RESIDENTIAL ELECTRICAL SERVICES
Connection and General Information

Sept. 2019
TEMPORARY ELECTRICAL SERVICE REQUIREMENTS

CUSTOMER RESPONSIBILITIES CHECKLIST

CHELAN COUNTY PUD RESPONSIBILITIES

GENERAL REQUIREMENTS

OVERHEAD TEMPORARY SERVICE CLEARANCE REQUIREMENTS

METER POST (CUSTOMER OWNED)

GENERAL INFORMATION

METER POST REQUIREMENTS

UNDERGROUND TEMPORARY SERVICES

GENERAL REQUIREMENTS

METERS AND SERVICE ENTRANCE EQUIPMENT

CUSTOMER RESPONSIBILITIES CHECKLIST

CHELAN COUNTY PUD RESPONSIBILITIES

GENERAL METERING REQUIREMENTS

METER LOCATION REQUIREMENTS

METER SOCKET ARRANGEMENT & REQUIREMENTS

METER RETAINING RINGS

SEQUENCE OF SERVICE ENTRANCE EQUIPMENT

METER SOCKETS – CLASSIFICATION & LIMITATIONS

CLEARANCES AND METER HEIGHT

OUTDOOR METERING REQUIREMENTS

METER ROOMS

METER SOCKET LABELING

MULTIPLE METER INSTALLATIONS

CT METERING INSTALLATIONS

GENERAL INFORMATION

CT METERING CABINET SIZE REQUIREMENTS

APPROVED CT CABINETS

APPROVED CT LANDING PADS

INDOOR CT METERING

CT METERING REQUIREMENTS

SWITCHBOARD METERING – SERVICES OVER 801 AMPS AND ABOVE

INSTALLATION OF A NEW SNAP SERVICE

GETTING STARTED

LABOR AND INDUSTRIES PERMIT AND INSPECTION

GENERAL REQUIREMENTS APPLYING TO UNDERGROUND SERVICES WHEN TYING DIRECTLY TO THE UTILITY

MULTIPLE METER INSTALLATIONS

NORTHWEST UTILITY NOTIFICATION CENTER (DIG COUNCIL)
To Our Customer:

Welcome to Public Utility District No. 1 of Chelan County. We look forward to working with you to provide electrical service to your property.

Our mission is “To provide utility products and services at a low cost to our customer/owners consistent with a high level of quality, reliability and customer satisfaction.”

Enclosed please find:

- Chelan County PUD Contacts
- General Service Connection Information
- Underground, Overhead and Temporary Service Requirements

Copies of the Utility Service Regulations, Utility Service Policies, Fees & Charges, Electric Rate Schedules and forms are available on the web [http://www.chelanpud.org/my-pud-services/rates-and-policies](http://www.chelanpud.org/my-pud-services/rates-and-policies) or by calling the Service Department at (509) 661-8400.

Thank you for contacting Chelan County PUD for your utility services. We look forward to assisting you.

Sincerely,

Lyle Moore
Customer Service Engineering Supervisor
CHELAN COUNTY PUD CONTACTS

CHELAN COUNTY PUD ELECTRICAL SERVICE AREA

Chelan County PUD Office Locations
- **Wenatchee (Main Office)**
  327 N Wenatchee Avenue
  Wenatchee, WA 98801
  (509) 663-8121

- **Leavenworth**
  222 Chumstick Highway
  Leavenworth, WA 98826
  (509) 548-7761

- **Chelan**
  1034 E Woodin Avenue
  Chelan, WA 98816
  (509) 682-2581

Chelan County PUD Department Locations
- **Customer Service Representative (CSR) & Customer Service Engineering**
  327 N Wenatchee Avenue
  Wenatchee, WA 98801
  (509) 661-8400

- **Customer Service** (Billing questions, credit payment arrangements & opening/closing accounts.)
  327 N Wenatchee Avenue
  Wenatchee, WA 98801
  (509) 661-8002

- **Chelan County PUD Trench Inspector**
  327 N Wenatchee Avenue
  Wenatchee, WA 98801
  (509) 661-8011

Other Contacts:
- **Telephone**
  Frontier: (800) 483-4000

- **Gas**
  Cascade Natural Gas : (800) 552-0615

- **Water**
  Contact your local provider.

- **Cable**
  Contact your local provider.

**Electrical Inspections:**
- **Washington State Department of Labor and Industries**
  519 Grant Road
  East Wenatchee, WA 98802
  (509) 886-6500
  24 hr. Inspection Line: (509) 886-6520

**Northwest Utility Notification Center**
“Dig Council” - (800) 424-5555

Chelan County PUD offices are open during regular business hours Monday through Friday, 8 a.m. to 5 p.m. Outlying areas are closed for lunch (closure time varies).

Call toll-free anywhere in the United States. 1-888-663-8121
CUSTOMER SERVICE DEPARTMENT CONTACTS

Have questions, or need more information? Call (509) 661-8400

CUSTOMER SERVICE REPRESENTATIVES (CSR)

STACE KNUDSTON
KRISANN HANKINS

CUSTOMER SERVICE ENGINEERING SUPERVISOR

LYLE MOORE

CUSTOMER OUTREACH SPECIALISTS

TEKA SELLERS
JENNA RAHM

CUSTOMER SERVICE ENGINEERS & RESPONSIBILITY AREAS

CHRIS MOSER
All Upper Valley (from North Dryden Rd near Pinnacles State Park)

TAMMY FISHER
Burch Mountain Rd east and all areas south, Wenatchee, Malaga, Olds Station, Rocky Reach Dam

SCOTT BAIRD
North Shore, Chelan Falls, Wells Dam, Antoine Creek, Stehekin

CHRIS PETERSON
Rocky Reach Dam to South Shore Lake Chelan, Entiat & Entiat Valley, Stayman Flats, Knapps Coulee, Navarre Coulee

JASON MILLER
Burch Mountain Rd to North Dryden Rd, Cashmere, Monitor, Sunnyslope

NESC & PPB FIBER BUILD OUT

DARREN WURL

COUNTY-WIDE CAPITAL PROJECTS

JEFF MITCHELL

CUSTOMER SERVICE ENGINEERING SUPPORT

AMANDA HOLADAY
Support to all service territories
GENERAL SERVICE INFORMATION

The material in this handbook supports the Utility Service Regulations, Utility Service Policies, Electric Rate Schedules, and the Chelan County PUD Transmission and Distribution Department Construction Standards.

Copies are available on our website, or by calling a Customer Service Representative at (509) 661-8400.

Web address: http://www.chelanpud.org/my-pud-services/rates-and-policies

All conflicts between this handbook and the policies and regulations listed above shall comply with the most current Policies and Regulations approved by the Chelan County PUD Board of Commissioners. Revisions are subject to change without notification.
INSTALLATION OF A NEW ELECTRICAL SERVICE

Chelan County PUD is pleased to serve your electrical needs. Installing electrical service to your home or project is a joint effort between you and Chelan County PUD. A Customer Service Representative will need the following information to assist you with providing electrical service to your project:

- Where the building or service point will be located
- What the service will be used for (house, manufactured home, R.V., shop, irrigation, etc)
- Type of service desired—overhead or underground
- Service size (200 Amp, 400 Amp, other)

The Customer Service Representative will provide you with additional information depending on the type of service you will be installing, and the proximity of your electrical service to Chelan County PUD facilities. This packet is a general overview of the installation process.

Customer Service Representatives are located at the Chelan County PUD Office in Wenatchee. See page 5.

DEFINITION TABLE

<table>
<thead>
<tr>
<th>Rate Schedule</th>
<th>The category/classification of a customer connection.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Entrance Conductors</td>
<td>The conductors between the service equipment and the connection to the service lateral/drop</td>
</tr>
<tr>
<td>Service lateral/Service Drop</td>
<td>Conductors from the main line to the service entrance conductors, point of attachment or point of entrance.</td>
</tr>
<tr>
<td>Point of Attachment/Point of Entrance</td>
<td>The point where the Service Conductors make contact with the building</td>
</tr>
<tr>
<td>Disconnecting Means</td>
<td>Usually a circuit breaker or switches/fuses to cut off the supply on the load (customer) side.</td>
</tr>
<tr>
<td>Service Equipment</td>
<td>The equipment on the load (customer) end of the service conductors, which serve a customer, that make up the main control and shut off of the power supply.</td>
</tr>
<tr>
<td>Service Point</td>
<td>The point where the Utility’s responsibility stops and the customer’s starts. The utility’s Service Point</td>
</tr>
<tr>
<td>Service Conductors</td>
<td>Conductors from the service point to the Service Disconnecting Means.</td>
</tr>
<tr>
<td>PUD Connection Point</td>
<td>A usable PUD transformer or connection point on or near your property to provide electrical service to your project.</td>
</tr>
</tbody>
</table>
METER BASE LOCATION

Your meter base must be located in an area that is accessible to meter readers for accurate meter reading, maintenance and for emergency personnel to access in case of a fire.

The meter base must be located:

- Outside
- On the front 1/3 of your home closest to normal public access
- In an area that is not subject to being fenced in or enclosed (patio, deck, carport, backyard)
- On a structure that is owned by you
- All meters must be mounted 5 feet – 7 feet above finish grade.

SERVICE & METER BASE GENERAL INFORMATION

- Not more than one service of like voltage will be provided to any one building or structure unless granted special permission from the District and Washington State Department of Labor and Industries.
- Chelan County PUD will supply to a single customer 120/240V single phase service up to maximum service entrance equipment rating of 800 amps.
- Any service in excess of the 800 amps shall be by three-phase service which shall be balanced on both three-phase and single-phase loading. Contact a Customer Service Representative for information about three phase services.
- Self contained meter bases can be used for residential services up to and including 400A single phase. All single phase residential services larger than 400 amps must have current transformer metering. Contact Chelan County PUD Meter Department for more information (509) 661-4337.
- Single phase motor services will be allowed up to 5HP maximum.
- Meter bases shall not be enclosed. Removal of the meter base face (cover) shall not be hindered and must be accessible without tools. The meter base face must be visible and unobstructed to allow meter to be read monthly. Contact a Customer Service Representative for specific requirements.
- Any wiring installed without first contacting the District to determine the service entrance location is done at the risk of having to change the service location to conform to these requirements.

SEE THE METERS & SERVICE ENTRANCE EQUIPMENT SECTION FOR FURTHER INFORMATION
NEW SERVICE CHECKLIST

Steps for You or Your Electrician:

1. Call a Customer Service Representative at (509) 661-8400 to initiate a request for service.
2. Complete the Customer Request for Service form and provide a site plan.
3. Obtain a legal address from city or county planning office for your new construction.
4. Obtain an Electrical Permit from the Washington State Labor & Industries (L&I) located at 519 Grant Road, East Wenatchee, (509) 886-6500. Check with your electrician or building contractor as they may be obtaining this for your project.
5. Contact local telephone and cable providers to make arrangements for installation of service.
6. Prepare site and install all materials for service as necessary according to Chelan County PUD design standards. Call for Chelan County PUD trench inspection (509) 661-8011.
7. Provide and install meter base and all electrical wiring for your project. (See Underground or Overhead Service Requirements section for more information.
8. Set up a billing account. Call Chelan County PUD Customer Accounting (509) 663-8121 and pay all applicable fees.
9. Call Washington State L&I for electrical inspection. (See item 5)
10. The electrical inspector will notify Chelan County PUD when your service is approved for energizing. Please allow 10 working days for Chelan County PUD personnel to energize your service. If your service is done in conjunction with a Line Extension additional time may be needed.

UPGRADING OR CONVERSION OF SERVICES

The customer shall advise the District of upgrading or conversion in the customer’s facilities, whether it is a voltage, phase or load requirement, or service entrance location change.

- Contact Chelan County PUD Customer Accounting Department (509) 663-8121 to pay applicable fees.
- All upgrading, rewiring or conversion shall be in compliance with District policies and procedures in effect at the time of the upgrading, rewiring, or conversion.
- It is the customer’s responsibility to have all inspections performed by the representatives of the agencies having jurisdiction over said inspections.
- Any wiring performed without first checking with the District is done so at the risk of having to change either the service entrance equipment or location of same or both.
- If work was not performed by a licensed electrician and L&I permit obtained, service will not be reconnected and/or energized until approved by the state inspector and work performed is acceptable to the District. If work is completed by a licensed electrician and L&I permit posted, the District may reconnect, at its discretion, if the homeowner signs a customer authorization waiver prior to L&I inspection.
PRIVATE GENERATORS

- Customer owned stand-by generators are defined by the District as those units which are installed on wiring that is not owned by the District and is intended for occasional use to supply emergency or back-up power when District supplied power is unavailable.

- Customer owned stand-by generators will be allowed on the customer's side of the meter. All facilities on the customer side of the meter, including generators and transfer switches, must meet or exceed the requirements of the current National Electric Code, Washington Administrative Code, and the Washington State Department of Labor and Industries. It shall be the customer's responsibility to obtain the necessary size and type of equipment and to obtain the necessary approvals from the appropriate agencies.

- Customer owned and installed generators must be electrically isolated from the District's lines to prevent back feeding into the District's System. To accomplish this, a transfer or double throw switch **MUST** be installed so that the customer's load will be transferred from the District's service to the customer's generator upon operation of the switch. The switch must be equipped with interlocks so that simultaneous feed from both the District's service and the customer's generator is prevented.

- The District reserves the right to disconnect any service that can or does feed simultaneously from both the District's service and the customer's generator.

- The customer should consult an electrician and the Washington State Department of Labor and Industries prior to initiating any plan for stand-by generators.
QUALITY OF POWER – CUSTOMER RESPONSIBILITIES

The characteristics of the customer's electrical equipment and devices must allow the District's distribution system to operate efficiently without undue interference to the District's service or to other customers.

- Prior to purchase, the customer shall submit information to the District regarding any equipment that might cause interference with service to other customers and/or require additional District facilities for its satisfactory operation. The District reserves the right to inspect and test any equipment connected to its lines and to obtain any information necessary to determine the operational characteristics of the equipment.

- The customer must provide any power conditioning devices needed to obtain the "quality" of power necessary for optimum performance of voltage-sensitive equipment. Electric service supplied by the District may be subjected to voltage disturbances which will not normally affect the performance of typical electrical equipment. However, these disturbances may result in the improper operation of voltage-sensitive equipment such as computers or microprocessors. Voltage-sensitive equipment is defined as equipment which is adversely affected by power disturbances (i.e., sags, spikes, or interruptions) of less than 0.5 seconds in duration.

- Whenever a customer's equipment has characteristics which cause undue interference with District service to other customers, the customer must make changes in such equipment or provide, at customer expense, additional equipment to eliminate the interference.

- The customer may use additional facilities (such as separate District transformers and a separate service) to minimize voltage fluctuations on circuits for devices such as welders, induction heating equipment, and X-ray machines. Where the operation of these types of equipment causes undue voltage fluctuations on primary voltage lines, the additional equipment required may include a separate primary voltage line.

- The effects of the design and operation of high-frequency equipment (such as electronic heating systems, spark discharge devices, radio transmitting equipment, etc., and equipment that generates harmonics, such as an induction furnace) must not create disturbances on the District's electrical system which interferes with any other customer's proper operation of communication, radio, television, remote control, or other equipment.

- Devices which can produce harmonic distortion (such as adjustable speed drives, electronic ballasts for fluorescent lighting, and switching power supplies for computers and electric vehicles) shall be filtered in order that the harmonic distortion resulting from these devices are kept within the limits specified in IEEE 519-1992, Section 10.
UNDERGROUND ELECTRICAL SERVICE REQUIREMENTS

Contact a Chelan County PUD’s Customer Service Representative (CSR) prior to construction. Availability and location of Chelan County PUD facilities for providing underground service shall be determined by a Chelan County PUD Customer Service Representative prior to the installation of service. Site plans, legal description, Customer Request for Service, and New Account Service Application shall be submitted to Chelan County PUD a minimum of four weeks prior to any construction.

CUSTOMER RESPONSIBILITIES CHECKLIST

- Contact a Customer Service Representative to determine a Chelan County PUD connection point (Fig. 1, above) and meter location if necessary. (Note: Meter bases cannot be installed on Chelan County PUD power poles or service poles.)
- Provide and install appropriate meter base, conduit and conductor to PUD connection point. Call the ‘One-Call Center’ (1-800-424-5555) for utility locations prior to digging. Washington Law requires you to locate all utilities on your site before you begin digging.
- Contact Chelan County PUD for a Trench Inspection (509) 661-8011
- Contact local phone and cable service providers for utility installation information
- Obtain electrical permit, inspection and approval from the Washington State Department of Labor and Industries (Electrical Inspection (509) 886-6500)
- Set up an account for billing and pay fees at the Chelan County PUD Customer Accounting Department in Wenatchee, Chelan or Leavenworth.

Chelan County PUD cannot connect your service until these items are completed.

CHELAN COUNTY PUD RESPONSIBILITIES

- Provide and install meter
- Trench Inspection
- Supply and install conductor (wire) or connect conductor (wire) installed by a licensed electrician (on behalf of customer) at meter base and Chelan County PUD connection point. (See Fig 1 above.)
GENERAL REQUIREMENTS APPLYING TO UNDERGROUND SERVICES

- Your service route should be as straight as possible from your meter base to the Chelan County PUD connection point. It cannot cross drainfields and shall have a minimum 5 feet horizontal clearance from any drainfield. It cannot be installed under any permanent structures, such as foundations, buildings, concrete slabs, etc.

- All trenching, conduit installation, backfilling and restoration from your meter base to the Chelan County PUD point of connection shall be done by the customer or contractor.

- Unless otherwise specified by a Chelan County PUD Customer Service Representative, all electrical conduit shall be 3-inch Schedule 40, gray electrical conduit.

- If your service route requires crossing a road, neighboring property or city, county or state right-of-way, consult with a Chelan County PUD Customer Service Representative before installation. A line extension may be required.

- Consult with a Chelan County PUD Customer Service Representative or Service department before installing conduit to the base of a power pole. Proper conduit location at the pole is required for safe work practices and should be determined by a Customer Service Representative.

- Chelan County PUD will supply and install conductor (wire) for a flat fee. Conductor (wire) supplied by customer is optional and must be installed by licensed electrician.

**If you have any questions, please contact a Customer Service Representative.**

---

**Figure 2**

Electrical Service - Overview

- Transformer Pole
- Padmount Transformer or Handhole

---

**Std Dwg No: 500.101**
CHELAN COUNTY PUD OR CUSTOMER INSTALLED CONDUCTOR (WIRE)
(120/240V APPLICATIONS)

1. There is a flat fee for Chelan County PUD supplied and installed conductor (wire) up to 150 feet. The customer must pay the fees prior to installation.

2. The customer has the option of supplying and installing the conductor (wire).

- The customer will provide trenching, conduit and backfilling of the trench. All trenching and conduit installations must be inspected and approved by Chelan County PUD prior to being backfilled. Schedule a trench inspection by calling (509) 661-8011, 24 hours a day. See section UNDERGROUND SERVICE TRENCH & CONDUIT REQUIREMENTS- Page 15.
- Chelan County PUD Representative will specify service termination locations for the meter and Chelan County PUD connection point.
- Verify conductor (wire) size with your Chelan County PUD Customer Service Representative prior to installation.
  Acceptable conductor (wire) sizes include:
  - 200 amp service = 4/0 – 4/0 – 2/0 aluminum URD triplex
  - 400 amp service = 350kCM - 350kCM - 4/0 aluminum URD triplex
- Chelan County PUD cannot terminate conductor (wire) that is smaller than #6 size or larger than 500MCM. Any conductor outside this range must be approved by Chelan County PUD prior to installation.
- Customer-supplied conductor (wire) must be installed by a licensed electrical contractor. Your PUD Customer Service Representative and/or serviceman will require license verification.
- Contractors must leave an adequate excess length of conductor (wire) at the Chelan County PUD connection point. Contact your Chelan County PUD Representative.
- Chelan County PUD will provide connection at the meter socket and at the Chelan County PUD connection point (see page 12 Fig 1).
- The customer must pay the service connection fees before the service is connected and energized.
UNDERGROUND SERVICE TRENCH REQUIREMENTS

TRENCH

- When electrical conduits/conductors cross over or under water, there shall be a minimum of 12 inches vertical separation.
- 3 inches of bedding material (sand, native rock-free material) shall be used in areas with rocky soil and when backfilling trench.
- Contact a Chelan County PUD Customer Service Representative (CSR) for information regarding separation requirements from gas and sewer lines.
- Install warning tape in trench 18 inches above power conduits. Warning tape is provided by Chelan County PUD upon request.
- Provide all trenching to the edge of Chelan County PUD transformer, handhole or transformer pole. Before digging near Chelan County PUD facilities, ensure that utilities have been located in the area. Hand dig the last three feet to the transformer or handhole and expose the base of the facility to install sweep.
- Call the Chelan County PUD Service Department at (509) 661-4325 to schedule a serviceman to open Chelan County PUD handholes and transformers. A minimum of 48 hours notice is required.
- Trenching and conduit installation shall be inspected by a Customer Service Engineer or Chelan County PUD representative prior to backfilling. Call the Chelan County PUD Trench Inspection line at (509) 661-8011 to schedule an inspection. Minimum of 48 hours notice is required.

CONDUIT:

- Service power conduit shall be 3 inch Schedule 40, gray electrical conduit and 1" Schedule 40, gray electrical conduit for fiber unless otherwise specified by a Chelan County PUD Customer Service Engineer. For services over 400 amps, two runs, parallel, of 3 inch Sch 40 PVC will be supplied by the customer.
- A maximum of three 90-degree bends are allowed in the conduit run. This includes the bend at the base of the meter and the bend at the Chelan County PUD point of connection.
- All conduit sweeps shall be SCH 40 PVC 36-inch minimum radius.
- The customer will be required to repair or replace any conduit that is improperly installed, crushed or defective.
- Conduit must be bonded with cement that is compatible with the conduit on which it is used.
- Conduit must be continuous from the customer’s service entrance to the District’s point of service. Condulets, junction boxes, or devices that allow access to the service conductor must not be used.
UNDERGROUND METER POST (CUSTOMER OWNED)

GENERAL INFORMATION

- All meter posts shall be furnished by the Customer.
- Meter posts are the property of the Customer and shall be maintained by the Customer.
- If a meter post is determined inadequate by Chelan County PUD, and must be replaced, the customer shall, at his expense, transfer all customer owned service entrance equipment to the new post and upgraded to current standards is necessary.
- Once transfer of customer owned equipment is complete an L & I inspection must be obtained before service will be reconnected by Chelan County PUD.
- See page 20 for drawing.

METER POST REQUIREMENTS

Meter post must meet the following requirements:

- 6” x 6” full treated timber set at 48” minimum burial and tall enough to meet minimum clearance requirements

  OR

- 4”x13# steel I-beam, 7’ long set in minimum 18”x18”x18” concrete foundation

  OR

- A meter post meeting the following criteria:

<table>
<thead>
<tr>
<th>Pole Length</th>
<th>Pole Class</th>
<th>Setting Depth</th>
<th>Circumference 6’ from Butt</th>
<th>Circumference at Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fir</td>
<td>Cedar</td>
</tr>
<tr>
<td>20 ft</td>
<td>4</td>
<td>4 feet</td>
<td>25”</td>
<td>27”</td>
</tr>
<tr>
<td>25 ft</td>
<td>4</td>
<td>5 feet</td>
<td>28”</td>
<td>30”</td>
</tr>
<tr>
<td>30 ft</td>
<td>4</td>
<td>5 ½ feet</td>
<td>30”</td>
<td>32.5”</td>
</tr>
</tbody>
</table>

The center line of the meter shall be 5’-7’ above grade.
Figure 4
200 Amp Underground Residential Meter Installation
HEAVY DUTY 400 AMP SURFACE MOUNTED METER BASE UNDERGROUND TYPE

(2) 200 AMP SERVICE PANEL SERVICE POINT

3" SLIP METER RISER
CONDUIT CLAMP REQUIRED

5' MIN. - 7' MAX.

3" SCH 40 ELECTRIC GRADE CONDUIT

FINAL GRADE - GROUND LEVEL

WARNING TAPE

SERVICE LATERAL TRENCH & CONDUIT BY CUSTOMER, CONDUCTOR (WIRE) INSTALLED BY A LICENSED ELECTRICIAN or CHELAN PUD

MINIMUM 36" RADIUS SWEEP

NOTES:

1. ALL METERING INSTALLATIONS SHALL BE BONDED AND GROUNDED PER CURRENT N.E.C. AND LOCAL JURISDICTION AGENCY REQUIREMENTS

2. WORKING SPACE OF 36 INCHES IN ALL DIRECTIONS SHALL BE MAINTAINED AROUND METERBASE. THIS SPACE IS TO BE LEFT CLEAR OF ALL OBSTRUCTIONS INCLUDING LANDSCAPING AND ENCLOSURES

3. ALL MATERIAL SHOWN IS SUPPLIED AND INSTALLED BY CUSTOMER OR CUSTOMERS ELECTRICIAN UNLESS OTHERWISE NOTED

4. DO NOT GLUE SLIP RISER, DESIGNED TO FLOAT.

400 AMP METER BASE
(320A CONTINUOUS RATED)

400 Amp Underground Residential Meter Installation

Figure 5

Std Dwg No: 500.300
MANUFACTURED HOME - UNDERGROUND SERVICE REQUIREMENTS

Customer-owned meter posts or pedestals
There are two options for underground manufactured home meter installations,

1. Custom-built meter post (Fig. 7 & 8)
2. Factory-built meter pedestal (Fig. 9-See restrictions)

Customer-owned meter posts or pedestals are purchased and installed by the customer. The meter must be located where it can be seen from the roadway and maintained. The address, space or unit number must be tagged with a permanent tag on both the home and the meter socket prior to installation of the meter by Chelan County PUD personnel.

Meter installation on manufactured home
A manufactured home service may be located on the home if the following conditions are met:

a. The manufacturer installed the service equipment at the time the home was built
b. The meter socket is located on the outside wall of the home
c. Conduit inside wall meets Chelan County PUD standards (See Fig. 4, 200A meter base)

In addition to the above requirements, the NEC requires that manufactured homes have a disconnect switch installed within 30 feet of the service entrance to the home. Normally, the meter socket is installed at this same location. The meter socket must be located on the side of the home facing normal public access. See figure below.

---

![Diagram of manufactured home meter installation](image-url)
Figure 6
200 Amp Manufactured Home Service

NOTES:
1. ALL METERING INSTALLATIONS SHALL BE BONDED AND GROUNDED PER CURRENT N.E.C. AND LOCAL JURISDICTION AGENCY REQUIREMENTS
2. WORKING SPACE OF 36 INCHES IN ALL DIRECTIONS SHALL BE MAINTAINED AROUND METER BASE. THIS SPACE IS TO BE KEPT CLEAR OF ALL OBSTRUCTIONS INCLUDING LANDSCAPING AND ENCLOSURES
3. ALL MATERIAL SHOWN IS SUPPLIED AND INSTALLED BY CUSTOMER OR CUSTOMERS ELECTRICIAN UNLESS OTHERWISE NOTED

Figure 7
Alternate Manufactured Home Service

NOTES:
1. ALL METERING INSTALLATIONS SHALL BE BONDED AND GROUNDED PER CURRENT N.E.C. AND LOCAL JURISDICTION AGENCY REQUIREMENTS
2. WORKING SPACE OF 36 INCHES IN ALL DIRECTIONS SHALL BE MAINTAINED AROUND METER BASE. THIS SPACE IS TO BE KEPT CLEAR OF ALL OBSTRUCTIONS INCLUDING LANDSCAPING AND ENCLOSURES
3. ALL MATERIAL SHOWN IS SUPPLIED AND INSTALLED BY CUSTOMER OR CUSTOMERS ELECTRICIAN UNLESS OTHERWISE NOTED
Figure 8
Manufactured Home
Factory-Built Pedestal
Installation

FACTORY-BUILT MANUFACTURED HOME
METER BASE PEDESTALS ARE NOT
ACCEPTED WEST OF MONITOR OR IN ANY
OTHER HEAVY SNOW AREA

METER BY PUD

FACTORY-BUILT
METAL METER
PEDESTAL

WEATHERPROOF PANEL

SERVICE EQUIPMENT

36" MIN.
48" MAX.

3" MIN.
FINISH GRADE - GROUND LEVEL

30" MIN.
TOP OF CONDUIT (TYP)

SERVICE LATERAL
3" SCH40 CONDUIT
(w/ MIN. 36" RADIUS SWEEP)
CONDUCTOR (WIRE) INSTALLED BY A
LICENSED ELECTRICIAN or P.U.D.

CUSTOMER SUPPLIED CONDUIT & SERVICE CONDUCTOR
TO MANUFACTURED HOME PANEL.

MIN. 18"x18"x18"
CONCRETE BASE
REMOTE METERING (METER LOOP)
FOR UNDERGROUND RESIDENTIAL SERVICES

WHAT IS REMOTE METERING?

Normally, a meter socket and associated devices (current transformers, etc.) are attached to a permanent fixed structure that contains the load being served (such as a house). If the metering equipment is not attached to the permanent structure, it is called "remote metering." In this case, the conductors that run from the meter to your house are installed, owned, and maintained by the customer.

REQUIREMENTS FOR SINGLE FAMILY RESIDENTIAL REMOTE METERING

Remote metering shall be mounted on a structure or meter post. It is your responsibility to purchase, install, and maintain this equipment.

GROUNDING

Per NEC requirements

METER POST AND PEDESTAL LOCATION

Remote Metering must be:

- Accessible for reading and maintenance during normal business hours.
- Not be in a walkway or breezeway.
- Not be in an area that is subject to being fenced or enclosed.
- Safe parking must be located within 50 feet of the meter.

When installed close to Chelan County PUD’s transformer, all metering equipment must be a minimum of 3 feet from the transformer and not installed in front of the transformer.
UNDERGROUND RECREATIONAL VEHICLE SERVICES

METER POST REQUIREMENTS

- A District approved factory assembled pedestal set a minimum of two (2) feet in the ground.
- Factory assembled pedestals are not allowed west of Monitor or other heavy snow areas, such as the Entiat Valley, without prior permission of the District.
- Non-factory assembled meter posts must meet the following requirements:
  6 inches in diameter, butt treated OR 6” x 6” full treated timber set at 48” minimum burial
  OR
  (2) 2” x 2” x 3/16” steel angle irons set in minimum 18”x18”x18” concrete block buried minimum 30”
- The center line of the meter shall be 5'-7’ above grade.

METER POST LOCATION

- A pedestal shall not be located more than thirty (30) feet from the trailer or RV
- When a pedestal is located in a parking area, it must be so located that parked vehicles will not restrict meter accessibility or be damaged by vehicular traffic.

Figure 9
Recreational Vehicle Service Installation
UNDERGROUND WIND MACHINE SERVICE

Wind machine services require a **320A minimum rated meter base.**

**METER POST REQUIREMENTS**

- Meter posts must meet the following requirements:
  - 6 inches in diameter, butt treated OR 6” x 6” full treated timber set at 48” minimum burial
  - OR
  - 4” x 13# steel I-beam post, 7’ long, embedded min. 18” in a minimum 18”x18”x18” concrete foundation
- The center line of the meter shall be 5’-7’ above grade.

**METER POST LOCATION**

- Locate meter in a tree row a minimum of 20 feet from the wind machine, preferably in an adjacent row.
- Wind machine services may exceed 150 feet from the Chelan County PUD transformer bank providing that the installed conductor (wire) is sized appropriately for the service length.
FIBER OPTIC CONDUIT INSTALLATION GUIDELINES

Fiber optic conduit shall be supplied and installed by the customer in the trench with the 3-inch electrical conduit. Fiber optic conduit shall be installed as detailed in Fig. 9, below.

1-inch fiber optic conduit shall be installed for service runs

Figure 11
Fiber Optic Service Conduit Installation

NOTES:
1. ALL 1” FIBER SERVICE CONDUIT & 3” ELEC SERVICE CONDUIT TO BE SCH 40 W/ 36° 90° LONG SWEEP ELBOWS – TYPICAL

TYPICAL METER BASE
(12" W X 15" H)

FUTURE GATEWAY DEVICE PROVIDED BY PUD
(12" W X 12" H)

FUTURE 1” SCH 40 INSTALLED BY PUD

FIBER OPTIC HANDHOLE
PLUMB 1” VERTICAL 12” ABOVE FINAL GRADE & CAP
CUSTOMER INSTALLED SCH 40 1” FIBER CONDUIT W/ 36° 90° ELBOWS

FINISH GRADE
PLUMB 1” VERTICAL IN FIBER HANDHOLE & CAP 4” ABOVE GRADE IN BOTTOM OF HANDHOLE – GROUP WITH OTHER CONDUIT IN HANDHOLE

3” SCH 40 ELECTRICAL SERVICE CONDUIT

3” SLIP METER RISER
CONDUIT CLAMPS REQUIRED

5’ TO 7’
NOTES:

1. IF RISER BRACKETS EXIST AT POLE, STUB CONDUIT AT EXISTING RISER BRACKET.

2. IF RISER BRACKETS DO NOT EXIST, VERIFY PROPER QUADRANT FOR CONDUIT PLACEMENT WITH PUD TRENCH INSPECTOR.
OVERHEAD ELECTRICAL SERVICE REQUIREMENTS

Contact Chelan County PUD’s Customer Relations Management Group (CRM) prior to construction. Availability and location of Chelan County PUD facilities for providing overhead service will be determined by a Customer Service Representative prior to the installation of service. Site plans, legal description and a New Service Application must be submitted to the Chelan County PUD a minimum of four weeks prior to any construction.

CUSTOMER RESPONSIBILITIES CHECKLIST

- Contact a Customer Service Representative to determine a Chelan County PUD connection point (Fig. 1, above) and meter location, if necessary. (Note: Meter bases cannot be installed on Chelan County PUD power poles or service poles.)
- Provide and install appropriate meter base with weatherhead and attachment point (See drawings and notes).
- Contact local phone and cable service providers for utility installation information.
- Obtain electrical permit, inspection and approval from the Washington State Department of Labor and Industries (Electrical Inspection (509) 886-6500)
- Set up an account for billing and pay fees at the Chelan County PUD Customer Accounting Department in Wenatchee, Chelan or Leavenworth.

Chelan County PUD cannot connect your service until these items are completed.

CHELAN COUNTY PUD RESPONSIBILITIES

- Provide and install meter
- Provide and install overhead service drop from Chelan County PUD connection point to customer weatherhead. (See Fig. 2 on page 28.)
GENERAL REQUIREMENTS APPLYING TO OVERHEAD SERVICES

- If overhead service length is 75 feet or more from the Chelan County PUD point of connection, a customer meter post shall be guyed. Service masts extending higher than 26 inches above the roof or with overhead services longer than 50 feet must be guyed. (See drawings and notes.)

- If overhead service is over 75 feet from Chelan County PUD point of connection or crosses a road, a Chelan County PUD installed service pole may be required to maintain clearances. (See Figure 2, below). A Customer Service Engineer will determine if a service pole is necessary. Costs associated with Chelan County PUD installed service poles are the responsibility of the customer.

- The path that the service will take should not cross property belonging to other individuals.

- If the service will pass through trees or brush, a three-foot path must be cleared and maintained to allow service personnel to access the line, and to allow lines to hang without contacting trees or limbs. Maintaining this clear path is the customer's responsibility.

- The customer shall furnish and install a substantial point of attachment for wall or mast mounting that meets NEC requirements. See Figure 4, for approved deadend bracket types.

- Only listed or approved service entrance equipment of the proper rating may be installed.

- For a duplex or larger building where only one strike to the building is permitted by state law but more than one weatherhead is desired, the weatherheads must terminate within eighteen (18) inches of one another.

- Attaching service brackets to the barge board and fanning the conductors above the edge of the roof to connect to a service mast is not permitted. Service brackets attached directly to the roof are not permitted.

- Not more than fifteen (15) feet of service conductor shall extend inside the building lines.

If you have any questions, please contact a Customer Service Representative.

Figure 2
Intermediate Service Pole
OVERHEAD SERVICE CLEARANCE REQUIREMENTS

The National Electric Code (NEC) and the National Electric Safety Code (NESC) establish minimum clearance requirements to maintain safe height distances for electrical conductors over various terrain. The service drop from a Chelan County PUD pole to a temporary service pole must meet clearances as illustrated in Fig. 3.

It is not the customer’s responsibility to supply or install the overhead conductor (wire), but you are required to provide a point of attachment at your service post that will allow Chelan County PUD to meet the clearance requirements.

Figure 3
Minimum Clearances per NEC/NESC

Figure 4
Approved Deadend Bracket Types

27
NOTES FOR OVERHEAD SERVICES (SURFACE & FLUSH MOUNT)

1. ALL METERING INSTALLATIONS SHALL BE BONDED AND GROUNDED PER CURRENT N.E.C. AND LOCAL JURISDICTION AGENCY REQUIREMENTS

2. WORKING SPACE OF 36 INCHES IN ALL DIRECTIONS SHALL BE MAINTAINED AROUND METERBASE. THIS SPACE IS TO BE KEPT CLEAR OF ALL OBSTRUCTIONS INCLUDING LANDSCAPING AND ENCLOSURES

3. IF SERVICE MAST IS LOCATED WITHIN 4 FEET OF ROOF EDGE, SERVICE WIRE MUST MAINTAIN MINIMUM CLEARANCE OF 18" FROM THE ROOF TOP WITHIN A 6 FEET RADIUS. BEYOND A 6 FEET RADIUS, SERVICE WIRE MUST MAINTAIN A MINIMUM CLEARANCE OF 3 FEET FROM THE ROOF TOP (NESC MINIMUMS)

4. IF SUPPORT MAST IS LOCATED MORE THAN 4 FEET FROM THE ROOF EDGE, SERVICE WIRE MUST MAINTAIN MINIMUM CLEARANCE OF 3 FEET FROM THE ROOF TOP (NESC MINIMUMS)

5. SERVICE MAST MUST BE TALL ENOUGH TO PROVIDE REQUIRED CLEARANCES FROM GROUND TO SERVICE CONDUCTORS EVERYWHERE IN THE SPAN (SEE FIGURE 2)

3. ALL MATERIAL SHOWN IS SUPPLIED AND INSTALLED BY CUSTOMER OR CUSTOMERS ELECTRICIAN UNLESS OTHERWISE NOTED
MAST SUPPORTS

Additional mast supports, typically a guy or a brace, are required for any service line over 50 feet in length.

Figure 6
Guy Attachment
Construction for Guyed Service Masts

Figure 5
Overhead Residential Installation
Figure 7
Gable End Mount – Under Eave
(REQUIRED WEST OF MONITOR or HEAVY SNOW LOCATIONS)

1. ALL METERING INSTALLATIONS SHALL BE BONDED AND GROUNDED PER CURRENT NEC AND LOCAL AGENCY REQUIREMENTS.

2. WORKING SPACE OF 36 INCHES IN ALL DIRECTIONS SHALL BE MAINTAINED AROUND METER BASE. THIS SPACE IS TO BE KEPT CLEAR OF ALL OBSTRUCTIONS INCLUDING LANDSCAPING AND ENCLOSURES.

3. ALL MATERIAL TO BE SUPPLIED & INSTALLED BY CUSTOMER OR UNLESS NOTED "BY PUD"
OVERHEAD METER POST (CUSTOMER OWNED)

GENERAL INFORMATION

- All meter post shall be furnished by the Customer
- Meter posts are the property of the Customer and shall be maintained by the Customer.
- All guys and anchoring required for the meter post shall be furnished and maintained by the Customer. Chelan County PUD will not connect to any customer installed meter post that is unstable and does not conform to Chelan County PUD standards.
- If a meter post is determined inadequate by Chelan County PUD, and must be replaced, the customer shall, at his expense, transfer all customer owned service entrance equipment to the new post and upgraded to current standards is necessary.
- Once transfer of customer owned equipment is complete an L & I inspection must be obtained before service will be reconnected by Chelan County PUD.

METER POST REQUIREMENTS

Meter posts must meet the following requirements:

- 6” x 6” full treated timber set at 48” minimum burial and tall enough to meet minimum clearance requirements

  OR

- A meter post meeting the following criteria:

<table>
<thead>
<tr>
<th>Pole Length</th>
<th>Pole Class</th>
<th>Setting Depth</th>
<th>Circumference 6’ from Butt</th>
<th>Circumference at Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fir</td>
<td>Cedar</td>
</tr>
<tr>
<td>20 ft</td>
<td>4</td>
<td>4 feet</td>
<td>25”</td>
<td>27”</td>
</tr>
<tr>
<td>25 ft</td>
<td>4</td>
<td>5 feet</td>
<td>28”</td>
<td>30”</td>
</tr>
<tr>
<td>30 ft</td>
<td>4</td>
<td>5 ½ feet</td>
<td>30”</td>
<td>32.5”</td>
</tr>
</tbody>
</table>

The center line of the meter shall be 5’-7’ above grade.
MANUFACTURED HOME - OVERHEAD SERVICE REQUIREMENTS

Overhead manufactured home services are typically installed on a post or pole using one of the two methods illustrated in Figures 8 & 9, depending on the service entrance type on the manufactured home. The customer-owned meter post or pedestal and associated equipment are purchased and installed by the customer and meet the requirements outlined in the underground meter post (customer owned) Page 33. The meter must be located where it can be seen from the roadway and maintained. The address, space or unit number must be tagged with a permanent tag on both the home and the meter socket prior to installation of the meter by Chelan County PUD personnel.

In addition to the above requirements, the NEC requires that manufactured homes have a disconnect switch installed within 30 feet of the home. Normally, the meter socket is installed at this same location. The meter socket shall be located on the side of the home facing normal public access. See Figure below.
For overhead service panel feeds, Chelan County PUD requires that the meter must be located within 15 feet of the service entrance on the home, see figure below.
OVERHEAD WIND MACHINE SERVICE

Wind machine services require a **320A minimum rated meter base.**

**METER POST REQUIREMENTS**

- Meter posts must meet the requirements specified on page 33, Overhead underground meter post (customer owned).
- The center line of the meter shall be 5’-7’ above grade.

**METER POST LOCATION**

- Locate meter in a tree row a minimum of 20 feet from the wind machine, preferably in an adjacent row.
- Wind machine services may exceed 150 feet from the Chelan County PUD transformer bank providing that the installed conductor (wire) is sized appropriately for the service length.

---

![Figure 10](Std Dwg No: 510.600)
OVERHEAD RECREATIONAL VEHICLE SERVICE

METER POST REQUIREMENTS

- Meter posts must meet the requirements specified on page 33, Overhead underground meter post (customer owned).
- The center line of the meter shall be 5'-7' above grade.

METER POST LOCATION

Meter posts must meet the following requirements:

- A pedestal shall not be located more than thirty (30) feet from the trailer or RV
- When a pedestal is located in a parking area, it must be so located that parked vehicles will not restrict meter accessibility or be damaged by vehicular traffic.
TEMPORARY ELECTRICAL SERVICE REQUIREMENTS

Temporary Electric Service is defined as single phase power required for construction use or other operations that are not considered permanent and shall not be construed as seasonal or recurring. This temporary service is limited to 12 months unless work is actively and continuously in progress. Temporary construction service equipment may only be used for construction purposes and must be disconnected when the permanent service is connected unless Labor & Industries grants an extension of time as per WAC 296-46B-590 Special occupancies — Temporary installations. More information on Temporary Electric Service is provided in the Utility Service Regulations.

CUSTOMER RESPONSIBILITIES CHECKLIST

- Contact a Customer Service Representative to determine the temporary service meter location, if necessary.
- Complete application for service and/or set up an account for billing with the Chelan County PUD Customer Accounting Department in Wenatchee, Chelan or Leavenworth.
- Provide and install appropriate meter base and post (see attached drawings). Call the ‘One-Call Center’ (1-800-424-5555) for utilities locations prior to digging. Washington Law requires you to locate all utilities on your site before you begin digging.
- Obtain electrical permit, inspection and approval from the Washington State Department of Labor and Industries (Electrical Inspection: (509) 886-6500). Chelan County PUD cannot connect your service until these items are completed.

CHelan County PUD Responsibilites

- Provide and install meter
- For overhead installations - provide and install overhead service conductor to customer’s meter post (see Figures 2 and 3).
- For underground installations - connect customer-provided temporary service conductor (see Figures 4 and 6).
GENERAL REQUIREMENTS

- If overhead temporary service length is 75 feet or more from the Chelan County PUD point of connection, the customer meter post shall be guyed and anchored.
- If overhead temporary service is over 75 feet from Chelan County PUD point of connection or crosses a road, a service pole may be required to maintain clearances. A Customer Service Engineer will determine if a service pole is necessary.
- The customer is required to pay certain costs incurred by the District for installation and removal of temporary services including service poles.
- The path that the service will take should not cross property belonging to other individuals.
- If the service will pass through trees or brush, a three-foot path must be cleared and maintained to allow service personnel to access the line, and allow lines to hang without contacting trees or limbs. Maintaining this clear path is the customer’s responsibility.
- Service entrance equipment shall include proper provisions for grounding portable tools and equipment in accordance with the National Electric Code and such equipment must be of factory built, rain-tight construction when exposed to the weather.

If you have any questions, please contact a Customer Service Representative.

OVERHEAD TEMPORARY SERVICE CLEARANCE REQUIREMENTS

The National Electric Code (NEC) and the National Electric Safety Code (NESC) have established minimum clearance requirements to maintain safe height distances for electrical conductors over various terrain. The service from a Chelan County PUD pole to a temporary service pole must meet clearances as illustrated in Fig. 2.

It is not the customer’s responsibility to supply or install the overhead conductor (wire), but you are required to provide a point of attachment at your service post that will allow Chelan County PUD to meet the clearance requirements.

![Figure 2: Minimum Clearances per NEC/NESC](Std_Dwg_No: 510.110)
METER POST (CUSTOMER OWNED)

GENERAL INFORMATION

- All meter post shall be furnished by the Customer.
- Meter posts are the property of the Customer and shall be maintained by the Customer.
- All guys and anchoring required for the meter post shall be furnished and maintained by the Customer. Chelan County PUD will not connect to any customer installed meter post that is unstable and does not conform to Chelan County PUD standards.
- If a meter post is determined inadequate by Chelan County PUD, and must be replaced, the customer shall, at his expense, transfer all customer owned service entrance equipment to the new post and upgraded to current standards is necessary.
- Once transfer of customer owned equipment is complete an L & I inspection must be obtained before service will be reconnected by Chelan County PUD.

METER POST REQUIREMENTS

Meter post must meet the following requirements:

- 6” x 6” full treated timber set at 48” min burial and tall enough to meet min clearance requirements
- OR
- 4”x13# steel I-beam, 7’ long set in minimum 18”x18”x18” concrete foundation
- OR
- A meter post meeting the following criteria:

<table>
<thead>
<tr>
<th>Pole Length</th>
<th>Pole Class</th>
<th>Setting Depth</th>
<th>Circumference 6’ from Butt</th>
<th>Circumference at Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fir</td>
<td>Cedar</td>
</tr>
<tr>
<td>20 ft</td>
<td>4</td>
<td>4 feet</td>
<td>25”</td>
<td>27”</td>
</tr>
<tr>
<td>25 ft</td>
<td>4</td>
<td>5 feet</td>
<td>28”</td>
<td>30”</td>
</tr>
<tr>
<td>30 ft</td>
<td>4</td>
<td>5 ½ feet</td>
<td>30”</td>
<td>32.5”</td>
</tr>
</tbody>
</table>

The center line of the meter shall be 5’-7’ above grade.
MINIMUM 6"x6" POLE OR 6' DIAMETER POST BURIED MINIMUM 4' DEPTH
POLE/POST HEIGHT DETERMINED BY NESC CLEARANCE HEIGHT OVER GROUND - SEE FIGURE 2

SERVICE DROP BY PUD
SERVICE POINT
INSULATED MAST DEADEND CLAMP (DEADEND INSULATOR)
CONDUCTORS PER NEC EXTEND 18" BEYOND WEATHERHEAD
WEATHERHEAD
CONDUIT CLAMPS REQUIRED
5/16" STEEL CABLE GALVANIZED GUY WITH ANCHOR ROD & PLATE IF SERVICE DROP EXCEEDS 75'
1-1/4" RIGID CONDUIT OR SCH 40 PVC
100 AMP METER BASE METER BY P.U.D.
DISCONNECTING MEANS: GFI PROTECTED SERVICE EQUIPMENT, WEAHTERTIGHT
GROUND LEVEL - FINAL GRADE
GROUNDING PER N.E.C.

NOTES:
1. ALL METERING INSTALLATIONS SHALL BE BONDED AND GROUNDED PER CURRENT N.E.C. AND LOCAL JURISDICTION AGENCY REQUIREMENTS
2. WORKING SPACE OF 36 INCHES IN ALL DIRECTIONS SHALL BE MAINTAINED AROUND METERBASE. THIS SPACE IS TO BE KEPT CLEAR OF ALL OBSTRUCTIONS INCLUDING LANDSCAPING AND ENCLOSURES
3. ALL MATERIAL SHOWN IS SUPPLIED AND INSTALLED BY CUSTOMER OR CUSTOMERS ELECTRICIAN UNLESS OTHERWISE NOTED
Figure 3
Typical Overhead Temporary Service Installation

- 1 1/4" Rigid Conduit or Schd. 40 PVC
- 100 Amp Meter Base
- GFI Protected Service Equipment, Weatherproof
- Conduit Clamps Required
- Service Point
- 5' Min. - 7' Max.
- Ground Level - Final Grade
- Grounding per NEC

Notes:
1. All metering installations shall be bonded and grounded per current N.E.C. and local jurisdiction agency requirements.
2. Working space of 36 inches in all directions shall be maintained around meterbase. This space is to be kept clear of all obstructions including landscaping and enclosures.
3. All material shown is supplied and installed by customer or customers electrician unless otherwise noted.
UNDERGROUND TEMPORARY SERVICES

GENERAL REQUIREMENTS

- Install the temporary meter base in an approved location on your property (see Figures 5 & 6).
- Provide appropriately sized conductor from your meter base to the Chelan County PUD connection point. Provide sufficient conductor to reach the transformer or handhole plus an additional 6 feet of conductor (wire) to make connections. Chelan County PUD servicemen will route your conductor (wire) into the box and make connections.
- **Note: We do not splice customer conductors.** If your conductor (wire) is too short to be connected in the transformer or handhole, it will be required to be replaced by the customer or customer’s electrician.
- Provide all trench and backfill to the edge of the Chelan County PUD transformer or handhole and leave your conductor (wire) exposed. The trench must be a minimum of 24 inches deep for proper burial of conductor (wire).
- Underground temporary conductor (wire) shall not be installed in conduit intended for permanent conductor (wire).

DO NOT ATTEMPT TO INSTALL CONDUCTOR INTO ENERGIZED FACILITIES WITHOUT A CHELAN COUNTY PUD SERVICEMAN PRESENT

If you have any questions, please contact a Customer Service Representative.
Figure 6
Typical Underground Temporary Meter Pole Installation

NOTES:

1. ALL METERING INSTALLATIONS SHALL BE BONDED AND GROUNDED PER CURRENT N.E.C. AND LOCAL JURISDICTION AGENCY REQUIREMENTS.

2. WORKING SPACE OF 36 INCHES IN ALL DIRECTIONS SHALL BE MAINTAINED AROUND METERBASE. THIS SPACE IS TO BE KEPT CLEAR OF ALL OBSTRUCTIONS INCLUDING LANDSCAPING AND ENCLOSURES.

3. ALL MATERIAL SHOWN IS SUPPLIED AND INSTALLED BY CUSTOMER OR CUSTOMERS' ELECTRICIAN UNLESS OTHERWISE NOTED.

(2) – #2 COPPER
(1) – #4 COPPER
OR
(2) – 1/0 ALUMINUM
(1) – #2 ALUMINUM
OR PER CURRENT N.E.C. STANDARDS
METERS AND SERVICE ENTRANCE EQUIPMENT

This section provides information on Chelan County PUD’s metering requirements including requirements that pertain to all meter installations such as meter location, clearances, and multiple meter installations and information on Self-Contained Metering and Current Transformer Metering. A Customer Service Engineer will coordinate this process. Please follow these requirements to avoid a delay in your service hookup.

CUSTOMER RESPONSIBILITIES CHECKLIST

- The customer shall be required to supply, install, and maintain meter mounting equipment acceptable to the District including:
  - Meter socket
  - Current Transformer Enclosures & Landing Pads
  - Conduit

- The customer shall provide sufficient space and exercise proper care to protect District property on his premises.

- In the event of loss or damage to the District's property on the customer's premises arising from neglect, carelessness, or misuse, the cost of necessary repairs or replacement will be billed to the customer.

- The customer or his contractor shall connect his equipment to keep the load under normal operating conditions and balanced within plus or minus 10% of the average load across the phase wires.

CHelan County PUD RESPONSIBILITIES

Chelan County PUD provides, installs, and maintains revenue meters. Current Transformers (CT's) will be provided and connected by Chelan County PUD meter department. Contractor / Licensed electrician will be responsible for picking up and installing the CT's. Please contact Chelan County PUD meter department at (509) 661-4337 to pick up CT's.
GENERAL METERING REQUIREMENTS

METER LOCATION REQUIREMENTS

- The District must approve all meter locations prior to installation (WAC 296-46-23001). The customer shall furnish a location acceptable to the District, readily accessible without risk of bodily harm to District employees, free from vibration, corrosive atmosphere, and abnormal temperatures, in which to install the metering equipment, and the equipment shall be protected from damage.
- Meters shall not be in carports, breezeways, porches, fenced in areas, or such locations where subsequent addition, rewiring or remodeling could enclose the meter.
- Meters shall not be closed in by paneling, or siding, etc. Meter and meter base must be exposed and accessible without tools and allow removal of meter base cover. Contact your Customer Service Representative for specifics.
- Metering shall not be mounted on or in the District's padmount transformer, transclosure, or pole.
- All meters and meter base covers shall be readily removable, not enclosed.
- A meter installed in an alley or driveway must be protected adequately to prevent damage from vehicular traffic.
- In heavy snow areas, the meter must be protected from damage by snow and ice loading.
- The District reserves the right of ingress and egress from the premises of the customer for purposes of meter reading, inspection and testing, or for the installation, removal or replacement of its property.

METER SOCKET ARRANGEMENT & REQUIREMENTS

- Meter socket and socket enclosures shall meet the standards of the Electric Utility Service Equipment Requirements Committee (EUSERC).
- Socket forms or arrangements to provide correct metering for the various systems used in the District are illustrated in Table 4 of this section.
- Sockets must be mounted plumb and be securely fastened to the structure to withstand forces of the installation or removal of the meter.
- The District prohibits the use of meter sockets with automatic circuit closing devices. Manual block bypass devices may be installed on self-contained meter bases only. These sockets must be clearly marked. (No lever bypass)
- Terminals shall be marked with a conductor range for aluminum or copper conductors. When aluminum conductors are used, the socket must be approved and clearly marked by the manufacturer that it is acceptable for aluminum conductor.
- Taps are not allowed in meter sockets
- The line supply conductors to a socket shall be connected to the top terminals and the load supply conductors shall be connected to the bottom terminals.
- The neutral service conductor shall be bonded to the meter base using the grounding screw or bonding terminal.

METER RETAINING RINGS

Meter retaining rings will be provided and installed by the District.
SEQUENCE OF SERVICE ENTRANCE EQUIPMENT

The sequence of service equipment shall be meter-switch-fuse or meter-circuit breaker-load unless not allowed by Code. Prior Chelan County PUD authorization is required. For requirements, contact Chelan County PUD. When code requires sequence of service equipment to disconnect-meter-load, Chelan County PUD approved locking provisions must be provided on all access to conductors that are ahead of the meter.

METER SOCKETS – CLASSIFICATION & LIMITATIONS

Classification of meter sockets by NEMA Standards:

- **Style 2** - A 100 ampere socket rectangular shaped and generally constructed of sheet steel, (listed or approved).
- **Style 3** - A 200 ampere socket (160 ampere continuous duty and/or special socket UL approved for 200 ampere continuous duty).
- **Style 4** - Limited to "grouped", "stacked" or on-the-job assembled meter sockets and switch assemblies at multi-meter installations (listed or approved).

Limitations of meter sockets by Style:

- Use of the **Style 2** socket is limited to installations where the size of service entrance conductors does not exceed #2 AWG copper or #1/0 aluminum.
- Use of the **Style 3** socket is limited to installation where the size of the service entrance conductors does not exceed 2/0 copper or 4/0 aluminum.
- **Style 4** sockets may be used in multi-meter installations of two (2) or more meters.
TABLE 4 – Meter Socket Requirements

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Wires</th>
<th>Service Capacity</th>
<th>No. of Terminals</th>
<th>Meter Socket Config.*</th>
<th>Manual Block Bypass Acceptable?</th>
<th>Accessible Disconnect Required?</th>
<th>Socket</th>
</tr>
</thead>
<tbody>
<tr>
<td>120/240</td>
<td>3</td>
<td>up to 200</td>
<td>4</td>
<td>A</td>
<td>Yes</td>
<td>No</td>
<td>Self-contained socket</td>
</tr>
<tr>
<td>120/240</td>
<td>3</td>
<td>201 to 320</td>
<td>4</td>
<td>A</td>
<td>Yes</td>
<td>No</td>
<td>Self-contained 320 Amp Socket</td>
</tr>
<tr>
<td>120/240</td>
<td>3</td>
<td>above 320</td>
<td>6</td>
<td>B</td>
<td>n/a</td>
<td>n/a</td>
<td>Instrument transformer rated with provision for test switch</td>
</tr>
<tr>
<td>120/240</td>
<td>3</td>
<td>above 200</td>
<td>6</td>
<td>B</td>
<td>n/a</td>
<td>n/a</td>
<td>Instrument transformer rated with provision for test switch</td>
</tr>
<tr>
<td>120/208</td>
<td>3</td>
<td>up to 200</td>
<td>5</td>
<td>C</td>
<td>Yes</td>
<td>No</td>
<td>Self-contained socket</td>
</tr>
<tr>
<td>120/208</td>
<td>4</td>
<td>up to 200</td>
<td>7</td>
<td>D</td>
<td>Yes</td>
<td>No</td>
<td>Self-contained socket</td>
</tr>
<tr>
<td>120/208</td>
<td>4</td>
<td>above 200</td>
<td>13</td>
<td>E</td>
<td>n/a</td>
<td>n/a</td>
<td>Instrument transformer rated with provision for test switch</td>
</tr>
<tr>
<td>120/240</td>
<td>4</td>
<td>up to 200</td>
<td>7</td>
<td>D</td>
<td>Yes</td>
<td>No</td>
<td>Self-contained socket</td>
</tr>
<tr>
<td>120/240</td>
<td>4</td>
<td>above 200</td>
<td>13</td>
<td>E</td>
<td>n/a</td>
<td>n/a</td>
<td>Instrument transformer rated with provision for test switch (RESTRICTED APPLICATION) – High leg on right terminals</td>
</tr>
<tr>
<td>120/240</td>
<td>4</td>
<td>above 200</td>
<td>13</td>
<td>E</td>
<td>n/a</td>
<td>n/a</td>
<td>Instrument transformer rated with provision for test switch (RESTRICTED APPLICATION)</td>
</tr>
<tr>
<td>277/480</td>
<td>4</td>
<td>up to 200</td>
<td>7</td>
<td>D</td>
<td>Yes</td>
<td>Yes</td>
<td>Self-contained socket</td>
</tr>
<tr>
<td>277/480</td>
<td>4</td>
<td>above 200</td>
<td>13</td>
<td>E</td>
<td>n/a</td>
<td>n/a</td>
<td>Instrument transformer rated with provision for test switch</td>
</tr>
</tbody>
</table>

Three wire services taken from any 208/120 volt system require a #10 wire from the neutral grounded conductor shall be connected to the fifth terminal.

Three phase four-wire services require the neutral tap to be connected to the terminal second from the right on the bottom or load side. In the case of four-wire delta services, the high voltage-to-ground phase conductor shall always be connected to the right hand terminal, top and bottom, and be properly color coded.
<table>
<thead>
<tr>
<th>Amp</th>
<th>Brand</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Midwest</td>
<td>M038CB1033</td>
</tr>
<tr>
<td>100</td>
<td>Square-D</td>
<td>SC1624M100S</td>
</tr>
<tr>
<td>100</td>
<td>Cooper</td>
<td>U011</td>
</tr>
<tr>
<td>100</td>
<td>Cooper</td>
<td>011</td>
</tr>
<tr>
<td>125</td>
<td>Eaton</td>
<td>CHM7N7N5GS</td>
</tr>
<tr>
<td>200</td>
<td>Square-D</td>
<td>SC816D200C</td>
</tr>
<tr>
<td>200</td>
<td>Eaton</td>
<td>CMBE88B200BTS</td>
</tr>
<tr>
<td>200</td>
<td>Cooper</td>
<td>204 MS68</td>
</tr>
<tr>
<td>200</td>
<td>Cooper</td>
<td>MSM200PPD</td>
</tr>
<tr>
<td>200</td>
<td>Cooper</td>
<td>U204</td>
</tr>
<tr>
<td>400</td>
<td>Cooper</td>
<td>324 N</td>
</tr>
<tr>
<td>400</td>
<td>Eaton</td>
<td>HP816P400BS</td>
</tr>
</tbody>
</table>

**NOTE:** Equipment other than those units listed here shall be submitted for approval prior to installation. Approval will be made through the office Distribution Engineering and Operations Department. All metering equipment must be approved by EUSERC.
CLEARANCES AND METER HEIGHT

- A level standing and working surface shall be provided and maintained in front of each metering installation. A clear and unobstructed working space shall be provided above this surface.
- Should the metering installation be on a working platform then the platform must be accessible by a permanent stairway that conforms to OSHA/WISHA regulations.

See Table 5, for detailed meter clearance information.

TABLE 5 - Metering Clearance Requirements

NOTE: The center of the meter socket is the point of reference unless otherwise noted.

<table>
<thead>
<tr>
<th>For:</th>
<th>Clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socket Height</td>
<td>5 feet minimum to 7 feet maximum above finished grade or floor (WAC 296-46-180)</td>
</tr>
<tr>
<td></td>
<td>In metering rooms 7 feet maximum and 3 feet minimum</td>
</tr>
<tr>
<td>Current Transformer Enclosures</td>
<td>Bottom of device shall be no less than 12” above finished grade, floor or working platform</td>
</tr>
<tr>
<td>Working Space</td>
<td>Minimum 3 feet wide and 3 feet deep measured from the front of the current transformer enclosure or meter face.</td>
</tr>
<tr>
<td></td>
<td>Plants, shrubs and trees shall not be planted in this area</td>
</tr>
<tr>
<td></td>
<td>All meter socket enclosures shall be assessable and unobstructed to allow the removal of cover, retaining ring, and meter.</td>
</tr>
<tr>
<td></td>
<td>Minimum distance between socket centers is 16” VERTICAL and 10” HORIZONTAL</td>
</tr>
<tr>
<td>Meter Pedestals (RV, Manufactured Home)</td>
<td>Minimum 44 inches and Maximum 7 feet</td>
</tr>
</tbody>
</table>

OUTDOOR METERING REQUIREMENTS

- Meter sockets containing energized equipment shall be covered and sealed with a transparent cover plate if a meter is not installed.
- Meters shall be installed only in sockets that are level, plumb and securely fastened to the structure.
- Installation of three (3) meters or less shall be on the outside lines of the building and shall be grouped in such a manner that a single service drop may serve all meters.
- All unused openings of the meter socket enclosure shall be closed with plugs (rain-tight, if outside) that are secured tightly in place from inside the enclosures before a meter is installed.

All meter equipment exposed to weather shall be rain-tight according to the National Electrical Manufacturer’s Association (NEMA) 3R minimum.
**METER ROOMS**

Where a multiple installation is four (4) meters or more, the location may be on the inside lines of the structure, provided the location is a metering room accessible to the District. The customer shall install a suitable key box provided by the District on the outside of the building in close proximity to the meter room that is keyed to accept the District key. If the "key in the knob", "lock set", or "mortise lock set" is used the lock must accept a removable core that can be keyed to the District key.

- The number of meter rooms in apartment buildings shall not exceed one (1) without the District approval.
- When a metering room is to be used, a floor plan shall be submitted to the District for approval prior to any wiring thereof.
- Meter rooms shall be properly illuminated with a switch located immediately next to the access door. The District has the right to refuse to enter inadequately illuminated or unsafe spaces.
- Meters shall not be installed in commercial buildings above the first level or below the first basement level without District approval.

**METER SOCKET LABELING**

- Before a meter can be installed, the customer must obtain a valid service address from the proper agency. When the meter is installed and sealed, it is designated in the District's official record as the meter serving that premise. Apartment unit or space numbers are considered part of the valid address.

- It is the responsibility of the owner or manager of multi-unit complexes to notify the District of any changes in numbering so that the District's Meter Department may verify metering circuits. Such notice must be given in writing immediately to Customer Service and Engineering to permit re-designation of meters serving the premise. The customer shall be responsible for renumbering both the premises and meter sockets prior to dispatch of the Meter Department.

- Meters will not be installed nor service energized until marking is complete. Each meter position and each service switch or breaker shall be clearly and permanently identified by the customer to indicate the particular location supplied by it. The relation of the meter socket, breaker, and location served must be easy to identify. Clear identification means a legible apartment or street number. The store name or number may be included but does not constitute a clear designation in itself.

Examples of permanent marking are:

1. An identification plate attached by screws, rivets or a secure adhesive.
2. Commercially available decals.
MULTIPLE METER INSTALLATIONS

On residential multiplex panels, the minimum spacing between socket centers shall be 7-1/2 inches horizontally, 8-1/2 inches vertically leaving not less than 1 inch clearance on the top and sides of the meters, and 2" clearance on the bottom. The center line shall be a minimum of 3 feet and a maximum of 7 feet above the floor or finished grade. All meters shall be identified per the requirements in the Meter Labeling section.

Meter socket jumpers shall not be used to serve house meters.

**Figure 1**
Typical Multiple Occupancy Service
(208v, 3-Phase, 4 Wire)
CT METERING INSTALLATIONS

Single phase residential services over 400A, Commercial services over 200A or Three phase services over 200A

GENERAL INFORMATION

- All current transformer installations shall be in acceptable enclosures (CT cans).
- All current transformer enclosures in residential services will be mounted on the outside of the building or flush mounted on an outside wall so that access to the enclosure is from outside of the building only.
- The customer must provide a 50,000 Amp fault current rated "Landing Pad" for mounting of CT's.
- Current transformers (CT's) are furnished by the District for services over 200 amperes except single phase residential 400 amp self-contained type services and shall remain the property of the District. Either type shall be installed by the customer and may be obtained directly from the District's Meter Department in Wenatchee or from any local office by advance request.
- Transformer enclosures must contain only the line wires and transformers. The enclosure must not be used as a junction box for other wires or conduits.
- Enclosures shall not be mounted in or under floor crawl spaces. See Table 5, page 32 for further clearance requirements.
- Space requirements for meter socket and associated equipment shall be adequate for mounting, access and safe working of all equipment. All doors must be able to be completely removed or opened to 180° if hinged.
- Meters shall not be mounted on panels covering compartments which contain fuses, switches, or any other devices that will require servicing, changing, or adjusting, necessitating the breaking of seals on meter panels.

The minimum size of metal instrument transformer cabinets or enclosures (CT Can) shall be as follows:

<table>
<thead>
<tr>
<th>CT METERING CABINET SIZE REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUIRED CT's</td>
</tr>
<tr>
<td>Service Size</td>
</tr>
<tr>
<td>Single Phase, 201 – 800 Amps</td>
</tr>
<tr>
<td>*Min. size. Consult Meter Dept for more info</td>
</tr>
<tr>
<td>Three Phase, 200 – 800 Amps</td>
</tr>
<tr>
<td>801 Amps +</td>
</tr>
</tbody>
</table>

The three phase cabinet cover must be hinged

The Meter Department personnel will make up all termination of metering points on all current transformer installations.
## APPROVED CT CABINETS

<table>
<thead>
<tr>
<th>Service Size</th>
<th>Circle AW</th>
<th>Milbank</th>
<th>Hoffman</th>
<th>Cooper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Phase, 201 – 800 Amps</td>
<td>RTCT</td>
<td>CT-243611-SC</td>
<td>A303011CT</td>
<td>243611 RTCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CT-303611-SC</td>
<td>A363011CT</td>
<td>303011 RTCT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CT363611-SC</td>
<td>A363611CT</td>
<td>363611 RTCT</td>
</tr>
<tr>
<td>Three Phase, 200 – 800 Amps</td>
<td>HRTCT</td>
<td>CT364811-HC</td>
<td>A483611HCT</td>
<td>364811 HRTCT</td>
</tr>
<tr>
<td>801 Amps +</td>
<td>Requires</td>
<td>Requires</td>
<td>Requires</td>
<td>Requires</td>
</tr>
<tr>
<td></td>
<td>Switchgear</td>
<td>Switchgear</td>
<td>Switchgear</td>
<td>Switchgear</td>
</tr>
<tr>
<td>Three Phase, 201-400 Amps</td>
<td>6019-HEL</td>
<td>A4-K4797</td>
<td>(400A Max)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6019-HELS</td>
<td>A-K4797</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>G-K4729</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>J-K4903</td>
<td>(400A Max)</td>
<td></td>
</tr>
<tr>
<td>Three Phase, 400-800 Amps</td>
<td>6067-HAL</td>
<td>B4-K4798</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6067-HALS</td>
<td>J-K4903</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6067-HEEL</td>
<td>B-K4798</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6067-HEELS</td>
<td>H-K4722</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## APPROVED CT LANDING PADS

<table>
<thead>
<tr>
<th>Service Size</th>
<th>Circle AW</th>
<th>Milbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Phase, 201 – 800 Amps</td>
<td>6019-HEL</td>
<td>A4-K4797</td>
</tr>
<tr>
<td></td>
<td>6019-HELS</td>
<td>A-K4797</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G-K4729</td>
</tr>
<tr>
<td></td>
<td></td>
<td>J-K4903</td>
</tr>
<tr>
<td>Three Phase, 201-400 Amps</td>
<td>6067-HAL</td>
<td>B4-K4798</td>
</tr>
<tr>
<td></td>
<td>6067-HALS</td>
<td>J-K4903</td>
</tr>
<tr>
<td>Three Phase, 400-800 Amps</td>
<td>6067-HEEL</td>
<td>B-K4798</td>
</tr>
<tr>
<td></td>
<td>6067-HEELS</td>
<td>H-K4722</td>
</tr>
</tbody>
</table>
Figure 2
Typical CT Cabinets

FIG. 1
Cabinet showing stud mounted cover

FIG. 2
Cabinet showing flanged cover fastened by sealable rivet latches

FIG. 3
Hinged, flanged cover

MOUNTING BASE FURNISHED & INSTALLED BY CUSTOMER

SEALABLE STUDS WELD TO FLANGE

LIFT HANDLES

3/8" HOLE

Std Dwg No: 550.200
INDOOR CT METERING (Commercial Only)

- If a Current Transformer (CT) is installed on a balcony or platform, it must be accessible by a permanent stairway that conforms to OSHA/WISHA. A minimum of 3 feet of clearance in front of enclosure is required.
- Adequate lighting shall be permanently provided with a switch located immediately next to the access door. The District has the right to refuse to enter inadequately illuminated spaces.

CT METERING REQUIREMENTS

- Current transformer enclosures must be grouped with the meter base and attached via conduit.
- A minimum of one (1) inch conduit is required to connect meter base to CT enclosure. Enclosures and conduit shall be bonded by approved methods.
- The length of conduit and number of bends shall be kept to a minimum. Conduit is not to exceed fifteen (15) feet in length and shall not have more than three (3) 90° bends. Condulets or LBs are not allowed.
- Flexible conduit shall not be used.
- The District will complete the terminal connections from the secondary side of the current transformers to the metering equipment.

SWITCHBOARD METERING – SERVICES OVER 801 AMPS AND ABOVE

The customer shall consult the District and submit equipment drawings prior to the manufacture of the switchgear to determine the type of meter or meters that will be used, and arrangements for mounting. **Switchboards shall conform to EUSERC Standards.**

When the customer's factory-built switchgear is manufactured and installed, current transformers may be obtained by the customer directly from the District's Meter Department in Wenatchee or from any local office by advance request. Current transformers shall remain the property of the District. Either type shall be installed by the customer after the District approval of the switchboard drawings.

On switchboards, the current transformers shall be installed in such a manner as to be readily accessible after all bussing is in place. Installation plans regarding size of cubicle and placement of equipment shall be approved by the District before switchboard manufacturing. Neutral connections for metering shall be readily accessible and sealable.

Working spaces in back of a freestanding switchboard shall not be less than thirty-six (36) inches from the panel to the rear wall with provisions for safe exit.

The cover of the current transformer enclosure on switchgear shall be free of meters or equipment; however, the meter connected to the current transformer may be mounted on the cover provided said cover is hinged, sealable, and removable.
WELCOME TO SNAP
SNAP (Sustainable Natural Alternative Power) is Chelan County PUD’s award-winning renewable energy program. The program connects customers who want to produce solar and wind power with other local customers who want to support the development of new, renewable energy.

Under the program, customers voluntarily pay a little extra on their utility bills. These customer donations are collected by the PUD and distributed once a year to our SNAP producers – individuals, schools and nonprofit agencies that are generating solar and wind power. Renewable energy generated by SNAP producers goes into the PUD’s electrical grid and is distributed to PUD customers.

This guide provides information about the process of becoming a SNAP producer. Participation in SNAP is available to Chelan County PUD customers with systems generating 25 kilowatts or less. Most SNAP producers are generating solar power – and this guide focuses on solar installations – but these renewable options also are eligible for the program: wind, geothermal energy, landfill gas, wave or tidal action, gas produced by the treatment of wastewater, qualified hydropower, or biomass energy based on solid organic fuels from wood, forest or field residues or dedicated energy crops.

OVERVIEW
Here are the steps you will take to become a SNAP producer
1. Obtain a packet with these items from Chelan County PUD by calling (509) 661-8400:
   - Interconnection Application. Fill out the application. The application contains links to five construction diagrams. Please print out and attach the appropriate construction standard showing your proposed interconnection.
   - Power Purchase and Interconnection Agreement for SNAP Generation (includes Certificate of Completion, required at end of installation process)
   - Interconnection Standards for Customer-Owned Generating Facilities 25 kW or Less
   - Policy for SNAP Generation Within Chelan County PUD's Service Territory
2. Submit the Interconnection Application to a PUD Customer Service Engineer for review (attaching construction standard diagram showing proposed interconnection).
3. Pay the application/connection fee to Customer Accounts Representative at Chelan County PUD Headquarters Building, 327 N. Wenatchee Ave.
4. Submit the signed Power Purchase and Interconnection Agreement for SNAP Generation. (Applicant signs now. PUD General Manager will sign once project is complete.)
5. Work with a PUD Customer Service Engineer to determine a PUD connection point. Engineer reviews application and discusses the process with applicant.
6. Obtain electrical permit from local code authority. *Washington law requires you to locate all utilities on your site before you begin digging.*

7. Provide and install state approved meter base, conduit and conductor to the PUD connection point. Furnish and install, on customer side of the meter, a UL-approved safety disconnect switch fully capable of disconnecting the customer’s generating facility from the utility’s electric system.

8. Install system consistent with Chelan County PUD standards and policies. Note that equipment and labor costs to install solar power systems are exempt from Washington state sales tax.

9. Install proper labels on electrical disconnects and meter base.

10. Obtain final electrical inspection approval from code authority.

11. Notify Chelan County PUD of completion. Applicant submits Certificate of Completion signed by electrician or facility owner.

12. Chelan County PUD inspects system and installs meter(s).

13. Chelan County PUD reviews and approves Power Purchase and Interconnection Agreement for SNAP Generation and returns signed copy to SNAP applicant.

14. Operate your system.

15. Chelan County PUD sends annual SNAP payment to Producer in April.

The information and diagrams on the following pages refer to electrical service and meter base installations outlined in the previous section of this guide book. They are included here for your information and reference as you plan your SNAP installation. For further details, refer to the previous section or contact a Customer Service Representative.
INSTALLATION OF A NEW SNAP SERVICE

GETTING STARTED
Contact the PUD’s Customer Service Engineering Department during planning and design and prior to construction. Customer Service Representatives are located at the Chelan County PUD Service Building in Wenatchee, phone (509) 661-8400.

A Customer Service Representative will need the following information to assist you with providing electrical service to your project:

- Connection type and size of SNAP installation (this information must be included in your initial Interconnection Application)
- Voltage, phase and rated power output of SNAP generator
- Is the proposed connection to the Customer’s electrical service panel, or will it connect directly to a PUD transformer?
- Distance to PUD transformer, if applicable
- Are overhead or underground conductors proposed?

Availability and location of PUD facilities for interconnection to a renewable energy project must be determined by the Customer Service Engineer prior to starting your project. A usable PUD transformer or secondary connection point on or near your property is necessary. If no connection point is available, a line extension may be required at customer’s cost. This PUD connection point must be within 150 feet of the alternative energy source. If proximity is greater than 150 feet, applicant should consider the net metering option outlined in Chapter 6, section (7) of the document Interconnection Standards for Customer-Owned Generating Facilities 25kW or Less.

LABOR AND INDUSTRIES PERMIT AND INSPECTION
All parties performing electrical wiring are required to secure an Electrical Work Permit from the Washington state Department of Labor and Industries office at 519 Grant Road, East Wenatchee, phone (509) 886-6500. The inspection of the electrical wiring must be performed and approved by the state inspector and the District prior to interconnection to the District’s distribution grid. It is the customer’s responsibility to ensure inspections are performed by the state Department of Labor and Industries.

Once Labor and Industries’ approval has been received, the District’s metering technicians will install the production meter required to monitor renewable generation. The metering technician or other District representative is authorized by the District to make sure the customer’s equipment complies with District requirements, policies and connection standards.

The customer is responsible for all trenching, backfilling, conduit, conductor and related equipment and materials necessary for interconnection on the customer’s side of the transformer. See section CHELAN COUNTY PUD OR CUSTOMER INSTALLED CONDUCTOR - Page 15 #2.

The electrician who is installing the SNAP interconnection wire and conduits into energized transformers must coordinate this work with the PUD to ensure a safe installation before the work begins. Depending upon the type of work being done, the PUD will either de-energize the transformer or provide a journeyman lineman to assist with the installation. It is the responsibility
of the electrician to contact the PUD Service Department to coordinate an outage or journeyman

to stand by well in advance of the anticipated interconnection date.

Work that involves installing conduit and inserting wire or pulling wire into a transformer shall be
done only:
  • After the transformer has been de-energized, or
  • With the on-site assistance of a PUD journeyman

To train the cable and mark the runs:
  ▪ Label the cables and group them together
  ▪ Label each cable’s phase and the neutrals for three phase services
  ▪ Leave no more than 8 feet of wire coiled in the vault, neatly installed and taped together

Note: If you are considering installing underground services to power poles (overhead
transformer) contact a Customer Service Engineer to determine whether this option is feasible
as a SNAP interconnection.
GENERAL REQUIREMENTS APPLYING TO UNDERGROUND SERVICES
WHEN TYING DIRECTLY TO THE UTILITY

- Your service route should be as straight as possible from your meter base to the Chelan County PUD connection point. It cannot cross drainfields and shall have a minimum 5 feet horizontal clearance from any drainfield. It cannot be installed under any permanent structures, such as foundations, buildings, concrete slabs, etc.
- All trenching, conduit installation, backfilling and restoration from your meter base to the Chelan County PUD point of connection shall be done by the customer or contractor.
- Unless otherwise specified by a Chelan County PUD Customer Service Representative, all electrical conduit shall be 3-inch Schedule 40, gray electrical conduit.
- If your service route requires crossing a road, neighboring property or city, county or state right-of-way, consult with a Chelan County PUD Customer Service Representative before installation. A line extension may be required.
- Consult with a Chelan County PUD Customer Service Representative before installing conduit to the base of a power pole. Proper conduit location at the pole is required for safe work practices and should be determined by a Customer Service Representative.
- Chelan County PUD will supply and install conductor (wire) for a flat fee. Conductor (wire) supplied by customer is optional and must be installed by a licensed electrician.

The figure below relates to Construction Standards 560.400 and 560.600 where production metering is connected directly to the utility transformer. If you have any questions, please contact a Customer Service Representative.
Figure 3
200 Amp Underground Meter Installation

Std Dwg No: 550.200
MULTIPLE METER INSTALLATIONS

On residential multi-meter panels, the minimum spacing between socket centers shall be 7-1/2 inches horizontally, 8-1/2 inches vertically leaving not less than 1 inch clearance on the top and sides of the meters, and 2 inches clearance on the bottom. The center line shall be a minimum of 3 feet and a maximum of 7 feet above the floor or finished grade. All meters shall be identified per the requirements in the Meter Labeling section.

Meter socket jumpers shall not be used to serve house meters.

NOTES:
208/120 VOLT THREE (3)-WIRE SINGLE PHASE METER SOCKET TO BE FIVE (5) TERMINAL WITH NEUTRAL TERMINAL LOCATED ON LEFT SIDE FACING METER.
ALL LOAD TO BE BALANCED BETWEEN PHASES (± 10% OF NOMINAL VOLTAGE)
LOAD CENTER MAY BE TOP OR BOTTOM CONNECTED.
LOAD CENTER TO BE APPROVED BY CCPUD BEFORE BEING INSTALLED.
NON-SHUNTING TYPE METER SOCKETS.
ALL METERS SHALL BE IDENTIFIED WITH A PERMANENT TYPE LABEL AS TO LOCATION OF SERVICES.
SEE STANDARDS SECTION V-1.
NORTHWEST UTILITY NOTIFICATION CENTER (DIG COUNCIL)

Call two full working days before you dig!

It’s required by law, and you could be held liable for any damages to utility services.

1-800-424-5555

At no charge to you, Northwest Utility Notification Center (Dig Council) will mark where power, water, gas lines, and other utilities are located on your property, using the following color codes:

- RED ............................................. Electric
- YELLOW ....................................... Gas – Oil
- ORANGE ...................................... Telephone – CATV
- BLUE ........................................... Water
- GREEN ........................................... Sewer
- PURPLE ....................................... Reclaimed Water
- PINK ........................................... Survey
- WHITE ........................................ Proposed excavation