

## Definitions

### General

**Customer** refers to a present or prospective user of Idaho Power's service.

**Idaho Power** refers to Idaho Power or its authorized agent.

**ANSI** (American National Standards Institute) is an organization responsible for a variety of industry standards including pole class.

**EUSERC** (Electric Utility Service Equipment Requirements Committee) is the committee that develops standards for meter enclosures and equipment.

**NEC** (National Electric Code) is the code that governs the requirements for a customer's wiring. Electrical wiring for Idaho Power is governed by a different code.

**Service** has two definitions:

1. The supply of electricity from Idaho Power to the customer.
2. The **conductors** (wires or cables) that connect Idaho Power's facilities to the customer's equipment.

### Electrical Terms

**Horsepower** (hp) refers to the size (electrical load) of a motor. 1 hp = 0.746 kW.

**Kilowatt** (kW) refers to the size (electrical load) of a customer's service. 1 kW = 1000 watts.

**Kilowatthour** (kWH) refers to the electrical consumption of a customer's load. A 1000 watt load operating for 1 hour uses 1 kWH.

**Kilovoltamp** (kVA) refers to the apparent power of a customer's load and is what Idaho Power uses to size its facilities.  $kVA = kW/p.f.$

**Non-linear load** refers to an electrical device that draws current in a non-sinusoidal waveform such as a:

- ◆ Solid-state motor drive
- ◆ Variable frequency drive
- ◆ Adjustable speed drive
- ◆ Electronic motor controller
- ◆ Electronic power supply
- ◆ Electronic phase converter

Tariffs require that these loads must meet IEEE 519-1992 guidelines regarding their effect on voltage distortion and notching.

**Power Factor** (p.f.) is ratio used to measure the inefficiency of a customer's load. Idaho Power may need to install larger facilities to serve a customer's load if the power factor is too low.

### Conduit

**Rigid Conduit** is required for certain applications and includes the following types:

- ◆ **RMC** (Rigid Metal Conduit) and **GRC** (Galvanized Rigid Conduit) are heavy wall metallic conduit.
- ◆ **IMC** (Intermediate Metal Conduit) is lighter weight than RMC and GRC, but still acceptable for applications that require rigid conduit.
- ◆ **Schedule 80 PVC** is heavy weight non-metallic conduit and is acceptable for applications that require rigid conduit.

**Schedule 40 PVC** non-metallic conduit that is acceptable for applications where the conduit is buried.

**EMT** (Electrical Metal Tubing) is thin wall metal tubing and is used to carry metering wires.

## Definitions for Electric Service

### Metering

**Meter** is a device for measuring the electric energy consumed by a customer.

**Self-contained Meter** refers to a meter that has the ability to measure a customer's load without using CTs.

**Current Transformer** (or CT) is an instrument transformer used in metering that allows large customer loads (those that exceed the capacity of self-contained meters) to be measured.

**Current Transformer Enclosure** (or CT Enclosure) is a cabinet that houses Idaho Power's instrument transformers.

**Metering Wires** are wires installed in 1" conduit by Idaho Power between the CTs and the meter.

**Meter Seal** is a device installed on a meter base by Idaho Power to indicate that it has been opened.



Meter Seal

Sealed Meter

### Poles

**Pole Size** refers to the overall length of the pole and includes the portion buried in the ground.

**Pole Class** is an ANSI standard used to establish the strength of a wood pole based on the type of wood and the dimensions of the pole at specific locations. Service poles must be at least Class 6.

For temporary service only a 6x6 treated post may be used.

### Services

**Single Phase (1-Ø) Service** refers to an overhead or underground three-wire service used to serve 1-Ø loads.

**Three Phase (3-Ø) Service** refers to an overhead or underground four-wire service used to serve 3-Ø loads.

**Point of Attachment** for overhead services is the point on the customer's building, structure or pole that supports service wires.

**Service Point** is the point where Idaho Power's service conductors connect to the customer's wires or equipment.

**Service Disconnect** is a customer-owned circuit breaker or fused switch and accessories that is intended to disconnect the customer's service.

**Temporary Service** is a non-recurring service intended to be used for a limited time (not to exceed 18 months).

## Definitions for Electric Service

### Equipment

**Handholes** are small subsurface boxes that contain connections between the customer's service and Idaho Power facilities.



**Handhole**

**Transformers** are electrical devices that convert Idaho Power's high voltage facilities to the desired voltage needed for the customer's service.



**3-Ø Padmount Transformer**

**1-Ø Padmount Transformer**



**1-Ø Overhead Transformer**



**3-Ø Overhead Transformers**



**BE AWARE** Don't mistake other Idaho Power equipment for a transformer. Only transformers have service voltages. **Contact Idaho Power for clarification**