



# Electric Service Guidelines

**General Information**

**Section 100**

**July 2010**

*Oncor Electric Delivery Company*

# ELECTRIC SERVICE GUIDELINES

---

These Electric Service Guidelines supersede all prior issues of Electric Service Guidelines issued by Company and become effective with all construction **on or after July 1, 2010**. For more information call the Company at 1-888-313-6862 or visit our website at

<http://www.oncor.com>

**For underground cable locates call 811.**

**FOREWORD**

**SECTION 100  
GENERAL INFORMATION**

**SECTION 200  
CLEARANCES**

**SECTION 300  
OVERHEAD SERVICE**

**SECTION 400  
UNDERGROUND SERVICE**

**SECTION 500  
METERING AND ASSOCIATED EQUIPMENT and  
CONNECTOR APPLICATION TABLES**

**SECTION 600  
TEMPORARY SERVICE**

## FOREWORD

This booklet is issued by Oncor Electric Delivery Company (Company) for use by Customers and their agents.

This booklet should be used as a guide in planning the installation of electrical equipment and methods of receiving electrical power and energy from the electrical delivery system of Company.

**If service methods other than the examples discussed in this booklet are required, the Customer is to obtain written Company approval prior to letting bids and installing equipment.**

Where local inspection authority is not involved, meter installations should be wired in accordance with the latest edition of the National Electrical Code or Company specifications when the Company specifications exceed those of the National Electrical Code.

The information presented herein will be revised periodically to reflect changes which may develop. **It is the Customer's responsibility for obtaining the latest revision.**

The latest revision can be obtained at:

[http://www.oncor.com/electricity/construct/guidelines/const\\_guide.aspx](http://www.oncor.com/electricity/construct/guidelines/const_guide.aspx)

**NOTE: Revisions are highlighted in yellow on the Internet copy only.**

## SECTION 100 – GENERAL INFORMATION

### 100.01 Definitions

#### 100.01.01 **Company**

Oncor Electric Delivery Company and its officers, agents, employees, successors, and assigns.

#### 100.01.02 **Connected Load**

The combined electrical requirement (i.e., the sum of the capacities and/or ratings) of all motors and other electric power consuming devices installed on the Customer's premises.

#### 100.01.03 **Current Transformer (CT)**

A transformer used in metering applications which reduces, by a definite ratio, the value of primary current to a value usable by the meter.

#### 100.01.04 **CT Enclosure (also known as CT Can)**

See instrument transformer enclosure.

#### 100.01.05 **CT Socket**

A meter socket used only with external instrument transformers.

#### 100.01.06 **Customer**

An end use customer who purchases electric power and energy and ultimately consumes it. When used in the context of construction services, the term Customer also includes property owners, builders, developers, contractors, governmental entities, or any other organization, entity, or individual that is not a Competitive Retailer making a request for such services to the Company.

#### 100.01.07 **Delivery Service**

The service performed by Company for the delivery of electric power and energy. Delivery Service comprises delivery system services and discretionary services.

#### 100.01.08 **Demand**

The rate at which electric energy is used at any instant or averaged over any designated period of time and which is measured in KW or KVA.

#### 100.01.09 **Demand Interval**

The specified interval of time on which a demand measurement is based. The Company demand interval is normally 15 minutes.

#### 100.01.10 **Energy**

The measure of how much electric power is provided over time for doing work. The electrical unit is the watt-hour, or kilowatt-hour.

**100.01.11 Facility Extension Agreement**

The service agreement that must be executed by Company and Customer requesting certain construction services before Company can provide such construction services to the requesting entity.

**100.01.12 Good Utility Practice**

The term will have the meaning ascribed thereto in PUC Substantive Rules, Section 25.5, Definitions, or its successor.

**100.01.13 Inspection Authority**

Generally an incorporated City or Town, but may be an agency of the County, State, or Federal Government.

**100.01.14 Instrument Transformer (IT)**

See Current Transformer and Voltage Transformer. Current transformers and voltage transformers are collectively called instrument transformers.

**100.01.15 Instrument Transformer (IT) Enclosure (also known as CT Can or CT Enclosure)**

A metal cabinet which houses the Company's instrument transformers when a transocket is not feasible.

**100.01.16 Maximum Available Fault Current**

The amount of current that will flow due to a direct short circuit from one conductor to ground or from one conductor to another.

**100.01.17 Meter**

A device or devices for measuring the amount of electric power and energy delivered to a particular location.

**100.01.18 Meter Socket**

A receptacle of weatherproof construction used for mounting a socket type meter.

**100.01.19 Point of Delivery (POD)**

The point at which electric power and energy leaves the delivery system.

**100.01.20 Raceway**

Tubular or rectangular channel or conduit for containing electrical conductors, which may be exposed, buried beneath the surface of the earth, or encased in a building or structure.

**100.01.21 Secondary Service**

Non-residential delivery service at any one of Company's standard service voltages listed in 100.05.02, Page 11.

**100.01.22 Service Agreement**

Any commission approved agreement between Company and Customer which sets forth certain information, terms, obligations and/or conditions of delivery service pursuant to the provisions of the Tariff for Retail Delivery Service.

**100.01.23 Service Availability Statement**

A statement from the Company designating the acceptable location of the Customer's service entrance conductors, the proper location of meters and metering equipment, the type of service available or which will be made available to the specific location under consideration, and the capacity of the service to be provided.

**100.01.24 Service Drop**

Overhead conductors that extend from Company's overhead delivery system to the point of delivery (POD) where connection is made to Customer's electrical installation.

**100.01.25 Service Enclosure**

A connection enclosure used for the purpose of connecting the service lateral to Customer's electrical installation.

**100.01.26 Service Entrance Conductors**

Conductors provided by Customer extending from Customer's electrical equipment to the point of delivery (POD) where connection is made.

**100.01.27 Service Equipment**

The necessary equipment, usually consisting of (a) circuit breaker(s) or switch(es) and fuse(s) and their accessories, connected to the load end of service conductors to a building or other structure, or an otherwise designated area, and intended to constitute the main control and cutoff of the supply.

**100.01.28 Service Lateral**

Conductors, usually underground but sometimes in raceway above ground, that extend from Company's delivery system to the point of delivery or from Customer's electrical installation to the point of delivery.

**100.01.29 Service Point**

See Point of Delivery.

**100.01.30 Secondary Enclosure**

A padmounted connection enclosure located adjacent to transformer used to connect Customer's service conductors that are in excess in number and/or size than can normally be accommodated by transformer.

**100.01.31 Suitable Space**

The required amount of cleared space after vegetation and other obstructions have been removed in order to access, install, operate, maintain and replace Company facilities. Contact Company for details.

**100.01.32 Tariff for Retail Delivery Service**

The document filed with, and approved by, the PUC pursuant to which Company provides delivery service. It is comprised of Rate Schedules, Riders, and service rules and regulations. The service rules and regulations include definitions, terms and conditions, policies, and Service Agreements.

**100.01.33 Transocket**

A metal enclosure which includes instrument transformers and meter socket.

**100.01.34 Voltage Transformer (VT, also known as Potential Transformer or PT)**

A transformer used in metering applications which reduces, by a definite ratio, the value of primary voltage to a value usable by the meter.

**100.02 Codes Governing Electrical Installations**

**100.02.01 National Electrical Safety Code**

The National Electrical Safety Code (NESC) is the code that Company follows in design and construction of electric supply lines whether overhead or underground.

**100.02.02 National Electrical Code**

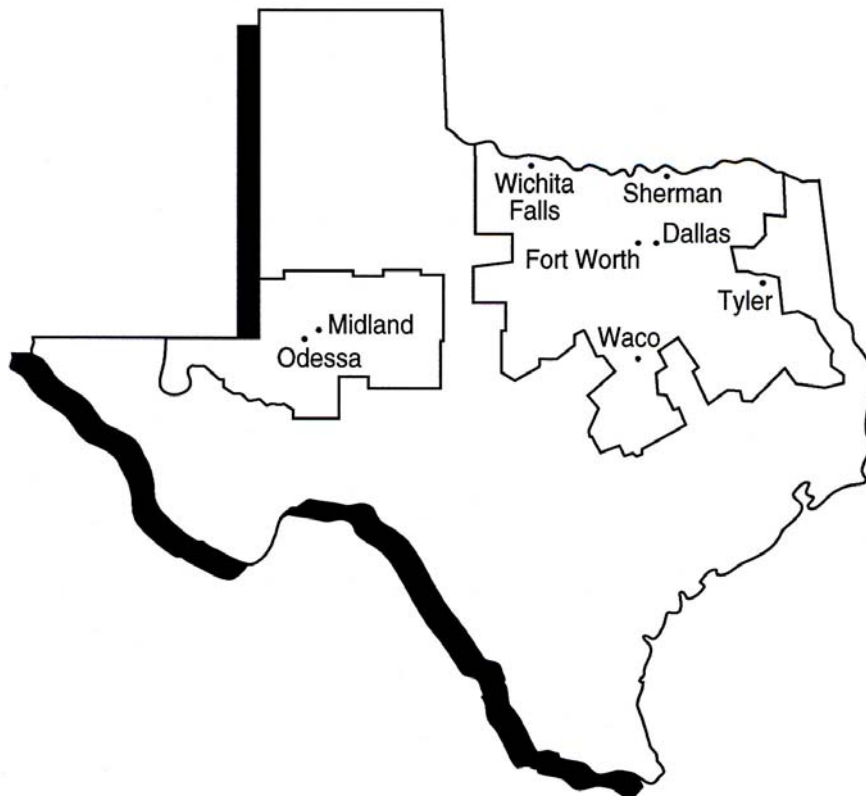
The National Electrical Code (NEC) is published by the National Fire Protection Association (NFPA). The current edition of the NEC is the code that electrical contractors follow for wiring Customer's electrical installations.

### 100.02.03 Inspection and Approval of Customer's Electrical Installation

In those locations where an ordinance requires the Customer to obtain a certificate of inspection and acceptance or a permit, Customer will obtain all necessary permits and certificates of inspection covering its electrical installation. Company will not interconnect its distribution facilities with Customer's electrical installation until Company receives notification of approval of Customer's electrical installation by the proper authority.

Company does not assume any duty of inspecting Customer's lines, wires, switches, grounding electrodes, or other equipment. Without limiting the foregoing sentence, Company may decline to interconnect its delivery system facilities with any of Customer's electrical installation that is known to be hazardous under applicable codes or that is of such character that satisfactory delivery service cannot be provided consistent with good utility practice, or where a known dangerous condition exists and for as long as it exists. **The providing of delivery service by Company does not indicate that Company has inspected Customer's electrical installation and pronounced it safe or adequate. If service methods other than the examples outlined in this booklet are required, the Customer is to obtain written Company approval prior to letting bids or installing equipment.**

### 100.03 Company Service Area



## **100.04 Security and Safety**

### **100.04.01 Radio and Television Antennas**

Antennas for radio, radio transmitter (including citizen band or amateur), or televisions shall not be erected over or under Company's overhead electric lines, nor shall they be attached to Company's poles or other equipment. Antennas should be located as far as practicable from Company's lines and in a place where they may not accidentally fall into energized wires. To do otherwise may result in serious accidents, damage to property or poor radio or television reception. The attachment of antenna guying systems to poles carrying Company's conductors is prohibited. Such attachments will be removed immediately upon discovery by Company.

### **100.04.02 Attachments to Company Facilities**

Company does not permit any attachments (such as wires, ropes, signs, banners, or radio equipment) to Company facilities by others except when authorized in writing by Company.

**Company may without notice and without liability remove unauthorized attachments to Company facilities.**

### **100.04.03 Company's Locks or Seals**

It is standard practice by Company to install locks or seals on all meters, service enclosures, padmount transformers, padmount switchgear, unmetered service wireways, or other equipment. Only Company agents and authorized persons shall remove a seal or lock.

### **100.04.04 Tampering**

Tampering with a meter or metering equipment or using any method which permits the flow of unmetered energy to a premise violates the laws of the State of Texas and may lead to disconnection of service, prosecution, or both. **Company shall not be liable to Customer for any injuries that result from such tampering.**

## **100.05 Standard Delivery Service**

### **100.05.01 General**

Company provides delivery service at the Company's standard voltages in accordance with Company's facilities extension policy, and not all standard voltages are available at every location. If Customer requests a voltage which is non-standard or not available for a specific load or location, such voltage may be provided by Company at the Company's discretion and at the expense of the requesting party. Company does not guarantee that facilities providing non-standard service (e.g. transformers) are readily available and extended outages may result.

## 100.05.02 Standard Secondary Voltages

Single Phase		Three Phase	
120	2W	---	
---		120/208	4W, Y
120/240	3W	120/240	4W, Δ
240	2W	240	3W, Δ
240/480	3W	240/480	4W, Δ
---		277/480	4W, Y
480	2W	480	3W, Δ
2400	2W	2400	3W, Δ
		2400/4160	4W, Y
		4160	3W, Y

## 100.05.03 Request for Ungrounded 3 Wire, 3 Phase Service

3 wire, 3 phase service at 240V, 480V and 2400V, shall be grounded unless the Customer requests, in writing, that the service be ungrounded (i.e. one service conductor is grounded at the distribution transformer and at the Customer's premises grounding electrode system). See Section 500.06.07 for meter sockets used on ungrounded services. Contact Company for details.

3 wire, 3 phase service at 240V and 480V is only available from overhead transformers. 3 wire, 3 phase service at 2400V is available from overhead and padmounted transformers in limited size ranges. New Customers or existing Customers adding load should check with the appropriate Company representative on availability of service at 2400 volts from overhead or padmounted transformers.

## 100.05.04 120/208 V, Single Phase, 3 Wire Network Service (Non-Standard)

Existing Secondary Service Customers served 120/208 volt, single phase, 3 wire from an underground network distribution system are **limited to a service entrance capacity of 60 amperes** to prevent unbalanced current conditions. **For services greater than 60 amperes, the Customer must wire for full 4 wire, wye service.** See Section 500 - Figure 5-H.

Three phase 120/208 volt service from padmounted transformation that will be later split up into single phase used in either residential or commercial applications shall be treated as a commercial service. The point of delivery will be at the secondary terminals of the transformer.

## 100.05.05 Point of Delivery (POD)

Customer's electrical installation must be arranged so that the location of the point of delivery allows Company to provide safe and reliable delivery service, taking into consideration the location of existing Company facilities and construction needed to connect Customer's electric installation to Company system.

Any change from the Company designated point of delivery is subject to payment by Customer based on any added costs to reach the new designated point.

**100.05.06 Easements, Rights-of-Way and Space Requirements**

Customer must grant to or secure for Company, at Customer's expense, any rights-of-way or easements on property owned or controlled by Customer necessary for Company to install delivery system facilities for the sole purpose of delivering electric power and energy to Customer.

Customer must provide, without cost to Company, suitable space on Customer's premises for the installation of delivery system facilities necessary to deliver electric power and energy to Customer and for installation of Company's metering equipment and the meter. To obtain standards on suitable space requirements, contact Company.

Company may inspect Customer provided space before installing electric facilities.

**100.05.07 Loads Exceeding 3000 Amperes**

Standard delivery service at 600 volts and less may be limited to 3000 amperes of load through a single Customer owned service entrance. Company may require loads exceeding 3000 amperes to be served with two or more adjacent services at one POD with totalized metering.

**100.05.08 Customer's Electrical Load**

Customer must take reasonable actions to control the use of electric power and energy so that Customer's electrical load at the point of delivery is in reasonable balance.

**100.05.09 Sensitive Equipment Protection**

Customers planning the installation of electric equipment such as computers, communication equipment, electronic control devices, motors, etc, the performance of which may be adversely affected by voltage fluctuations, distorted 60 hertz wave forms, or single phase events are responsible for providing and installing the necessary facilities, including protective equipment, to limit these adverse effects.

**100.05.10 4 Wire, 120/240V, 3 Phase Service**

Service at 120/240 volt, 3 phase, 4 wire delta is available from overhead transformers. Availability of this service voltage from padmounted transformers is **very** limited. New Customers or existing Customers adding load should check with Company on availability of service at this voltage from a padmount transformer.

## Information to be Supplied by Electricians to Pull Meters On Self-Contained Meter Bases

Template for information required when calling the electrician voice mailbox at 800-518-2374.  
See Section 500.02.

Electrical Contractor's Company \_\_\_\_\_

Employee's Name \_\_\_\_\_

Address where work is to be done \_\_\_\_\_

City \_\_\_\_\_

Work to be done

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Will work require an electrical inspection?    Yes    No

Date meter will be pulled \_\_\_\_\_

Date meter will be replaced \_\_\_\_\_

Contact phone number for clarifying information \_\_\_\_\_

## DO YOU KNOW THE LAW?

### Texas Law & OSHA Regulations

To ensure safety and the protection of the public, Chapter 752 of the Texas Health and Safety Code makes it unlawful for unauthorized persons to **move or be placed or bring any part of a tool, equipment, machine, or material within six (6) feet** of live overhead high voltage lines. Contractors and owners are **legally responsible** for the safety of construction workers under this law. This law carries both criminal and civil liability.

Additionally, OSHA Regulations restrict unauthorized persons from **approaching or operating any equipment or machines within ten (10) feet** of live overhead high voltage lines.

For lines to be turned off, moved, or other arrangements, call your Retail Electric Provider.

Some local Electrical Codes require structures to be located a safe distance away from live overhead high voltage lines as defined by the National Electrical Safety Code.

