply.

6.10.4.2.1.1 Pole

The distribution system includes different pole types of, wood, composite, metal and concrete. These vary in mechanical loading strengths and supply configurations such as attached overhead low voltage reticulation to the pole or supplied internally from underground reticulation.

The point of supply at a pole is nominated by the Distributor and is normally 4 metres from ground level. The customer shall be responsible for the installation of their consumer's mains cables and equipment to a height of 4 metres above ground level. The relevant Distributor shall be responsible to perform any works above 4 metres as per clause 7.5.4.2.

6.10.4.2.1.2 Underground

The point of supply is the service pit, located in the public land.

The provision of a point of supply from an existing service pit shall consider the existing and future connections when located on property boundaries. A point of supply shall not be provided if the maximum number of three connections would be exceeded within the pit.

A point of supply from a service pit will only be provided on the same side of the street as the customer's MSB for the installation.

6.10.4.2.2 Private electric cable routes

Un-metered consumer mains in public land shall:

- (a) Not exceed 25 metres route length without approval from the relevant Distributor from the point of supply to the electrical installation unless the customer is an exempt entity under section 47 of the Electricity Safety Act.
- (b) Where cables are extended longitudinally along a road reserve the consumer mains shall be installed parallel with the adjacent title boundary.
- (c) The cable route from the point of supply to the customer installation in a road reserve shall avoid deviations. In general, the cable route shall be installed in a manner that has a maximum of one 90° horizontal bend.

6.10.4.2.3 Attachments

The use of a Distributor's pole for the installation of consumer's mains and its associated service protection device, consumer's terminals and the electrical installation shall be in accordance with the Rules.

6.10.4.2.3.1 Pole

Equipment other than consumer's mains shall be installed in accordance with the Code of Practice for Shared Use of Poles and the agreement with the relevant Distributor made under clause 7.8 (Equipment other than Consumer's Mains on a Distributor's Pole).

Due to operational and safety concerns the Shared Use of Poles Code 2020 lists the following types of poles as unsuitable for Shared Use:

- Hinged public lighting poles;
- All types of frangible public lighting poles;
- 66kV cable head poles (cable termination poles);
- New attachments to unserviceable poles (this may include use of temporary stays).

Early in the scoping stage confirmation should be obtained from the relevant Distributor for suitability of a pole for attachment of un-metered equipment.

Unless otherwise agreed with the relevant Distributor all electrical installation equipment shall be located such that the equipment:

- (a) Is least liable to mechanical damage;
- (b) Is on the side of the pole least affected by vehicular traffic;
- (c) Does not obscure a Distributor's pole identification disk, mark or number;
- (d) Maintains integrity and be appropriately spaced from network earthing conductors;
- (e) Does not interfere with safe access to other equipment located upon the pole;
- (f) Unless otherwise agreed with the relevant Distributor consumer's terminals installed on poles shall be located at 4 metres above ground level.

6.10.4.2.3.2 Concrete and Steel (conductive)

Where consumer's mains and equipment are installed on a conductive pole carrying high voltage conductors, segregation of earthing systems shall generally be required between the pole and the customer's equipment.

Concrete and steel poles shall not be drilled under any circumstances as ingress of moisture can lead to failure of the pole.

Fixing of cables and equipment to non-timber poles shall be achieved by banding with suitable stainless-steel bands and be so arranged that the band will not directly compress on cable sheaths but will securely attach cables and equipment to the pole.

6.10.4.2.4 Safety

In addition to clause 5.1 (safety), work on a pole near live distribution assets has obligations for:

a) Persons, Mobile Plant or Vehicles

It is the responsibility of the un-metered asset owner and their workers to comply with all relevant legislation including *The Blue Book* (The Code of Practice on Electrical Safety for Work On or Near High Voltage Electrical Apparatus – www.esv.vic.gov.au) for works involving Distribution assets where such works involve persons, mobile plant or vehicles. Further information can be found in the Shared use of Poles Code.

b) Worker clearances to live assets

Workers who need to work on their un-metered equipment, are required to maintain the minimum working clearance as per VESI Safety & Compliance Training Requirements for Telecommunications Work on Victorian Electricity Supply Industry (VESI) Network Operator Assets.

All telecommunications workers shall:

- be aware of and ensure that their minimum training requirements are current;
- undertake any training and assessment as required.

6.10.4.2.5 Protection & Maximum Demand Limitation

The electrical installation must be provided with a main control and overcurrent protection via a supply protection device such as a circuit breaker or residual current devices. Load shall be limited to 2 amps as per the conditions for the Distributor's un-metered supply connection and compliance with clause 6.7.2.2, note the 2 metres height limitation requirement does not apply when the SPD is located on a distribution pole.

6.10.4.2.6 Labelling

Where a point of supply is provided on a distribution pole and the electrical installation is remote from the pole location, suitable labelling shall be provided to indicate the electrical installation location. Contact details, including the customer's business name, should be provided for the controlling authority of the electrical installation. Labelling shall comply with clause 5.4.

6.10.4.2.7 Earthing

Where the electrical installation is mounted on the distribution pole and is not double insulated the earth electrode shall be located a minimum of 2 metre distance from the outside face of the pole.

6.10.4.2.8 Multiple connections

Multiple points of supply and electrical installations on a distribution pole should be avoided.

6.10.5 Supplies in public land

6.10.5.1 ESV - exemption

As per clause 5.7.5 private electrical cables in public land will require an exemption from Energy Safe Victoria. Once approval for an un-metered connection is granted, the Distributor will provide the applicant with written approval for the installation of electrical cables in public land. This approval letter is required to be included as part of customer application to the ESV for the exemption request.

Entities that do not need to seek an exemption from ESV are Local Councils, Vic Roads, Melbourne City Link, Vic Track. Notably, telecommunications companies and water authorities are not exempt.

6.10.5.2 Route plans

Route plans of as built details for private electrical cables must be submitted to the Distributor prior to or at the time of final connection request. Plans shall be detailed in accordance with Electricity (Safety) Regulations 2019, Clause 219 Route of underground lines. Sample templates are available from each Distributor.