

3 Services

3.1 Types of Service Furnished

Available electric service includes 60-hertz, alternating current, single phase or three phase (See section 3.8). The nominal secondary voltages are given below:

Underground Service:

The following underground service voltages may be provided:

Single phase, 120/240-volt, three-wire, grounded.

Three phase, 208Y/120-volt, four-wire, grounded, wye. (See section 3.8.2)

Three phase, 480Y/277-volt, four-wire, grounded, wye.

Overhead Service:

The following overhead service voltages may be provided:

Single phase, 120/240-volt, three-wire, grounded.

Three phase, 208Y/120-volt, four-wire, grounded, wye. (See section 3.8.2)

Three phase, 240/120-volt, four-wire, grounded, delta. (This voltage may not be available at some locations, consult the Power Company before purchasing equipment.)

Three phase, 480Y/277-volt, four-wire, grounded, wye.

If other service voltages are required, the Customer must request and the Power Company must approve these voltages before services can be provided.

3.2 Permanent Service Connection

Only authorized Power Company employees shall make the permanent connection or disconnection of the Power Company's electric service. Services shall not be jumpered prior to local inspection and permanent connection by the Power Company. Services shall not be energized without NEC approved covers properly secured.

3.3 Point of Delivery

The *point of delivery* for commercial and industrial Customers refers to that location where the Power Company's circuit connects to the Customer's system. Where the point of delivery is located at the Customer's building, the Power Company will only install service connections to customers metering equipment at the main or entry floor level.

The *point of delivery* for residential customers must be located no more than 10 feet back from the front corner of building. When this condition cannot be met, the Customer must contact the Power Company to determine an appropriate location of the Customer's metering equipment.

3.4 General Meter Installations

The Power Company's rate schedules require the delivery of each class and type of electrical service through one meter to one Customer at one location. Meters must be accessible during normal work hours for meter reading and testing.

Meters *shall not* be installed on drive-through service entrance side of building. See the clearances section for more detail.

Customers or Contractors are not authorized to relocate any meter belonging to the Power Company or interfere in any way with the meter or its connection. The Customer must contact the Power Company for any work that involves relocation, rewire, or new installation of a meter.

CAUTION: With some types of meter sockets, removal of the meter does NOT de-energize the service.

The Customer or Contractor must promptly notify the Power Company upon completion of repairs or modifications so the Power Company can inspect, reinstall, and reseal the meter (See the seals sub-section below and section 1.0 concerning Customer Liabilities.)

3.4.1 Acceptable Meter Sockets

Acceptable meter sockets are manufactured in accordance with the current EUSERC requirements, standards for Safety Meter Sockets, as well as ANSO-C12 and UL/ANSI-414. The Customer must provide and install the meter socket complete with terminal lugs, meter jaws, manual link bypasses or safety sockets (when required), and sealing means for all sections (see Figures 7-1 and 7-5). Consult the Power Company for meter socket types.

Stainless steel meter enclosures are recommended for corrosive environments and contaminated areas.

3.4.2 Sealing Provisions

The Power Company uses seals placed on meter rings, and associated service equipment to prevent injury and/or tampering. Sealing provisions for service equipment shall mean using a stud/wing-nut assembly or a clip suitable for use with a seal.

All cabinets and gutters containing unmetered conductors (other than mainline switches required by applicable codes) must have sealing provisions. Removable sections of conduit may only be installed when approved by the Power Company and must be sealed by the Power Company. Unmetered conductors passing through a service disconnect compartment for a mobile home service pedestal must be in conduit and arrangements must be made for sealing.

3.4.3 Mounting of Meter Sockets

Verify that clearances for meter sockets meet the requirements shown in Figures 5-1 and 5-2. Plumb meter sockets in all directions and securely mount to a rigid surface. Securely fasten conductors to their respective terminals and arrange them in a manner which will not interfere with the installation of Power Company conductors, the meter or cover, or with the operation of manual link bypasses.

If the meter cabinet is to be recessed into the building wall, install a flush-type box or meter cabinet designed specifically for that purpose so the face of the meter cabinet projects outward beyond the building surface as approved by the Power Company.

The Occupational Safety and Health Code requires 36 inches of clear working space in front of live parts. No barrier shall be installed that will be within 36 inches of the front of the meter panel when a meter is removed and energized parts are exposed. Locate meter sockets and other metering equipment at least 36 inches horizontally from a gas meter, gas valve, or exposed gas line.

The unmetered service conductor and the metered service conductor will not be run in the same conduit, raceway, or gutter. This does not apply to minor repair jobs if coordinated with the Power Company before repair.

The Power Company does not encourage the use of enclosures over meters. Enclosures will be permitted when the following requirements are met:

The meter is readily accessible for meter reading or resealing, without requiring the use of tools or the removal of the enclosure. The enclosure should be hinged to one side.

The meter meets all requirements of section 5.1 (*Meter Clearances and Locations*).

Permission to enclose the meter will remain in effect as long as the Customer maintains the enclosure in good working condition.

Be sure adequate protection exists for meters subject to physical damage. Barrier posts are required when metering equipment is exposed to vehicle traffic.

3.5 Connection and Disconnection of Service

Connection and disconnection of any service will be done by the Power Company. The Customer will be charged according to the fee schedule in effect. ***All services disconnected longer than six months may require local inspection approval before reconnection.*** All work must be coordinated with the Power Company for connection and disconnection of service.

3.6 Relocation of Services and Facilities

A fee will be charged if the Customer requests or requires relocation of existing Power Company facilities.

3.7 Customer Equipment on Power Company Poles

Customer-owned metering equipment, switching devices, conduits, conductors, luminaries, etc., *shall not* be mounted on a primary Power Company pole.

3.8 Load Requirements

3.8.1 Single phase Service

Equipment having a capacity of 2 kilowatts or more shall be operated at not less than 208 volts.

Customers connecting any individual motor larger than five horsepower must obtain prior approval in writing from the Power Company. In addition, air conditioners and heat pumps larger than five tons require prior Power Company approval.

Single phase motors larger than three horsepower may cause voltage dips objectionable to some Customers.

Space or water heating must be designed and controlled so that no more than 48 amperes of load at 240 volts switches on or off at any one time.

The Power Company will limit the maximum single phase load served through one point of delivery to the capacity of a 167 kVA single phase transformer.

The Power Company will require the Customer to use three phase service in lieu of single phase service, if in the Power Company's judgment, the Customer's connected load is excessive for single phase service.

Single phase service over 320 amps requires current transformer metering as described in section 10.2 (*Current Transformer Metering*).

3.8.2 Three phase Service

Three phase service will be provided upon request to Customers in accordance with the Power Company's present rate schedules.

Three phase service over 200 amps maximum requires current transformer metering as described in section 10.2 (*Current Transformer Metering*).

The Customer's connection of single phase loads to three phase, should follow the guidelines shown below in order to prevent an overloading or single-phasing condition which could damage the Customer's three phase equipment;

On 208Y/120-volt or 480Y/277-volt three phase services, all single phase loads should be split evenly among the three phases.

On 240/120-volt delta three phase service, all single phase loads (both 120 and 240 volt) should connect only to the 120-volt-to-ground legs, except 240-volt resistance heating equipment which may be balanced across all three phases.

The high or wild leg (208 volts to ground) of a 240/120 volt four-wire delta must be identified with the color orange.

The Power Company will choose the voltage supplied to the Customer depending upon the characteristics of the Power Company's distribution system in the area and the Customer's electrical needs. Utility standards limit service at 208Y/120 volts to a demand of 500 kVA and 480Y/277 volts to 2500 kVA.

Typically, three phase delta service will not be supplied from an underground system. This type of service may be considered, at the discretion of the Power Company.