



# **GUIDELINES FOR COMMERCIAL ELECTRIC SERVICE HOOKUP**

# Steps to Commercial Service

**\*\*\*PLC may require up to 18 months advance notice when the new service makes it necessary to produce special equipment, do major engineering, or to extend PLC's distribution system\*\*\***

**Pay the Design Deposit for Commercial Buildings**

Up to 10,000 sq.ft.	=	\$1,000.00
10,000–50,000 sq.ft.	=	\$2,000.00
Over 50,000 sq.ft.	=	\$3,000.00

Commercial jobs require meter department approval on load calculation and line drawings before engineering starts. All new permanent connections are required to be underground.

**Apply for Membership:**

The Customer has the option of using his membership for all tenants or he may require that they provide their own. In either case, the Customer will be required to be a member of the Company.

**Complete and submit Load Information and Details form**

**Complete and Submit a Load Data Sheet for each metered space**

**Submit Construction Plans and Specifications**

- Site Plan showing:
  - Any building on the property
  - Street designation and address
  - Location of service entrance, switchgear, and meter centers
  - “North” or direction arrow
  - Property boundary designations
  - Legal description (as required)
  - All existing and proposed: utilities, buildings, parking lots and roadways
- Building drawings showing:
  - Electrical rooms (must be pre-authorized by Company)
  - Square footage
  - Building Layout (see sample) with location of electrical panels, and each separate metered space showing ID of each space. This drawing must be signed by the developer once finalized.
  - A detailed sketch of the proposed route of service conductors from the service termination point to the main disconnect or bus
  - Provisions for metering
  - Switchgear Drawings
- Electrical drawings showing:
  - Meter Base Configuration (see sample) showing layout of all meters and associated power distribution equipment. Space IDs must be shown (unit 302, etc.).
  - 1 line electrical drawing from the service termination point to the main disconnect or bus

- Specifications Including:
  - Switch gear specifications
  - Voltage requirements
  - The size of the main disconnect bus
  - The size, type, and number of service conductors and conduits

Pay for Estimated Construction Costs:

Prior to ordering materials and/or transformer(s), the Company will require that the Customer pay the estimated construction costs of the project.

## Other Useful Information

### Available Voltage

Electric service will be made available at alternating current, 60 hertz, at one of the nominal voltages stated below:

**A. SINGLE PHASE SERVICES** are available on all primary circuits except for network metering. However, depending on the primary distribution system, there may be voltage and loading limitations for some applications and the Customer should check with the Company prior to purchasing his equipment. Network metering will only be available on three phase primary systems. Single phase voltages are as follows:

1. 120/240 volts, 3 wire, grounded neutral
2. 240/480 volts, 3 wire, grounded neutral
3. 120/208 volts, 3 wire, grounded neutral, network metering

**B. THREE PHASE SERVICES** are available on three phase primary circuits. However, depending on the primary distribution system, there may be voltage and loading limitations for some applications and the Customer should check with the Company prior to purchasing his equipment. Available three phase voltages are:

1. 120/208 volts, 4 wire, grounded wye
2. 277/480 volts, 4 wire, grounded wye

If a non-standard voltage is desired, the Customer is responsible for installing transformation or conversion on the load side of their meter base. Three phase and network secondary voltages are only available in areas that have three phase primary power available.

Any existing 3 phase delta loads that are replaced need to be converted to 3 phase wye. Notify PenLight prior to conversion for the needed transformer modification.

**C. THREE PHASE SERVICE:** The Company will only provide three phase power for loads equal to or greater than 30 kva of demand load. Loads smaller than 30 kva will be served single phase unless there is an existing three phase transformer bank available that can be utilized.

**D. POWER QUALITY:** Motor starting at full voltage can cause voltage reductions that will cause lights to dim and electronic equipment to stop operating properly. The voltage reductions can affect several customers in the general area of the motor being started. To protect customers in the area from a customer who operates a motor, the Company requires the following:

1. For motors greater than 5 Hp and less than or equal to 10 Hp, a reduced voltage motor starter shall be installed.
2. For motors greater than 10 Hp, a "soft start" type motor starter shall be installed.

## **TRENCHING**

All secondary trenches (from building to electric power device or electric power pole) must allow at least 24 inches of earth cover over the service conductor from final grade of ground. Joint utilities are allowed in a secondary trench (power, phone, water, CATV) with a minimum horizontal or vertical separation of 6 inches. Gas lines require a minimum horizontal separation of 12 inches from secondary power cables. Sewer tight lines installed parallel to service conductors shall have a horizontal separation of no less than 4 feet.

In order to reduce the risk of an accident or electrocution during excavation, service laterals shall have their location identified by a warning ribbon that is placed in the trench at least 12 inches above the underground installation.

Trenching is the responsibility of the developer/contractor. All trenching must be completed to within 2 feet of the power source.

Telephone and cable TV companies need to be contacted to determine their installation needs, as they can share the same trench that you have made for the power system. Contact them early as they may need their trench to branch off the power line trench to their connection points. Be sure to keep all utilities at least 6 inches apart in the trench to improve heat dissipation and reduce interference.

Utility	Type	Contact Name	Contact Number
CenturyLink	Telephone	Customer Svc	1-800-201-4099
Comcast	Cable	Customer Svc	1-800-266-2278
Wave	Cable	Customer Svc	1-866-928-3123
Puget Sound Energy	Gas	Customer Svc	1-888-225-5773

**NOTE: State law** requires that before any underground digging begins of 12 inches in depth or more, customers must contact the Utilities Underground Location Center, Phone #1-800-424-5555, and request utility lines to be marked. A minimum two business days' notice is required, and there is no charge to the customer for this service.

### **Underground Service Conductors**

All new and upgraded service connections (usually from a meter to a transformer) are required to be installed underground. It is recommended that service conductors be installed in continuous conduit, beginning 3 feet from the power device or pole and ending between 2 and 3 feet from the service entrance/meter base riser. The purpose of ending the conduit short of the terminating devices is to reduce the potential of water flowing through the conduit to the service entrance. Each end of the conduit should have a plastic bushing or bell end and be sealed after the conductor is installed using RTV sealant or equivalent. Peninsula Light Company is not responsible for any ground or surface water that migrates between the Company owned power device and the point of service. The conduit should be continuous so be sure to leave adequate conductor length beyond each end to allow for terminating the conductor.

Customers are responsible for purchasing and installing their own service conductors and conduit. Peninsula Light does not sell underground service conductors or conduit. The service conductor should be rated for direct burial as it will not be in conduit at either end of the run. The trench, conduit and service conductor between the power device and the service point are customer owned and therefore are subject to inspection by Labor and Industries.

**Facility Ownership**

PenLight owns and maintains the power distribution system up to the transformer or secondary junction box (handhole). Secondary wiring (at facility voltage) is owned and maintained by the customer.

**Service Disconnected over a Year**

PenLight's primary goal is to cost-effectively provide safe, reliable service to every member on a fair and equal basis. The determination of safe, reliable, fair and equal is at the sole discretion of PenLight. To that end, in most cases, PenLight will require electric services which have been disconnected for over twelve consecutive months to have a current L & I safety inspection prior to being reconnected. PenLight may additionally require some services disconnected for less than twelve consecutive months to have a current L & I safety inspection prior to reconnection. L & I requires that the property owner request the permit for the safety inspection. PenLight may also require any service that has been disconnected and requires inspection for reconnection be updated to current PenLight metering standards and guidelines. Please contact PenLight Engineering for information and requirements regarding a disconnected service.

## Important Contact Numbers

Peninsula Light Company  
13315 Goodnough Dr. NW  
Gig Harbor, WA 98332

(253) 857-1547      Engineering

(253) 857-5950      Main Office

1-888-809-8021      Toll Free

[Engineering@penlight.org](mailto:Engineering@penlight.org)

State of Washington  
Department of Labor and Industries  
Electrical Division  
950 Broadway Suite 200  
Tacoma, WA 98402

(253) 596-3808

[www.lni.wa.gov](http://www.lni.wa.gov)

Utilities Underground Location Center  
“Call Before You Dig”

Dial 811

[www.callbeforeyoudig.com](http://www.callbeforeyoudig.com)

## Engineering Services Fee Schedule

*Effective May 2, 2016*

**Residential Engineering Design Deposit ..... \$500.00**

The Engineering Design Deposit is assessed for jobs more involved than a simple connection from the member's service to an existing adequately sized underground transformer or connection point, and is intended to help recover some of the costs incurred when it is necessary for the engineer to visit the project site, discuss the project details, consult with other utilities or public agencies, and to calculate associated labor and material costs.

Upon request, Peninsula Light Company will provide rough cost estimates free of charge for any standard line extension project. Overhead to underground conversions or system relocations shall require detailed cost estimates since costs may vary considerably depending on the extent of the job.

Those requests that require a detailed cost estimate shall first pay the design deposit. The design deposit shall be based on a percentage of the anticipated cost of construction or a minimum flat deposit, and shall be applied toward the final job costs provided full payment is received within 90 days of the estimate date.

Detailed cost estimates are valid for a period of 90 days from the date of the estimate. Additional design deposits shall be required if the 90 days has expired OR if any changes require the project to be redesigned or costs recalculated.

Design deposits are non-refundable: Projects that are not completed within 12 months of initial payment will be terminated and the balance of the Design deposit will be retained by Peninsula Light Company. If a project requires additional time, the customer is required to provide a status update to the Engineering Coordinator every 90 days. Failure to provide two status updates will result in the project being terminated and the balance retained by Peninsula Light Company.

**Membership Fee ..... \$100.00**

Peninsula Light Company, a Mutual Corporation, is a non-profit organization that is owned by its members and governed by an elected Board of Directors.

All new services must be covered by a membership. The membership Fee is refundable, provided there are no outstanding bills, if the member leaves the Company's service area.

## Engineering Services Fee Schedule

*Effective May 2, 2016*

### Design Deposits

#### Single Phase Line Extensions

<u>Project Type</u>	<u>Design Deposit</u>
All primary and secondary extensions	\$500.00

#### Short Plats / Subdivisions

<u># of Lots</u>	<u>Approx. Construction Cost</u>	<u>Design Deposit</u>
4 Lots	\$8,000.00	\$800.00
6 Lots	\$12,000.00	\$1,200.00
10 Lots	\$20,000.00	\$2,000.00
16 Lots	\$32,000.00	\$3,200.00
25 Lots	\$50,000.00	\$5,000.00
50 Lots	\$100,000.00	\$10,000.00

*Note: Design deposit is \$200.00/lot for all projects of this type. Approximate construction costs are \$2,000/lot and are to be used for ballpark costs only.*

#### Miscellaneous

<u>Project Type</u>	<u>Design Deposit</u>
Relocation (Pole, TX, Etc.)	\$500.00
Customer Requested OH / UG	\$1,000.00
Conversions – 60%/40% Split	(Project must be PLC justified)
Commercial Projects	Up to 10,000 sq. ft. \$1000.00
(combine the square footage of	10,000 sq. ft. to 50,000 sq. ft. \$2000.00
multiple buildings)	50,000 sq. ft. and greater \$3000.00

*Note: For canceled projects, deposit amounts paid in excess of actual PLC costs incurred may be refundable on a case by case basis at the discretion of the PLC Engineering department.*

#### **Temporary Service Hookup Fee ..... \$200.00**

Underground Service to an adequately sized transformer or connection point - In addition to the hookup fee, all equipment, conductor, and trenching is the responsibility of the customer.

Overhead Service - In addition to the hookup fee all equipment is the responsibility of the customer. Overhead temporary services are limited to a maximum drop distance of 200 feet. Beyond 200 feet, consult the company for details. Overhead services that require more than a 25' triplex drop from a PLC pole to the temporary service shall be assessed additional charges.



# Engineering Services Fee Schedule

Effective May 2, 2016

## Residential Permanent Service Hookup Fees

- 1 Phase 200 or 320 AMP self-contained meter..... \$245.00
- 1 Phase 400 or 600 AMP CT meter (includes meter base, meter labor TS)..... \$400.00

Underground service to adequately sized transformer or connection point - In addition to the hookup fee, all conductor, conduit, and trenching is the responsibility of the customer.

## Commercial Permanent Service Hookup Fees

- 1 Phase self-contained meter ..... \$245.00
- 1 Phase CT meter (includes meter base, test switch, meter labor) ..... \$400.00
- 3 Phase self-contained meter ..... \$245.00
- 3 Phase CT meter (includes meter base, test switch, meter labor) ..... \$650.00

**Metering with customer interface (i.e. KYZ pulses)..... quote based on customer needs**

Underground service to adequately sized transformer or connection point - Apartment buildings OR commercial projects that utilize a common service cable will pay a hookup fee of \$245.00 for the first self-contained meter. Additional meters for that project will be charged \$125.00 for each self contained meter connected at the same time as the first meter.

Overhead To Underground Service Conversions - All equipment, conductor, conduit, and trenching is the responsibility of the customer. Peninsula Light Company installs the conduit riser on the power pole at the customer's expense.

## Rental Light Installation ..... \$100.00

Installation of a rental light will be charged \$100 plus the cost of any additional materials that are needed to install and operate a rental light. Rental lights must be installed for a minimum of 1 year. Peninsula Light Company has the option to charge the customer for the removal of a rental light if it's removed prior to the first year.

## Trip Fee ..... \$100.00

Trip fees shall be charged when the following situations occur:

A hook-up is requested by a customer prior to the service connection approval by the State Electrical Inspector.

In the event that field assets need to be verified prior to the installation of new/altered equipment (rental lights) a trip fee will be charged.

Additional trips are necessary for disconnecting and/or reconnecting temporary services, altered services, or permanent services.

Additional trips are necessary to check for trench backfill or service approval.

## **Engineering Services Fee Schedule**

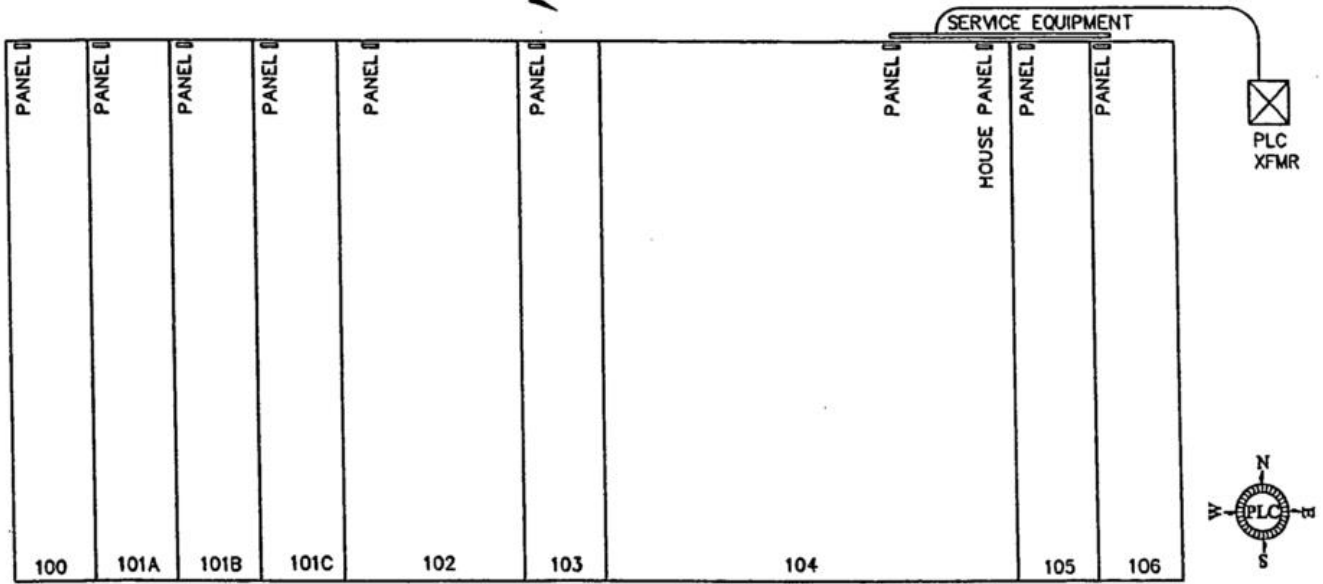
***Effective May 2, 2016***

All Engineering fees must be paid before any service connections will be made.

*Note: If customers are connecting to a Private Main Line they will also need to pay a proportionate share of repayment. Private Main Line repayments, if any, are in addition to normal Engineering fees and shall be paid prior to hookup.*

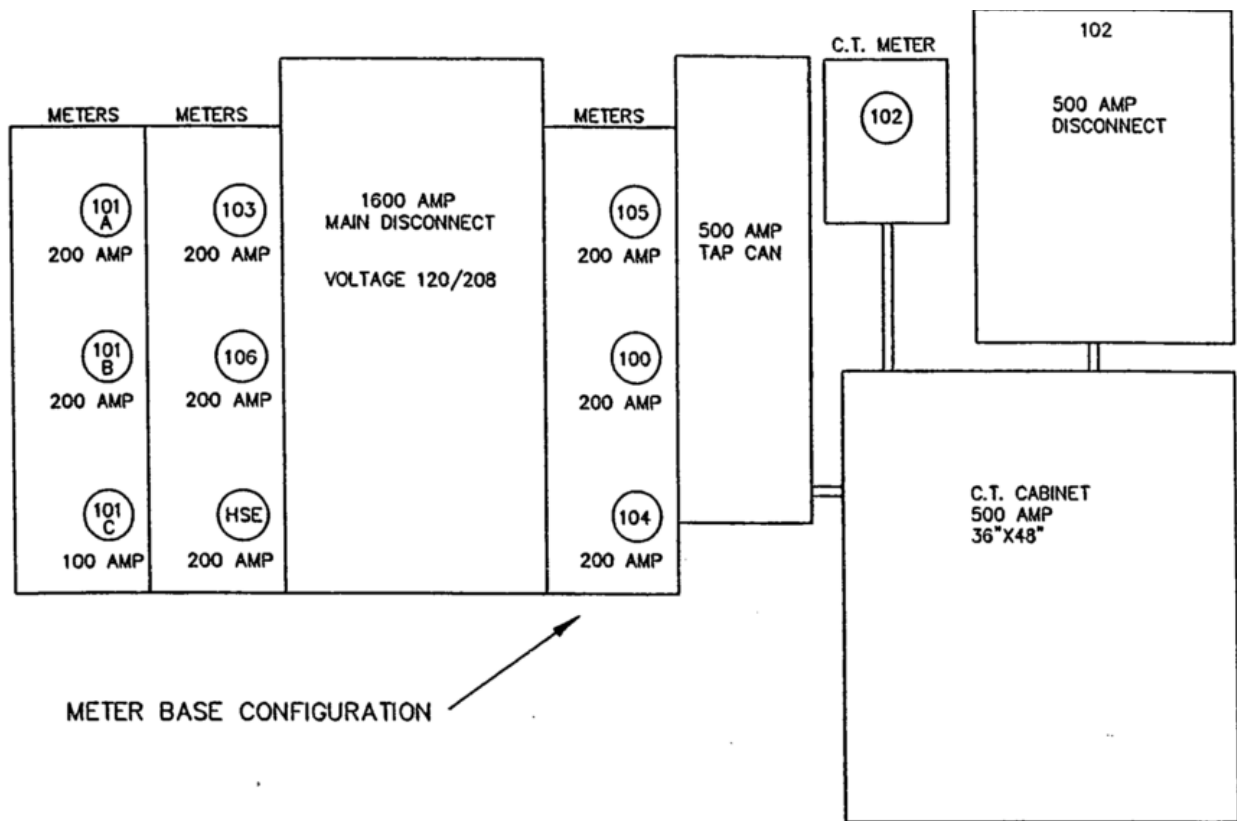
# Sample Building Layout Map

BUILDING LAYOUT



BUILDING ADDRESS \_\_\_\_\_

# Sample Meter Base Configuration



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### Load Data

Project Name:   
 Project Address:

Order Number:

*PLC Use Only*

	Load	Total KW	% Load Factor	Estimated KW
Air Conditioner	Number of Units: <input type="text"/>	<input type="text"/>	<input type="text"/>	0
Heat Pump	Total Tonnage: <input type="text"/>			
Compressor	Largest Single Unit: <input type="text"/>			
Heat	Strip Heat: <input type="text"/>	<input type="text"/>	<input type="text"/>	0
Gas <input type="checkbox"/> Yes	Resistance Heat: <input type="text"/>			
<input type="checkbox"/> No	Air Handling Fans: <input type="text"/>			
Lighting (list type)	Indoor: <input type="text"/>	<input type="text"/>	<input type="text"/>	0
	Outdoor: <input type="text"/>			
Water Heater	Number: <input type="text"/>	<input type="text"/>	<input type="text"/>	0
Gas <input type="checkbox"/> Yes	Gallons: <input type="text"/>			
<input type="checkbox"/> No				
Motors (over 7.5 HP)	Number of Units: <input type="text"/>	<input type="text"/>	<input type="text"/>	0
	Total Horsepower: <input type="text"/>			
	Largest Motor: <input type="text"/>			
Receptacles		<input type="text"/>	<input type="text"/>	0
Other (describe)	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Future (describe)	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Outbuilding (describe use)	<input type="text"/>	<input type="text"/>	<input type="text"/>	0
Totals:		<input type="text" value="0"/>	<input type="text"/>	<input type="text" value="0"/>

*Transformer Size - PLC Use Only*

Other factors used  
in determining  
transformer size:

Transformer size to be set:

Approved By:

Date:

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**LOAD INFORMATION AND DETAILS**

**ORDER INFORMATION**

**WO#:**                      **ENGR:**                      **PROJECT NAME:**

**SERVICE ADDRESS:**

**BILLING NAME & ADDR:**

**CONTACT INFORMATION**

**Primary Contact person:**                      **Phone #**

**Electrical Contractor:**                      **Phone #**                      **Company Name:**

**SERVICE SPECIFICATIONS**                       **Residential**                       **Commercial**

**1 Phase**  **or 3 Phase**                       **Service Entrance Size:**                      **Voltage:** /                      **Total Connected KVA:**

**Secondary Cable Info:** **Aluminum**  **or Copper**                       **Size Per Phase:**

**Size Per Neutral:**                      **Number of Runs:**

**Conduit: Size:**                      **Number of Runs:**                      **Type: PVC**  **or Steel:**

**TRANSFORMER SPECIFICATIONS (PLC Use Only)**

**KVA:**                      **Impedance:**                       **In Stock**                      **CO#**  
 **Ordered**                      **Date:**                      **Estimated Delivery:**

**Secondary Connectors:**                      **# of Blocks**                      **# of Places**                      **Item #**                      **PO#**

**Transformer Pad:**  **Existing**                       **In Stock**                       **Needs New**                       **Needs to Be Ordered**

**Available Fault Current at Transformer Secondary Terminal Is:**                      **Amps Symmetrical Based on**                      **% Impedance**

**METERING SPECIFICATIONS (PLC Use Only)**

**Meter:**                      **Meter Spec Code**                       **Network**                       **Demand**  
 **Switchboard**                      **# of units**                      **OR**                       **Switchgear**                      **Manufacturer:**

**Meter and Switchgear Location:**

**Meterbase Issued: Date:**                      **Issued By:**                      **Received By:**

**Meter Layout:**                       **Plans submitted per PLC specs (See Commercial Specs, Page 2, Section D)**

**Current Transformers:**                       **CT's NOT Required**  
 **CT's Required:**  **In Stock**                       **Ordered**                      **Date:**                      **PO#**

**Type:**                      **Ratio:**                      **RF:**                      **Quantity:**

**CT's Issued: Date:**                      **Issued By:**                      **Received By:**

**APPROVALS:**

**Service Connection by L&I: Approved By:**                      **Date:**                      **Permit #**

**Meter Shop:**                       **Meter Layout Plans**                      **Approved By:**                      **Date:**

**Meter and Switchgear Location**                      **Approved By:**                      **Date:**

**CT's and Meterbase Wired**                      **Approved By:**                      **Date:**

**Meter Installed**                      **By:**                      **Date:**

**Service Energized**                      **By:**                      **Date:**