

## Service Requirements

### General

Contact Idaho Power before beginning work on any new service.

All meter installations must meet current electrical code requirements and display the proper electrical permit.

To help prevent damage, always call **Dig-Line** for locations at least **2 business days** before digging, excavating, or driving a ground rod.

Dial **811** (Nationwide)

### Burial Depth

A 30" minimum burial depth is required for cables up to 750 volts line-to-line. Contact Idaho Power if this depth cannot be achieved.

### Service Voltages

**Three Phase (3-Ø)**      120/208 volts  
   277/480 volts

3-Ø, 120/240 and 240/480 volt services are for maintenance only and are not available for new construction, except for some small applications that must be approved in advance by Idaho Power.

### Meter Location

The meter and any associated equipment must be suitably located so that the installation and any future maintenance can be performed without undue inconvenience to the customer or Idaho Power.

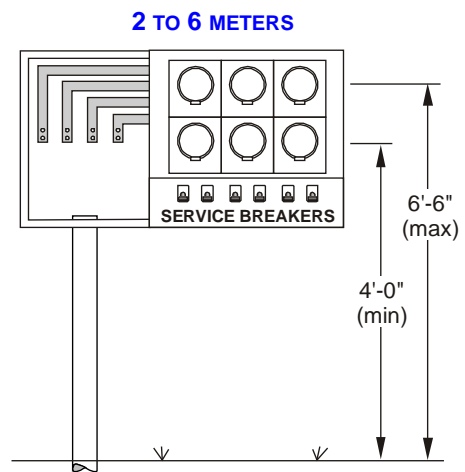
The meter must be located in a reasonably protected area so that the risk of inadvertent damage is minimized.

The meter base, conduit, and any CT enclosure must be adequately supported on the outside of an exterior structure wall so that it will be readily accessible to Idaho Power. **Do not cover or enclose the meter.**

### Meter Height

**Permanent meters** must be 5'-6" (+/- 6") above the finished grade or other accessible surface such as a deck or stairs, except as noted below.

- ◆ Multiple meter bases must be installed so that the lowest meter is at least 4'-0" above the finished grade.



### Special Meter Base Requirements

**480 volt meter bases.** EUSERC-approved safety socket meter bases with factory installed test bypass facilities are required for 480 volt self-contained meters to provide a means to de-energize and isolate the meter. These meter bases must have an interlocking device, a screw-type meter ring, and be capable of being sealed by Idaho Power.

### Meter Base Guidelines

Refer to the *Meter Base Identification Guidelines* located on [www.idahopower.com](http://www.idahopower.com).

### Multiple Meters

Each meter base or service disconnect that is part of an installation with more than one meter is required to be plainly and permanently marked with numbers or letters that corresponds to the address, suite, office, or room it serves.

## Meter Rooms for Multiple Meters

Multiple meter installations may be located in a meter room provided that all of the following criteria are met:

1. A plan for the meter room must be submitted to Idaho Power for approval before any wiring is done.
2. The meter room must be accessible to Idaho Power through an exterior metal door with a lock box. The door must be permanently labeled with the words "Electrical Room".
3. The meter room may only be used for electrical equipment and communication equipment that does not interfere with the electrical equipment. No storage of any kind will be allowed.
4. Lighting, drainage and health issues are the responsibility of the customer.

## Sealing for Moisture and Gas on Underground Services

Each meter base that is connected to an underground service where the service cables are installed in conduit must have all opening(s) between the meter base and the interior of a building permanently sealed to prevent any liquids or vapors from passing into the building. See NEC 230.8, *Raceway Seal*.

## Clearances

### Separation between Electric and Gas.

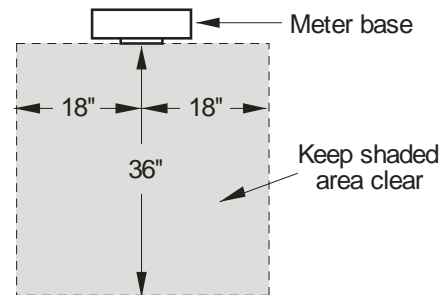
A gas meter must have a minimum horizontal separation of 36" from any electric meter, enclosure or equipment. Electrical conduit is not considered electrical equipment.

For **residential applications only**, this clearance can be reduced to 36" measured in any direction, except that the horizontal separation shall not be less than 18".

**Propane Tanks.** Any regulator, pressure relief valve, or fill connection associated with a propane tank or its delivery system must be at least 10' away from any source of ignition, which includes the electric meter.

**NOTE.** Propane tanks used for dispensing must be at least 20' from any source of ignition.

**Working Space.** Keep the 36" x 36" area directly in front of the meter base clear of any equipment, landscaping or other obstacles that could interfere with access to the meter.



## Caution: Portable Generators

Do not connect a portable generator to a building's electrical wiring unless a transfer switch has been installed per NEC 702. The transfer switch prevents the generator from feeding back into the Idaho Power electrical system, exposing workers to unforeseeable hazards. The generator can also be damaged if the electrical system becomes energized while the generator is operating.

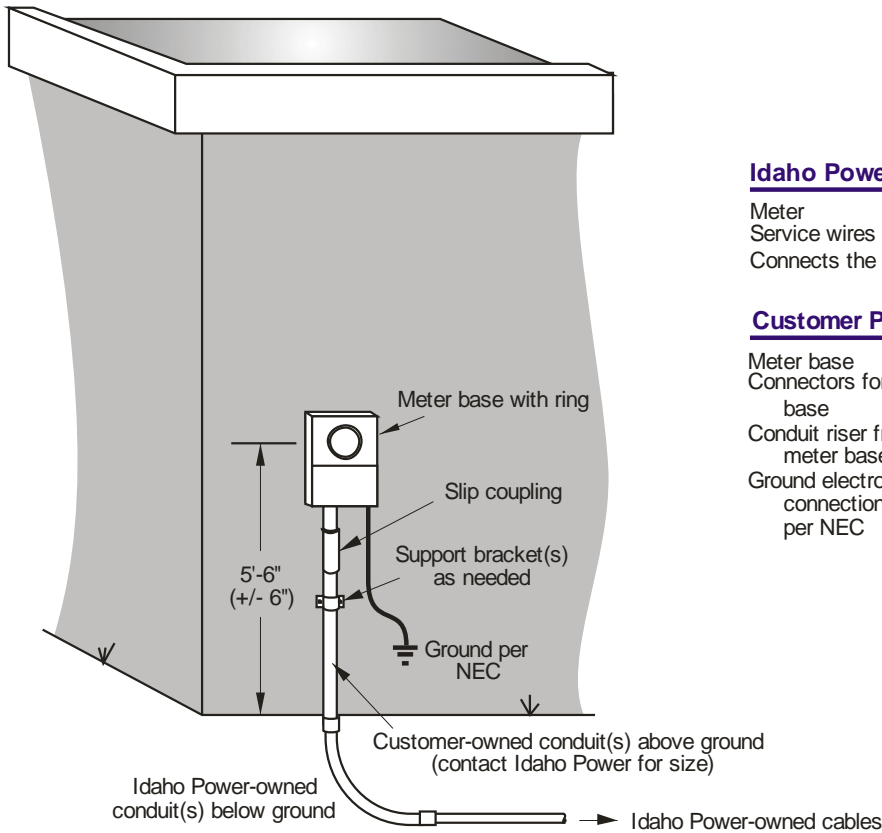
## Who Provides the Connectors?

Generally, the owner of the enclosure or equipment will provide the electrical connectors (lugs or terminals) within that piece of equipment necessary to connect the electrical cables, regardless of who owns the cables. The number, size, and type of cables must be known so that the proper lugs or terminals can be provided.

For example, Idaho Power will connect its service cable to the customer's equipment, such as a meter base or CT enclosure, using the customer-provided connectors.

# Requirements for Three-Phase (3-Ø) Underground Electric Service

## Idaho Power-owned 3-Ø Underground Service to a Building



### Idaho Power Provides

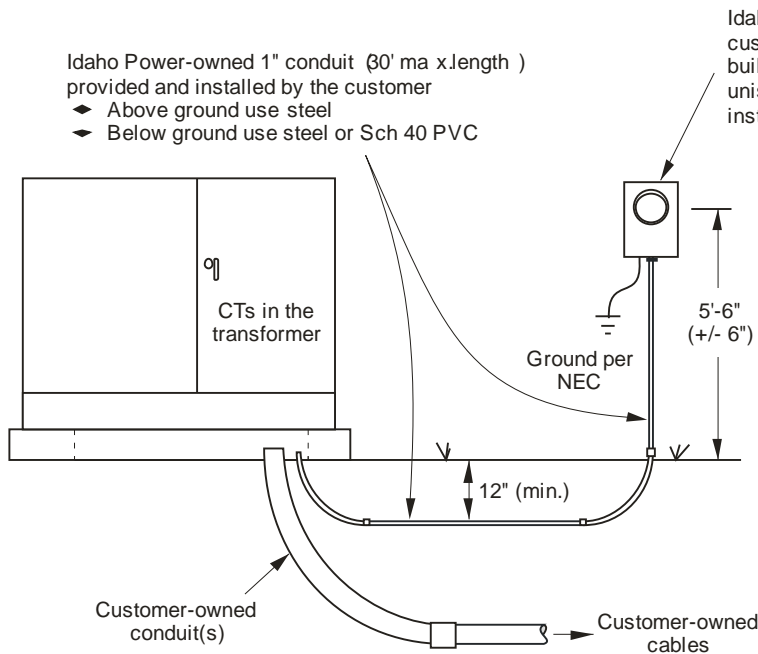
Meter  
Service wires and conduit  
Connects the service wires at the meter base

### Customer Provides

Meter base  
Connectors for the service wires at the meter base  
Conduit riser from just below ground to the meter base  
Ground electrode(s), ground wires, and connections to ground the meter base per NEC

# Requirements for Three-Phase (3-Ø) Underground Electric Service

## Customer-owned 3-Ø Underground CT Service



### Idaho Power Provides

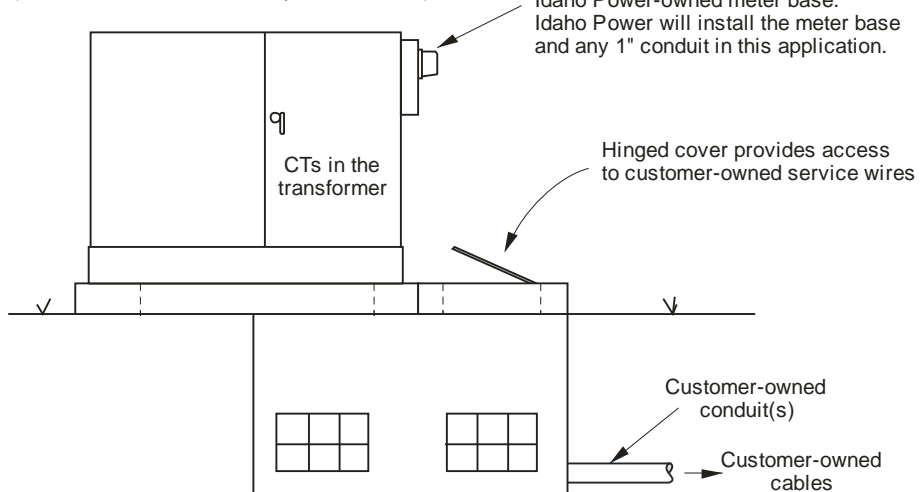
CT meter base, CTs and meter  
CT metering wires and connections  
Connectors for the service wires at the transformer

### Customer Provides

Building or structure to attach the CT meter base  
1" conduit for CT wires  
Installs the CT meter base and 1" conduit  
Service conduit(s) and service wires  
Connects the service wires at the transformer  
Ground electrode(s), ground wires, and connections to ground the CT meter base per NEC

### Typical Design with a Basement under the Transformer

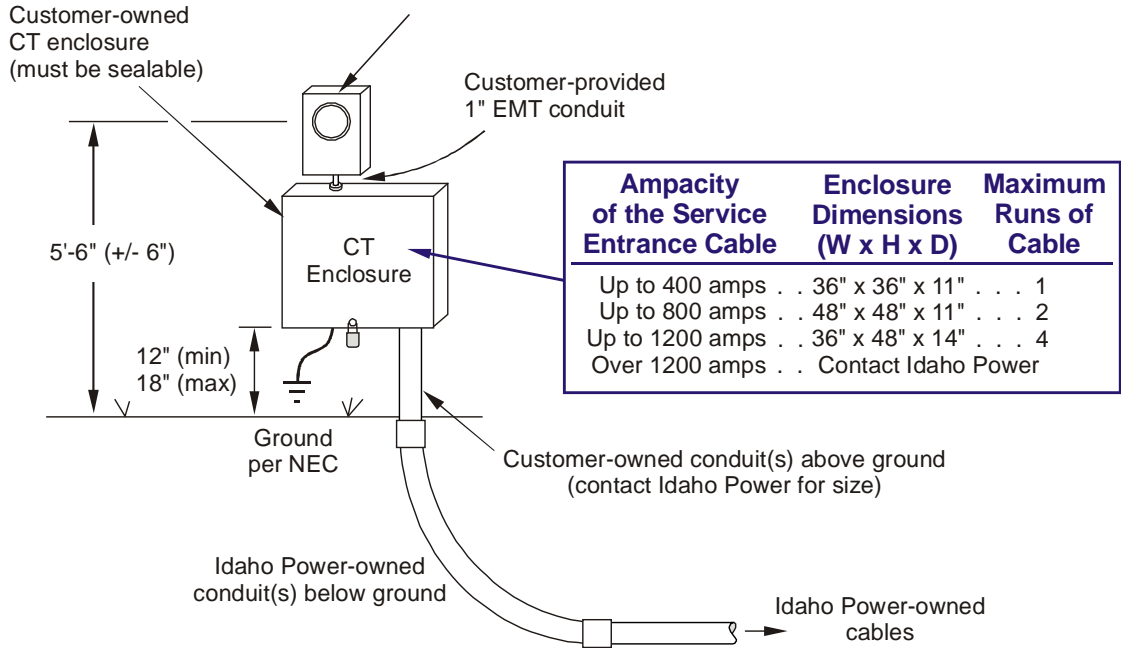
(when the customer has many runs of cable)



**NOTE.** There is an additional charge for CT metering when the customer's main breaker or panel size is 400 amps or less.

## Idaho Power-owned 3-Ø Underground CT Service

Idaho Power-owned meter base is installed by the customer and must be adequately supported on a building wall or suitable structure. It can be located to the side of the CT enclosure.



### Idaho Power Provides

CT meter base, CTs and meter  
CT metering wires and connections  
Service wires and conduit(s)  
Connects the service wires in the  
CT enclosure

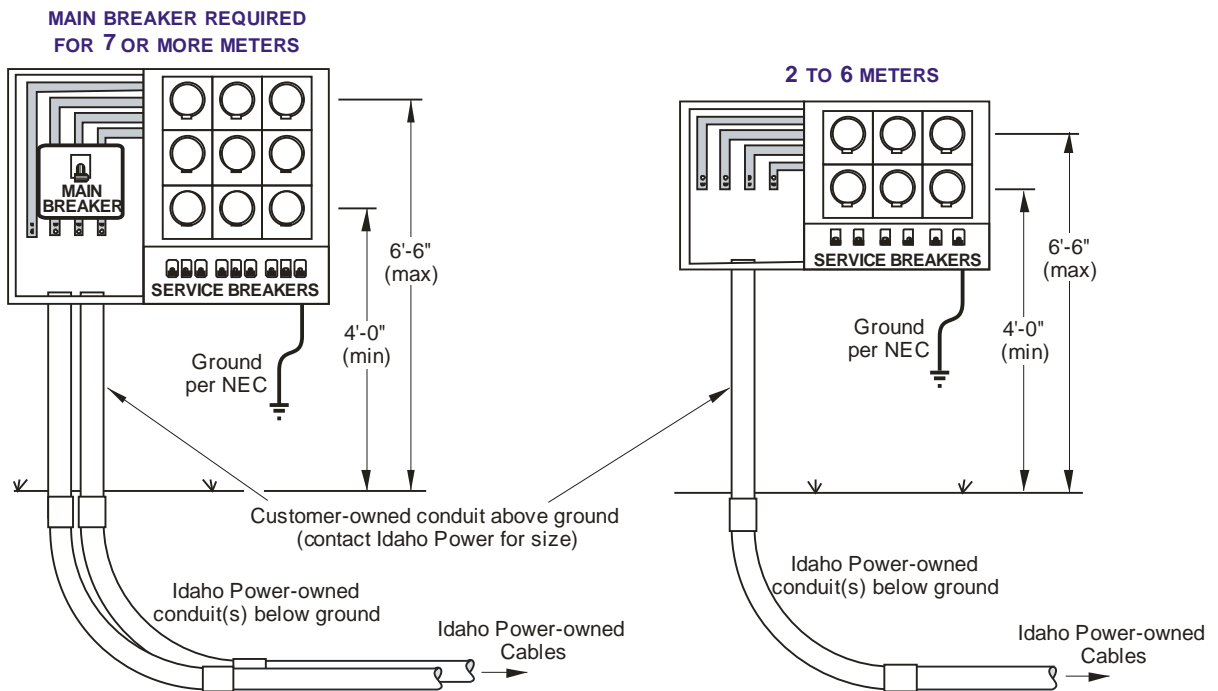
### Customer Provides

Building or structure to attach the CT enclosures and  
CT meter base  
CT enclosure (must meet IPCo specifications)  
1" EMT conduit for the CT wires  
Installation of the CT meter base and 1" EMT conduit  
Connectors for the service wires at the CT enclosure  
Conduit riser(s) from the CT enclosure to 18" below ground  
Ground electrode(s), ground wires and connections to  
ground the meter base per NEC

**NOTE.** There is an additional charge for CT metering when the customer's main breaker or panel size is 400 amps or less.

# Requirements for Three-Phase (3-Ø) Underground Electric Service

## Idaho Power-owned 3-Ø Underground Service to Multiple Meters



### Idaho Power Provides

- Meters
- Service cables and conduit(s) below ground line
- Connects the service cables at the bus or main breaker

### Customer Provides

- Meter base and main breaker (if needed)
- IMPORTANT NOTE** The connection point for Idaho Power's service cables must be on terminals that extend away from the main breaker
- Connectors for the service wires at the bus or main breaker
- Conduit from the meter base to ground line
- Ground electrode(s), ground wires and connections to ground the meter base per NEC