

BPA
(Board of Public Affairs)
Requirements
for
Electric Service
and
Metering Installation

General Information

A. General

1. Customers should give particular attention to sizing the ampacity of the service entrance equipment when determining present and future electrical needs.
2. Customers must provide a certificate of approval from the AHJ before the Company will permanently connect or reconnect customer's service. Also, the Company shall make the determination as to whether the customer's installed electrical equipment complies with all Company requirements.
3. The Company's Distribution Engineer is responsible for:
 - Assigning service and meter locations. All meter/metering equipment installations are to be located outside unless specific approval has been obtained by Electric Dept.
 - Assisting in planning the installation for connection to the Company's system.
 - Determining if the customer is in compliance with the Company's requirements for service.
4. Residential customers requesting temporary disconnection of service must contact the Company at least two (2) business days in advance. Nonresidential customers requesting disconnection of service must contact the Company at least four (4) business days.

B. Requesting New Electric Service

1. Customers must make requests for new electric service prior to the start of construction. This request can be made by telephone to the appropriate Distribution Engineer.
2. The customer or the customer's representative is responsible for supplying complete and accurate information relative to the use of the service and the equipment that can be connected. Subsequent changes in the customer's service or plans must be reported immediately.
3. Use the following outline to provide correct information that may be needed by the Company to make the necessary arrangements for service:
 - a. Service address (no directional addresses will be allowed on new construction).
 - b. Legal name of the customer who will be using the service, a copy of the deed and the correct legal name of the property owner if different than the customer to be served.
 - c. Approx. date when customer will be ready for permanent electric service.
 - d. Preferred service voltage and service point.
 - e. Service ampacity

f. Plot plan showing location of right of way, property lines and building structures to be served, satellite buildings, driveways and parking areas, etc...

g. Once work is complete and approved Company has 5 business days to energize new service.

C. Installation of Electric Facilities

Installation of electric facilities will begin when all Company requirements, including the following, have been completed:

1. The Company, customer and the property owner to be served have approved the method of service.
2. Arrangements have been made for the billing and collection of charges for the service to be provided.
3. The customer and all parties have completed the required agreements and/or grants of easement to the Company for the installation of facilities on or across private properties.
4. Elevation is to final grade within those areas where the company is to install facilities, assurance that these areas are accessible and clear of stored materials or other construction activities.
5. The Company has received all required permits to install its facilities.
6. Adequate protection for Company-owned equipment has been installed.

Unauthorized Use of Electricity Removal or relocation of an electric meter without the Company's permission is prohibited. Tampering with the Company's metering equipment, making an unmetered connection or making an unauthorized reconnection to the Company's system is prohibited. The penalties for these activities may include fines and imprisonment.

D. Service Voltages

Listed below are the service voltages that may be available based on customer location and the nature of the load.

The following service voltages, 600 volts or less, are supplied by the Company:

- a. Single-phase, 3-wire, 120/240 volts AC at 60 Hz
- b. Three-phase, 4-wire, 208Y/120 volts AC at 60 Hz
- c. Three-phase, 4-wire, 480Y/277 volts AC at 60 Hz

Company will maintain other voltages that have been previously supplied.

E. TEMPORARY ELECTRIC SERVICE

Requirements for Electric Service the Company will supply temporary electric service where available. For charges and information concerning temporary electric services, call Company Office.

1. Before the Company will provide temporary service, for single-phase services of 200 amps or less, the customer must furnish and install the following:

- a. Temporary support with address visible from the street
- b. Service entrance conductor or underground service lateral dug within 2 feet of source
- c. Weather-head (for overhead services)
- d. Service drop attachment device (for overhead services)
- e. Ringless meter socket
- f. Meter board (when required)
- g. Service grounding
- h. Service disconnecting device
- I. Any other equipment required by the AHJ.

These requirements must meet the stipulations contained in this manual's drawing for a maximum 200 amps temporary service.

2. The Company will:

- a. Furnish and install the service drop (for overhead areas)
- b. Make connections to the Company's facilities
- c. Furnish and install the electric meter

3. For three-phase services or single-phase service over 200 amps call Engineer.

F. PERMANENT ELECTRIC SERVICE

Number of Services

Only one service drop or underground lateral, except for separate lighting and power services, will be supplied to any one structure. Exceptions may be permitted by the National Electric Code (NEC) but are subject to approval by the Company and the AHJ. Separate service raceways and meter equipment are normally grouped, and service drops or underground laterals will be run to the same general location on the structure. At the discretion of the Company, the overhead services may be installed from different poles and the service entrance conductors may enter a structure at different locations.

Nothing is to be 10 feet in front or 3 feet on sides and back of company equipment for maintenance purposes, Space for Service Equipment Minimum space requirements can be obtained from figures in this manual and from the NEC.

G. Service Drop Location

The location of all service drop attachments must be approved by Distribution Engineer before the customer's work begins.

1. The service drop attachment must be safely accessible and in a direct line to the Company's service pole. "Safely accessible" is defined as accessible with an extension ladder placed on firm level ground directly beneath the point of attachment and with a mounting height of no greater than 20 feet.
2. The service drop attachment must be located at a height to permit the following minimum clearances (under conditions of maximum sag) at any point along the span of the service drop conductors. These clearances apply to Company-owned service drops meeting NESC rule 230C3
 - a. Twelve (12) feet above the finished grades, sidewalks, platforms or projections from which the conductor might be reached when the voltage is limited to 300 volts to ground
 - b. Sixteen (16) feet above the residential driveways when the voltage is limited to 300 volts to ground
 - c. Sixteen (16) feet above commercial areas, parking lots, public streets, alleys, roads, commercial driveways and areas subject to truck traffic or agricultural vehicles
3. The service drop conductors to a structure must have a horizontal clearance not less than 3 feet from all windows, doors, porches, fire escapes or similar locations readily accessible to pedestrians. All other clearance requirements of 21 the NEC, NESC, and state and local requirements must be met. Service drop attachment points at corners 90 degrees away from the service entrance weather-head must be installed no more than 12 inches from said corner.
4. The service drop attachment or service mast guying attachment device must not be installed on a masonry chimney.
5. The minimum size service mast for attachment of a service drop is 2-inch rigid steel or 2-inch intermediate metallic conduit (IMC). Conduit couplings are not permitted above the roofline. Couplings, if required, must be installed below the second conduit support from the roofline.

H. Attachment of Service Drop

The customer will furnish and install an appropriate service drop attachment device capable of withstanding a 1,200# dead-end tension fastened to the structure wall or other support for terminating the service drop. These service drop attachment devices must be secured into studs or other parts of the main building and must be capable of supporting the service drop tensions. Attachment to the trim board only is not permitted.

This attachment device must be mounted below and within 2 feet of the weather head.

I. Service Pole Line

If it is necessary to install poles and conductors to reach a service point, the cost of the pole line may be at the customer's expense, which shall be at the discretion of the Company. The Distribution Engineer will provide the estimated costs for these facilities to the customer.

J. Service Raceways and Service Entrance Cables

1. Service entrance cable or bus duct must be installed in compliance with the NEC. The metering equipment must be located on the supply side of the main service disconnecting device whenever possible. The meter is to be located outdoors on all new or rewired buildings.
2. Suitable protection must be used in locations where service entrance cables and/or meter would be subject to damage. Locations may include areas adjacent to driveways, sidewalks, parking lots, etc.
3. All service entrance conductor installations must be provided with a raintight weather-head located above and within 2 feet of the service drop attachment device. Weathertight connections must be installed in the top of outdoor meter sockets and cabinets when service entrance cables are used. Cable sealant may be required to make the installation watertight.
4. Where exposed to weather, raceways enclosing service entrance conductors must be arranged to drain as required by the NEC.

K. Service Entrance Conductors

1. All single-phase installations having more than one branch circuit must be wired with a three-wire service.
2. Service entrance conductors must extend at least 3 feet from the weather-head to permit connection to the Company's service drop. Additional conductor lengths may be required on installations having multiple or parallel sets of service entrance conductors or having pole, mast or building mounted current transformers.
3. Service entrance conductors for residential services must have an ampacity of not less than 100 amps, 120/240 volt, single-phase. An oxidation inhibitor must be properly applied to all connection points.
4. The customer will furnish, install, own and maintain all new u/g services. When a service lateral is installed, an expansion coupling shall be installed at the meter base to allow for settling of the earth.
5. When installing a service lateral to the service pole, the customer must furnish and install the following:
Sufficient lengths of cable for the Company to make connections to secondary conductors or terminals of pole-mounted transformer.
 - Obtain cable length information from Distribution Engineer.
 - The cable is to be dug and coiled at base of pole.

L. Grounding the Customer's Service

Service entrance wiring with a neutral must have the neutral grounded. Grounding of all electric services and equipment must be in compliance with the NEC and meet the requirements of the AHJ.

Customer Equipment

The use of Customer's equipment shall not adversely affect the Company's system or service supplied by the Company to other customers. The Company will make permanent connections between the customer's electric service wiring and the Company's system. Unauthorized connections are not permitted. Where three-phase service is provided, the Company will provide either clockwise or counterclockwise rotation.

M. Electric Meter Installations

General Removal of, relocation of or performing any work on an electric meter without the Company's permission is prohibited. Tampering with the Company's metering equipment, making an unmetered connection or making an unauthorized reconnection to the Company's system is prohibited. The penalties for such activities may include but are not limited to fines and imprisonment.

1. Before ordering or installing electrical metering equipment, please obtain from Distribution Engineering available information for establishing system types and service voltage.
2. Certain types of customer installations require special metering. These include but are not limited to:
 - a. Bus-bar installations of all ampacities
 - b. Service ampacities exceeding 1200 amps
 - c. Service voltages over 600 volts
 - d. All metering other than standard self-contained type
 - e. Multiple services
 - f. Multiple occupancy and/or multistory buildings
 - g. Underground service laterals terminating in metering compartments
 - h. Mobile homes or mobile offices
3. All metering poles and pole holes must be inspected and approved by a designated Company representative before they are installed. The pole must be a new, fully treated, minimum 25-foot, class 7 wood pole.
4. Self-Contained Metering Installations

The customer will furnish, install and maintain the following:

 - a. Meter socket (MEG Approved)
 - b. Overhead service drop attachment device
 - c. Service entrance conductors in raceways or cable assemblies
 - d. Underground service laterals
 - e. Connections to the meter socket terminals or preassembled unit bus bar connectors

f. Service disconnecting device

5. Meter bases cannot be used as a raceway, junction, termination point, or for grounding any other cables, wires or service conductors. Meter base load side service lugs shall have only one wire installed on each factory installed lug; no double tapping of lugs is permitted.

The location of the meter must be approved by Distribution Engineering in advance of the installation or placement of any meter and before the Company will make the service connection. At some locations the Company may require the customer to install guards or enclosures to protect the Company's metering equipment from damage. The customer is responsible for any loss of and/or damage to the Company's meter(s) on customer's premises. Standard meter height is 4 to 5 1/2 feet above finished grade. On new single-family residential service underground installations.

Electric meters and associated equipment shall not be installed: in store show windows; directly under any window; in restrooms; under or behind pipes, valves, steam traps, vents or other obstructions; close to motors, drive belts, other rotating machinery; or in any other place where they will be subject to vibration. Metering equipment shall not be located where exposed to gases, fumes, vapors, liquids or other agents having a deteriorating effect on the equipment, or where exposed to excessively high temperatures. A clear space at least 3 feet wide, 4 feet deep and 7 feet high must be provided and always be available in front of every meter for reading, inspecting, testing and maintenance operation.


N. Temporary Repairs

Any temporary Electrical repairs made by Company Representative to keep customer's service intact due to unforeseen circumstances **must** be permanently repaired with-in 10 working days to avoid service interruption unless arrangements are made with engineering. Any and all existing installations found in field by Company Representative deemed hazardous or unsafe by Company **must** be properly fixed to company and NEC/NESC specs within a specified time deemed by engineering not to surpass 30 days.

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Approved By: 

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