

People's Energy Cooperative



Electric Service Guide Rules and Regulations

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Guide to Electric Service Rules and Regulations

Revised: June 2025

INTRODUCTION

People's Energy Cooperative (Hereafter referred to as PEC) has assembled this booklet to assist members and their electrical contractors, architects, or engineers to plan for and obtain electric service. The requirements herein supersede all previous publications of the "Electric Service Guide" issued by PEC prior to the above date and is subject to change without notice. The most recent copy will be available on PEC's website.

PEC members and their contractors remain responsible for installing wiring that complies with the National Electric Code® (NEC®), National Electric Safety Code® (NESC®), and all applicable federal, state, and local codes and laws' this guide merely supplements those requirements. It is always necessary to refer to and comply with such codes, regulations, laws and ordinances when planning, designing, and installing a new electrical service, or modifying an existing electric service. The specific requirements of PEC do not intentionally conflict with any other requirements known to be in effect as of the publication date of this guide. Any apparent conflicts of this nature should be brought to the attention of PEC for interpretation. PEC assumes no responsibility whatsoever for the manufacturer's, supplier's, electricians', or engineering consultant's compliance with all applicable codes as well as with all local and state codes. Any waiver at any time of PEC's rights or privileges under the electric service rules and regulations will not be deemed a waiver as to any breach of other matter subsequently occurring.

All questions or requests should be directed to PEC's Engineering Department at engineering@peoplesenergy.coop, or (800) 214-2694.

This Electric Service Guide is available for download from PEC's website (<https://peoplesenergy.coop/electric-service>). Contact PEC for more details if needed.

People's Energy Cooperative Contact Information

Contact	Phone Number	Email or Website
Main Office	507-367-7000	engineering@peoplesenergy.coop
Toll-free	800-214-2694	
Distributed Generation	800-214-2694	derinterconnect@peoplesenergy.coop
Gopher State One Call	800-252-1166	www.gopherstateonecall.org

Electric Service Guide

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1.0 General Information

PEC provides this guide to assist in planning for new electric service or modifications to an existing service.

While effort is made to keep this guide current, it is subject to change without prior notice. It is the responsibility of the applicant, member, and contractor to contact PEC for the latest changes or revisions.

1.1 Definitions

Applicant – The member, future member, or representative of member who is requesting the electric service from the Cooperative and assumes responsibility for ensure all requirements are satisfied.

Application for Service – The request from the applicant to install a new electrical service or modify an existing service.

Accessible – Allowing or admitting, close approach; not guarded by locked doors, elevation, or effective means including any portion of a temporary or permanent structure.

Approved – Acceptable to the authority having jurisdiction.

Building – A structure with a roof and walls. Two (2) or more structures shall not be considered a single building merely by the existence of skyways, tunnels, common heating or cooling facilities, common garages, entry halls or elevators, or other attachments.

Cold Sequence Metering – A disconnecting device that is located on the line side (before) of the metering equipment.

Contractor – Licensed individual or company who performs work on behalf of the member.

Construction Agreement (CA) – Signed contract between PEC and applicant/member outlining work to be performed by PEC, work to be performed by applicant/member, and a good faith estimate of construction fees under normal construction practices and conditions, good soil conditions and level terrain, and the design as discussed and agreed to by the applicant/member.

Current Transformer – An instrument transformer designed for the measurement or control of electrical current.

Distributed Energy Resource (DER) – the term DER is used to address all types of generation and energy resources that can be interconnected to the electric distribution system. DER technologies can include photovoltaic solar systems, wind turbines, storage batteries or diesel generators and are not limited to renewable types of technologies.

Distribution Lines – PEC's electrical lines located on primary side (before) of the transformer. Physically, these lines can be found along streets, alleys, highways, or easements on private property, when used or intended for use for general distribution of electric services to members.

Dwelling Unit – One or more rooms for the use of one or more persons as a housekeeping unit with space for eating, living, and sleeping, and permanent provisions for cooking and sanitation.

- Multi-Family Dwelling – A building containing two or more dwelling units.
- Single-Family Dwelling – A building consisting solely of one dwelling unit.

Easement – The right of use over the property of another, such as a right-of-way.

Electrical Service – The availability of electric power and energy, regardless of whether any electric energy is used. The providing of electric service by PEC consists of maintaining, at the point of service delivery, approximately the agreed voltage, phase, and frequency by means of facilities adequate for carrying the load which PEC is thereby obligated to supply by reason of the known requirements.

Electrical Work – The installing, maintaining, altering, repairing, planning, or laying out of electrical wiring, apparatus, or equipment for electrical light, heat, power, technology circuits or systems, or other purposes.

Frost (Frozen Ground) – A condition where the water contained within the ground freezes, which may result in additional difficulty and expense in excavation work.

Instrument Transformer – A transformer that reproduces in its secondary circuit, the voltage or current proportional to its primary circuit.

Instrument Transformer Cabinet (CT Cabinet) – A cabinet installed and owned by the member, complying with PEC's requirements, and designed for housing instrument transformers used for metering.

Master Metering – Metering configuration where a single meter (master meter) measures the consumption for a building, and then sub-meters on the member side of the Master Meter measure the consumption of individual load(s) or groups of loads.

Master/Meter Set – An instrument or instruments, together with auxiliary equipment, for measuring the electric power and energy supplied to a member.

Member – Any individual, firm, association, corporation, or governmental entity receiving electric service from PEC, currently or previously, at a specified location.

Member's Service Equipment – The necessary equipment and accessories, located near the point of entrance of supply conductors to a building, which constitute the main control and means of disconnecting the supply to that building, structure, or machine requiring electrical service.

NEC® – The current edition of the National Electric Code® as issued by the National Fire Protection Association (NFPA No. 70).

NESC® – The current edition of the National Electric Safety Code® as issued by the American National Standards Institute (ANSI C2).

Nominal Voltage – The value, expressed in volts, which is assigned to a circuit or system for the purposes of conveniently designating its voltage class (such as 120/240, 277/480Y,

etc.). The actual voltage at which a circuit operates can vary from the nominal within a range established by ANSI C84.1. The member is responsible for making sure that their systems are capable of operating within range B of ANSI C84.1.

Parallel Service – Two or more services entering a building, allowed by all applicable codes, to serve separately metered loads of an individual member or members. Examples are services in multi-family dwellings, multi-occupant commercial buildings, and buildings with qualified member equipment served under a PEC incentive program.

Paved – A surface covered with a material such as stone, asphalt, or concrete designed for vehicular traffic.

Point of Delivery – The point where the electric energy first leaves the line or apparatus owned by PEC and enters the line or apparatus owned by the member. This is not necessarily the point of location of PEC's meter.

Point of Interconnection – The location designated by PEC that the member must extend (conduits?) to in order for PEC to install facilities on the member property.

Primary Service – Any type of service with a nominal voltage greater than 600 volts.

Rate Schedules – The classification of the use of electricity into categories considering the amount of power supplied, the purpose of its use, and the cost.

Secondary Connection Cabinet (Pedestal) – Cabinet required when the number and/or size of the conductors exceeds PEC's limit for terminating in a specific pad-mounted transformer.

Secondary Service – Any type of service with a nominal voltage less than or equal to 600 volts.

Secondary Terminal – The secondary side of a pad-mounted transformer, overhead transformer, service pedestal, or vault, whichever is designated by PEC.

Subtractive Metering – An arrangement to measure consumption for member equipment served under a PEC incentive program in series with one PEC master meter to measure total building consumption and a sub-meter(s) to measure the individual consumption of the equipment on the incentive program. For billing purposes, the consumption measured by the sub-meter is subtracted from the consumption of the master meter.

Service – The conductors and equipment for delivering energy from PEC's system to the wiring system of the member.

Service Drop – The overhead service conductors from the last pole or other aerial support, up to, and including the splices (if any), connecting to the service-entrance conductors at the building or other structure.

Service Entrance Conductors, Overhead System – The service conductors between the terminals of the service equipment and a point usually outside the building, clear of building walls, where joined by tap or splice to the service drop.

Service Entrance Conductors, Underground System – The service conductors between the terminals of the service equipment and the point of delivery.

Service Equipment – The necessary equipment, usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of supply conductors to a building or other structure, or an otherwise defined area, and intended to constitute the main control and means of cutoff to the supply.

Service Upgrade – An electric service is considered upgraded if any of the following conditions are met:

- If the rating of the member disconnect is increased.
- If the main service disconnect type is changed (i.e. from fuses to circuit breaker) or replaced (i.e. circuit breaker to circuit breaker)
- If either the conductors between the meter socket and the member disconnect or the conductors on the supply side of the meter are changed.
- If the service is changed from overhead service drop to underground service line.
- If a DER system is interconnected at the service location.

Unsuitable Backfill Material – Includes, but is not limited to, the following materials:

- Granular material (individual stories, soil in clumps or clods, etc.) larger than 1/4 inch in diameter
- Frozen materials
- Materials removed as rock excavation or over excavation
- Trash, metal, or construction waste
- Environmentally contaminated soils

Voltage to Ground – For grounded circuits, the voltage between the given conductor and that point or conductor of the circuit that is grounded; for ungrounded circuits, the greatest voltage between the given conductor and any other conductor of the circuit.

1.2 Application for Service

Members, future members, or their authorized representative should apply for new service, line extensions, and service improvements as far in advance as possible to avoid delays.

New service, line extensions, or service improvements requests should be made by completing the appropriate online application on PEC's website at www.peoplesenergy.coop/electric-service or by calling 800-214-2694 if you are unable to access the application. A Staking/Field Engineer will contact you in a timely manner to discuss your request.

1.3 Special Considerations

- When an electric service must cross public streets or roads, PEC is required to comply with applicable government regulations and obtain necessary permits, which may include public hearings.
- If an underground or overhead line must cross another parties', easements must be obtained from the respective landowner. See 1.8 Easements for further information on responsibilities for easements.

- Trees that may compromise the current or future reliability of a new or existing line must be trimmed or removed.
- All required permits and easements must be properly executed and obtained before service installation or upgrades can proceed.
- A CA must be signed, and all applicable fees must be paid prior to scheduling construction.

1.4 Availability of Service

PEC shall provide the necessary electric facilities to deliver service to new locations within its service territory for any individual or entity that meet the requirements for membership. The cost of extending PEC's facilities for new service requests shall be shared by the requesting member in a manner that ensures the extensions and improvements are prudent and allow for reasonable cost recovery without imposing a significant burden on current and future members.

Before designing or modifying any electric installation, the member, architect, engineer, and/or contractor must consult with the PEC Engineering Department to verify the availability of the requested service, confirm compatibility of the member's electrical equipment with PEC facilities, and determine whether PEC has additional requirements beyond those outlined in this guide.

PEC supplies 60 Hertz alternating current, single- or three-phase. The following are the standard voltages that PEC provides:

Single-phase voltage:

240/120 Volt, 3 wire

Multi-phase grounded "wye" voltages:

208/120 Volt, 4 wire

480/277 Volt, 4 wire

Contact PEC for other available voltages.

Exact service specifications, such as voltage and number of phases, determined based on the location and the proposed load's size, location, and nature. PEC assumes no responsibility for verbal statements regarding the type of service available at any given location. All such information must be approved in writing by PEC's Engineering Department..

1.5 Ownership of Electric Service Lines and Equipment

All primary electric distribution lines and equipment installed by PEC shall remain the property of PEC. Any payments made by the applicant for the extension of service do not transfer ownership or control of these facilities to the applicant.

1.5.1 Overhead Electric Service

For new installations, the member shall own and maintain all equipment located beyond the transformer or other secondary terminal point. This equipment includes, but is not limited to, the service conductor, meter pole or mounting structure, service drop wire holder or bracket, weather head & service mast with conductors, and the meter socket.

In all cases where PEC installs secondary conductor to serve multiple services as underbuild on primary distribution poles, PEC will retain ownership of those conductors and the designated connection point for the member's service drop.

For services installed prior to 1996, PEC owns and is responsible for maintaining the overhead service drop up to the service conductors extending from the weatherhead of the service mast or pole top switch. In cases where the secondary overhead service drop is connected at the weatherhead of a service mast, the point of ownership transitions at the point of connection to the service conductors. The member shall own and be responsible for the service drop wire holder or bracket, weatherhead & service mast with conductors, and meter socket.

If secondary conductors are replaced, ownership of the Service Drop extending from the service transformer or other designated connection point to the service entrance connectors shall transfer to the member. The member is advised to contact PEC to verify the ownership of the secondary conductors for the specific existing service in question.

In all cases, the member owns and is responsible for the service conductors extending from the meter socket to other locations or buildings, any disconnect switches or breaker panels located at the meter, the meter socket, and the associated mounting panel.

1.5.2 Underground Electric Service

For new installations, the member shall own and maintain the underground service cable running from the transformer or pedestal to the meter socket, including the cable and connections. The meter itself shall be owned and maintained by PEC.

For services installed prior to 1996, PEC owns and is responsible for maintaining the secondary cable running from the transformer or pedestal to the meter socket and the meter. The member continues to own the meter socket and all service cables beyond the metering point. If the secondary cable from the transformer to the meter socket is replaced, ownership of the new cable shall be transferred to the member. The member should contact PEC to verify ownership of the cable for the specific existing service in question.

In all cases, the member owns and is responsible for the service cable from the meter socket to other locations or buildings, any disconnect switches or breaker panels at the meter, the meter socket, and the associated mounting panel.

1.6 Responsibility

Compliance with the rules and regulations established by the authority having jurisdiction, the National Electrical Safety Code (NESC), National Electric Code (NEC), state and local codes, and PEC's requirements is necessary to ensure a safe and acceptable installation. PEC reserves the right to disconnect service if unsafe conditions exist or the member fails to comply with all applicable rules and regulations.

1.7 Unauthorized Use of Energy and Meter Tampering

Meters, instrument transformers, or metering devices shall not be tampered with. Meter sealing rings, locking devices, and meter seals shall not be cut, removed, or otherwise altered. PEC property shall not be moved, removed, or modified in any way related to wiring or connections by anyone other than authorized PEC employees, except in an emergency situation involving fire or immediate danger to life or property. Minnesota Statute 325E.026 will be enforced.

1.8 Easements

Whenever PEC owned conductor, cable, or equipment are located on the applicant's property, the applicant shall grant an easement to PEC by signing the Electric Service Membership Application. PEC may require a separate easement document containing the legal description of the easement and parcel. This document will be filed with the County Recorder's Office. All electric distribution line easements must be granted at no cost to PEC.

If any PEC owned conductor, cable, or equipment must be located on property not owned by the applicant, PEC will make a reasonable effort to obtain the necessary easements. However, if PEC is unsuccessful, it becomes the applicant's responsibility to secure the easement for filing, as outlined above. If easements cannot be obtained for the preferred route, the applicant shall be responsible for the total cost of a PEC determined alternative route necessary to provide electrical service.

1.9 Damage Liability

PEC shall not be liable for damage to the applicant's crops, trees, shrubs, fences, lawns, sidewalks, driveways, or other obstructions that may occur as a result of the installation, maintenance, or repair of facilities, unless such damage is caused by PEC's negligence.

1.10 Standards and Specifications

All additions and improvements to the electric facilities shall be designed and installed in accordance with, or exceed, the requirements and specifications of the NESC, NEC, applicable state and local codes, and approved design standards of PEC.

1.11 New Service Minimum

The applicant must agree to maintain the new service for a minimum period of (60) sixty months and to pay the basic monthly service charge during this time.

2.0 Application Requirements

The applicant, or their representative, shall provide all required information, agreements, and permissions necessary for PEC to extend the appropriate facilities to serve the intended load. Any facilities installed by the applicant must comply with all requirements of the NEC, NESC, applicable state and local codes, and approved design standards of PEC.

The applicant must provide the following before PEC can begin the design of the new service or modification of existing facilities:

2.1 Site Plan

The applicant must meet with a PEC representative at the service location to coordinate site requirements and provide a site plan detailing existing or proposed structures and/or facilities, both above ground and/or underground, including the location of property corners.

For residential and commercial subdivisions, the applicant must provide PEC with a copy of the approved general development plan and the approved final plat and construction plans.

2.2 Utility Right-of-Way Easement and Property Description

Easements must be required as outlined in Section 1.8. In addition, a legal property description must be submitted.

2.3 Permits

The applicant must provide a copy of the building and zoning permit(s). Proof of property ownership may be required.

2.4 Load Profile

The applicant must provide applicable load survey information, including the projected peak and nominal load capacity, type of load, utilization (seasonal or year-round), and projected motor sizes and quantity. Any anticipated plans for expansion or potential increases in load capacity within five years should also be included as a future load to ensure adequate capacity is considered during the design process.

2.5 Additional Requested or Required Information

PEC may request or require additional information or assistance as necessary to support PEC's completion of the service requested.

3.0 Pre-Construction Requirements

Upon execution of the CA, the applicant must complete the following items before the project can be scheduled for construction:

3.1 Service Point Location

The applicant must review and accept the proposed location of the electric facilities as designed by the Staking/Field Engineer, as well as other requirements and conditions.

3.2 Right-of-Way Clearing

The applicant must be responsible for the cost of right-of-way clearing along the entire line extension route, in accordance with PEC specifications. The applicant may perform right-of-way clearing within their property boundaries. PEC will perform right-of-way clearing along public roadways and bill the applicant for the associated costs.

3.3 Grade Requirements

The applicant must ensure that any areas designated for electric facilities are brought within four inches of finished grade before PEC facilities are installed.

3.4 Secondary Service

The applicant is responsible for installing the service conductor/cable, meter loop and socket, and the service entry. These installations must comply with the NEC, NESC, applicable state and local codes, and PEC specifications. Newly installed service conductors/cables must not contain splices between the transformer and the meter socket.

A secondary terminal point will be defined and provided by PEC. The secondary terminal point can be the secondary terminal of a transformer, a secondary pad ground mounted pedestal, or an overhead secondary junction point on a primary voltage pole owned by PEC.

PEC will provide, own, and maintain the meter and associated current and potential transformers. The main service entrances, meter loops, meter socket, and proper facilities must be furnished and installed by the applicant or applicant's contractor in accordance with PEC standards.

3.5 Construction Fee Charges

The applicant must be in good financial standing, with no past due or delinquent debt owed to PEC.

3.5.1 Estimated Costs

Estimated costs will be included in the CA. All estimated fees must be paid before construction begins.

3.5.2 Unanticipated Costs

Extraordinary construction costs, such as permit fees, obstacles, rough terrain, rocky soil, unanticipated contractor surcharges, or other unusual circumstances involving unique methods in the construction or ongoing operation and maintenance of the line extension, will require the applicant to reimburse PEC for those costs. This includes, but is not limited to, increased costs associated with installing primary underground cables during winter months when frost is present.

3.5.3 Major Line Extension Costs

Provisions will be made for the prorating of major line extension contributions among subsequent users, including possible refunds to the original applicant.

3.6 Minnesota Wiring Affidavit or Inspection Certificate

All wiring must be completed in strict accordance with state and local electrical laws and regulations and will conform to the requirements outlined in the NEC and NESC. If an electrical contractor is hired, the applicant must provide a Minnesota electrical wiring affidavit. If electrical work is done by the owner, a Minnesota electrical wiring affidavit and final electrical inspection must be provided to PEC before the service is connected.

4.0 Metering

Meter socket standards are published in PEC's Approved Electric Meter Equipment document, as provided in **Appendix B**. Meter sockets and CT cabinets on this list will be used unless otherwise approved in writing by the PEC Metering Department.

Meter sockets and metering cabinets are furnished by the applicant. PEC allows self-contained meter sockets for residential services up to 400 amps and up to 200 amps for commercial services.

4.1 General Metering requirements

Any exceptions to the requirements below shall be approved by PEC Metering personnel.

4.1.1 Socket Bypass Required

All self-contained meter sockets used for new or rewired installations must have an approved lever bypass mechanism. The house meter for apartment buildings requires lever bypass switches. This requirement is to both single phase and three phase services at all voltages. PEC requires the billing meter socket to be updated to a lever bypass meter socket when applicant is interconnecting a DER system to their service.

4.1.2 Conductor Splicing

New service lines, whether for a newly installed service or a replacement for an existing service, shall not be spliced in the meter socket.

4.1.3 Ground Movement

A slip sleeve or expansion joint must be furnished and installed by the applicant for all new and rewired underground residential meter installations, and it is recommended for all commercial installations. Meter sockets must include adequate conductor length to accommodate movement during freeze and thaw cycles in the ground.

4.1.4 Banner Boards

All banner board installations require the use of 4"x6" or 6"x6" green treated posts, set a minimum of three (3) feet in depth, and a minimum of 2"x 6" green treated banner board construction, with a preference of 2"x 6" green treated tongue and groove boards. A minimum clearance depth of three (3) feet in front of the meter must be provided for maintenance access. For service upgrades or DER installations, applicants must update

their banner boards to the latest PEC specifications if the existing banner board is in poor condition.

4.1.5 Member Disconnect Switch

Member disconnect switches should be connected on the load side (after) of the meter. No member devices such as surge suppressors, load management equipment, etc. may be installed on the lineside (before) of the meter.

4.1.6 Metering on poles

Pole top switches and metering sockets must not be located on PEC-owned poles; however, if no other meter socket location is possible, prior written approval may be request from PEC's Engineering Department. An exception applies to metering that requires external potential and/or current transformers, which will be owned by PEC.

4.1.7 Special Sockets

All special sockets, such as apartment panels, recessed, mobile home parks, socket and switch, or socket and transfer, must have PEC's approval prior to installation.

4.2 Wiring Requirements

4.2.1 Location of high leg (Delta secondary 208 volt - wild leg)

The conductor with the higher voltage to ground must be connected to the terminal on the right side. The high-leg conductor must be identified in accordance with the NEC. Meter sockets with the high-leg in the incorrect position will not be energized and any mis-wired socket may be disconnected until the correct socket is installed. In all CT cabinets, the high leg must be on the right side in order to be energized.

4.2.2 Line and Load side of CT Cabinets

In all CT cabinets the line side and load side shall be clearly marked.

4.2.3 Production Meter Wiring

PEC requires all DER installations to include a production meter. The applicant must provide the production meter socket or CT cabinet. The production meter sockets must be wired with the load side at the top and the line side at the bottom. PEC prefers that the production meter be located upstream from any customer disconnects.

4.2.4 Double Lugging

Double lugging is only permitted on meter sockets for distributed energy resources with prior approval.

4.2.5 Proper Grounding

All metering conduits and sockets must be properly grounded. No bonding bridges are permitted on the exterior of the meter socket. The grounding electrode conductor must not be pulled through or connected in the meter socket. Electric services will not be connected to improperly grounded systems.

4.2.6 Neutral for Seven Terminal Sockets

A system neutral is required to each seven-terminal socket. The minimum conductor size is #6 wire.

4.3 Location and Accessibility

4.3.1 Location

All meters must be located on the outside of the building receiving service or on another structure at a height that allows PEC personnel to read or service the meter without stooping or reaching overhead. The bottom of the meter socket should be at least 48 inches and no more than 65 inches from final grade.

A minimum radial distance of three feet must be maintained between any gas regulator and meter sockets. A minimum of ten feet must be maintained between any meter and propane tank that is 500 gallons or less. Twenty five feet must be maintained between any meter and propane tank greater than 500 gallons.

If more than one meter is required for a building, each meter socket must be labeled with permanent, weatherproof markings that clearly indicate each particular location being served. The lettering must be at least one-half inch in size of block letters. The same designation must appear on the inside of the meter socket in case the cover is replaced.

4.3.2 Alternate Locations

Special approval for an alternate location may be considered for certain three-phase installations. Such locations must be pre-approved by PEC Metering Department in writing, prior to installation.

4.3.3 Accessibility

The meters are to be readily accessible with clearance to the sides, above, and in front of the meter to allow proper access for regular and emergency maintenance as shown below in Figures 4.1 & 4.2. The member shall pay any costs associated with moving non-accessible meters or removing obstructions. The member is responsible for any damage caused during an emergency due to the inability to disconnect service at the meter due to inaccessibility.

Top-Down View

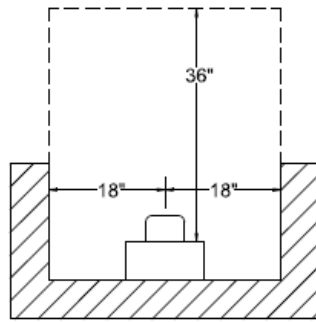


Figure 4.1 – Single Meter

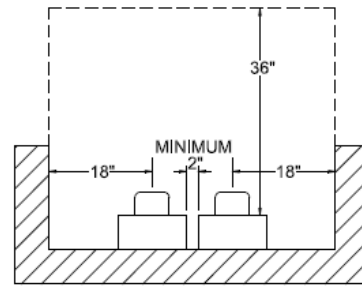


Figure 4.2 – Multiple Meters

1. Area within dashed lines shall be clear of all obstructions.
2. Eighteen-inch (18") clearance shall be maintained to either side of the center line of the meter socket.
3. Thirty-six-inch (36") clearance shall be maintained in front of meter socket unless otherwise specified in NEC.
4. The height as measured at the bottom of the meter socket should be no less than forty-eight inches (48") and no more than sixty-five inches (65").

4.3.4 Remodeling

When remodeling occurs, the member shall take the steps necessary to relocate the meter to meet the specifications identified in this section.

4.3.5 Multiple Buildings or Tenants

- Multiple members or building sites shall not share metered accounts unless that account only services a shared (co-owned) well or wastewater treatment facility.
- The main residence and farm buildings may be metered on one meter however, it is not preferred.
- The main residence, well, and outbuilding may be metered with one meter.
- Wells serving multiple homes must be metered separately.
- Additional tenant (leased) housing or other residence on the property shall be metered and billed separately.
- Commercial establishments such as mobile home courts, apartment buildings, campsites, or multi-tenant commercial lease space shall be designed so that the electric energy used by each mobile home, apartment, campsite, or leased commercial space is metered separately unless otherwise agreed to by PEC.
- A business entity with multiple buildings or service points may be worked out with PEC as a "campus" arrangement for one service point of metering at the entrance of the facility site. Such a metering point may be installed at primary voltage levels. The member shall enter into an electric service agreement which defines the metering point, service delivery point (or points), and ownership of all primary and

secondary electrical wire and equipment installed between the member side of the primary metering point and the service delivery point(s). The member shall own all primary and secondary wire and equipment on the member side of the service delivery point(s). The agreement between the member and PEC is required to be in place prior to implementation of a primary metering installation.

- Energy provided at a primary metering point, whether in a building with multiple tenants, a campus with multiple buildings, a mobile home park, or other types of service may not be resold.

5.0 General Construction Information

5.1 Service Connect Checklist

Appendix A is a Service Connect Checklist. Please be sure all the items on the checklist are completed before contacting PEC for a service connect.

5.2 Route/Design/Method of Construction

PEC reserves the exclusive right to determine the route, design, whether overhead, or underground facilities, and method of construction as it is deemed appropriate and necessary. If the applicant desires an alternative method or route of construction, the applicant shall pay all the additional costs associated with the alternative if it is accepted by PEC as a feasible method of installation.

5.3 Estimated Construction Schedule

At the time all pre-construction requirements are met, the applicant shall indicate if the project should proceed and PEC shall indicate an estimated construction schedule. This estimated schedule is subject to revision due to unforeseen circumstances such as line repairs and maintenance work to restore power, equipment breakdown, unavailability of materials, construction obstacles, or weather that delay progress. If the applicant elects not to proceed with the project within twelve months, the applicant shall be required to reapply under the line extension policy in effect at that time.

5.4 Other Agreements

Agreements, if any, for service types other than primary service to the site (such as dual fuel, EV charging, or lighting) shall be signed and submitted.

5.5 Line Extensions Not Connected

Extensions not connected for normal service within six months from project completion by PEC shall be subject to a line retention fee. The fee will be a monthly billing equivalent to the monthly facility charge for the rate class for the planned load served by the extension or modification. The line retention charge will continue until PEC's investment is recovered.

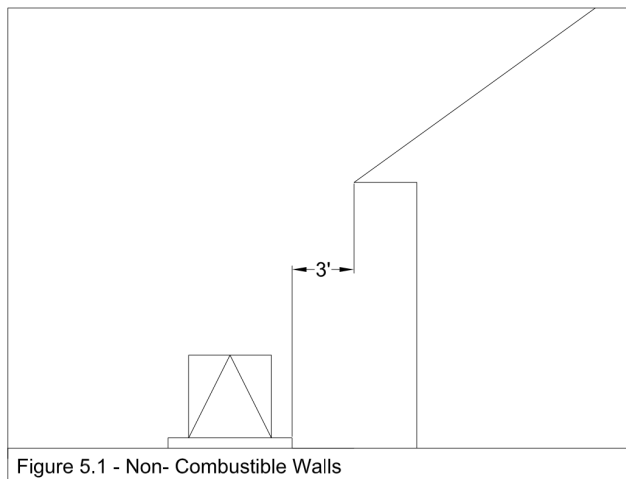
5.6 Trenching of Secondary Conductor to PEC Equipment

Before energizing electric service, all trenching of secondary conductors to PEC equipment shall be completed. It is recommended that the conductors be placed in conduit. If the equipment is a pad-mount device (transformer, secondary pedestal, etc.) the cable should be brought to the device with six (6) feet of extra cable for a secondary pedestal and ten (10) feet of extra cable for a transformer to allow for proper connection to PEC equipment. If the applicant is installing a secondary riser on a primary pole, the applicant shall install conduit and service cable from the meter to the primary pole. The applicant will also install the first ten feet of conduit on the pole and then leave all other remaining material at the base of the pole for PEC to finish the installation. Energization will be completed after PEC has deemed it safe and ready to energize.

5.7 Pad-mount Transformer Clearances

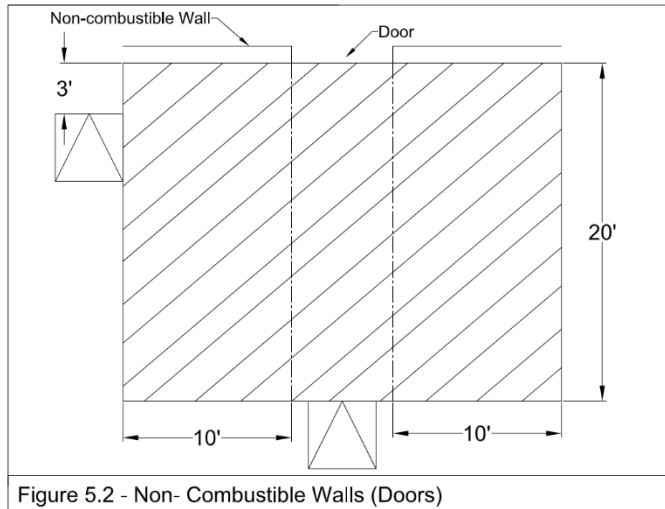
Noncombustible Walls

(Included in this class would be wood framed brick-veneered buildings, metal clad, steel-framed buildings; asbestos cement-board walled; metal-framed buildings; and masonry buildings with a one-hour fire rating.) Pad-mount oil-insulated transformers may be located a minimum distance of 3' from the roof overhang of a noncombustible walled building if all the clearances are maintained as noted in the figures below for doors, windows, and other building openings.



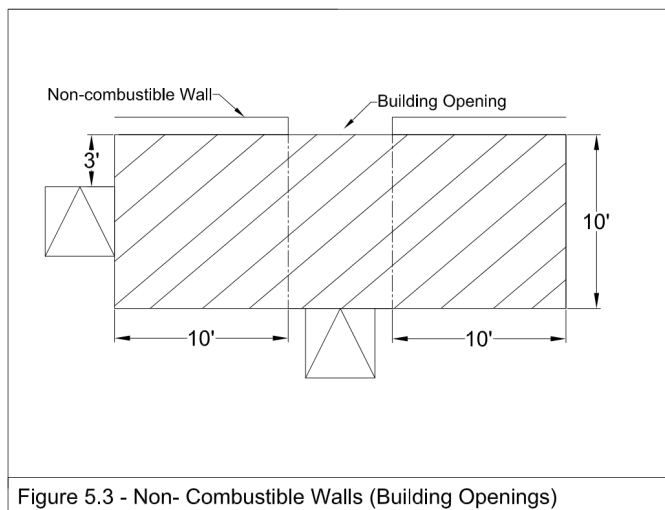
Doors

The required transformer clearances for Noncombustible walls with doors are shown below in Figure 5.2.



Building Openings

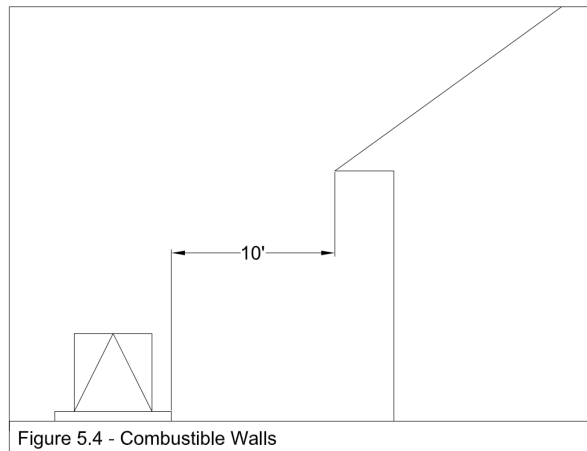
The required transformer clearances for Noncombustible walls with Building openings is shown below in Figure 5.3 If the opening is located above the transformer, the distance from the top of the transformer to the opening shall be a minimum of 10’.



Combustible Walls

(Included in this class would be wood buildings and metal clad buildings with wood frame construction.) Pad mount transformers shall be located a minimum of 10’ from the building

as shown below in Figure 5.4 in addition to the clearance from doors and building openings set forth for noncombustible walls.

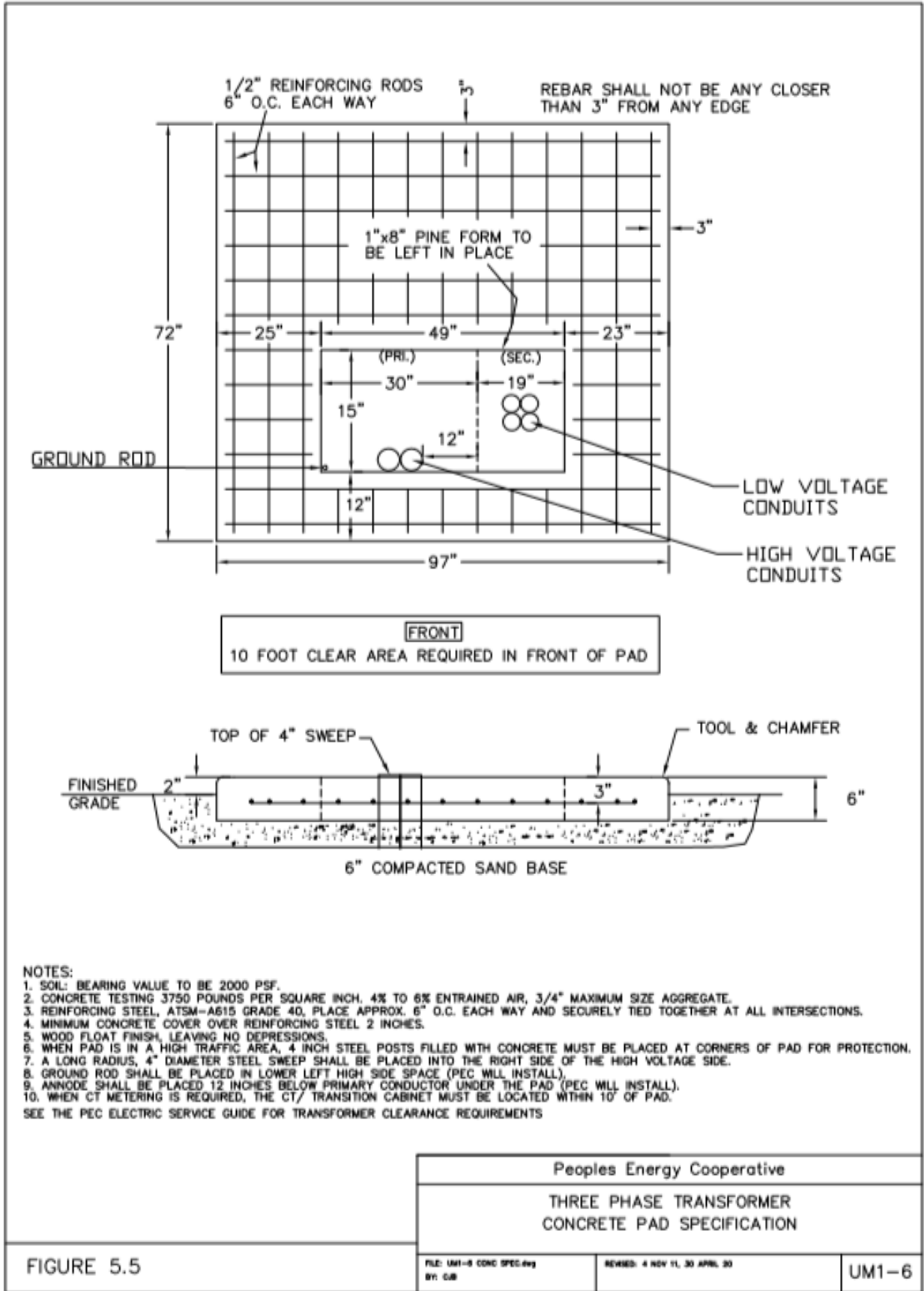


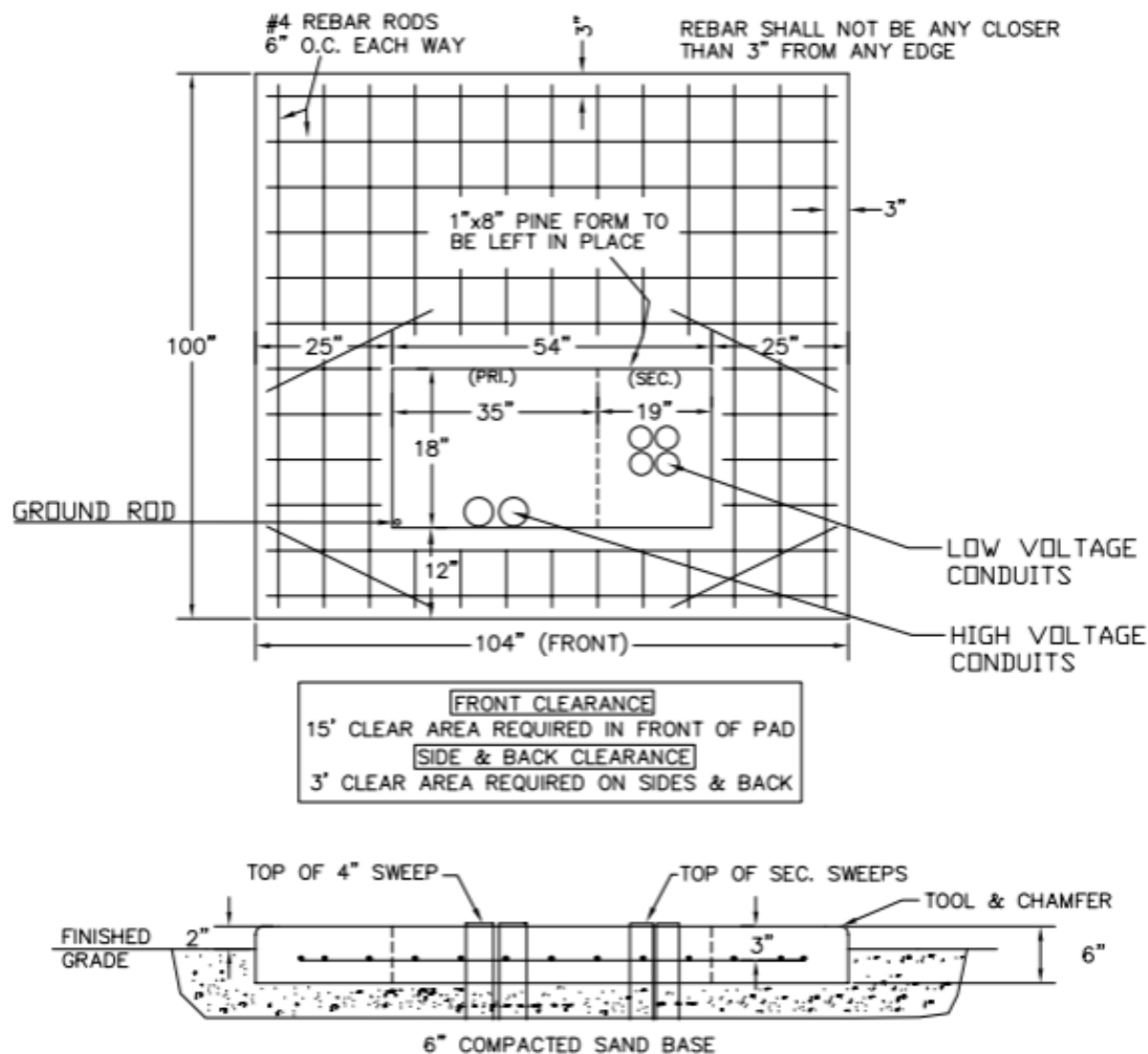
Barriers

(Included in this class are reinforced concrete, brick, or concrete block barrier walls with a three-hour fire rating.) If the clearance in the previous section cannot be obtained, a fire-resistant barrier shall be constructed in lieu of the separation. Contact the engineering department for clearance questions involving fire-resistant barriers.

5.8 Pad-mount Transformer pad specification

For three phase pad-mounted transformer installations the applicant is required to furnish the transformer pad and conduit sweeps. Please note PEC reserves the right to request a review of the formed pad before the applicant pours the pad. Refer to PEC's pad specification below in Figure 5.5 and Figure 5.6.





NOTES:

1. SOIL: BEARING VALUE TO BE 2000 PSF.
 2. CONCRETE TESTING 3750 POUNDS PER SQUARE INCH. 4% TO 6% ENTRAINED AIR, 3/4" MAXIMUM SIZE AGGREGATE.
 3. REINFORCING STEEL, ATSM-A615 GRADE 40, PLACE APPROX. 6" O.C. EACH WAY AND SECURELY TIED TOGETHER AT ALL INTERSECTIONS.
 4. 2 INCH MINIMUM CONCRETE COVER OVER REBAR.
 5. WOOD FLOAT FINISH, LEAVING NO DEPRESSIONS.
 6. WHEN PAD IS IN A HIGH TRAFFIC AREA, BOLLARDS MUST BE PLACED AT CORNERS OF PAD FOR PROTECTION.
 7. A LONG RADIUS, 4" DIAMETER STEEL SWEEP SHALL BE PLACED IN THE HIGH VOLTAGE SIDE AS SHOWN ABOVE.
 8. GROUND ROD SHALL BE PLACED IN LOWER LEFT HIGH SIDE SPACE (PEC WILL INSTALL).
 9. ANNODE SHALL BE PLACED 12 INCHES BELOW PRIMARY CONDUCTOR UNDER THE PAD (PEC WILL INSTALL).
 10. WHEN CT METERING IS REQUIRED, THE CT/ TRANSITION CABINET MUST BE LOCATED WITHIN 10' OF PAD AND NO CLOSER THAN 3'.
- SEE THE PEC ELECTRIC SERVICE GUIDE FOR TRANSFORMER CLEARANCE REQUIREMENTS

Peoples Energy Cooperative
THREE PHASE TRANSFORMER
CONCRETE PAD SPECIFICATION
(750KVA & LARGER)

FIGURE 5.6

FILE: UF3PC2 CONC SPEC.dwg
BY: CJB

REVISED: 4 NOV 11, 30 APRIL 20, 8 AUG 22

UF3.PC.2

5.9 Connection Cabinet

Applicants shall furnish and install a member owned connection cabinet where the number of secondary conductors exceed the transformer limitations. PEC will make secondary connections in the transformer. PEC will install a lock on the connection cabinet. Contact PEC Engineering Department for more details on member-owned connection cabinets.

6.0 Types of Service

6.1 Temporary

Temporary service extensions shall meet NEC and NESC requirements and be acceptable to PEC for location and installation. There are two types of temporary services.

6.1.1 Secondary Service and Metering for Construction

A temporary metered construction service may be installed at the request of the applicant or contractor. The service must be a secondary tap from an existing primary line and transformer. If a transformer is not presently in place, and the temporary service cannot use the planned permanent transformer, then the applicant is subject to a fee for installation and removal of a temporary transformer.

The secondary line and a temporary meter socket shall be provided by the applicant. The applicant shall pay a fee for the temporary meter installation.

Temporary metered services shall be reviewed twelve months after installation. At that time, the service shall be converted to a permanent account, possibly granted an extension of temporary service by PEC, or terminated.

All temporary service for construction will be metered with a monthly minimum service charge at the appropriate service class rate.

6.1.2 Primary Voltage Service

Temporary extension of primary service is the installation of primary voltage facilities (lines, poles, and transformer) to support the applicant's construction prior to the installation of the planned permanent facilities. Temporary primary voltage services are those that will likely be used for a period of twelve months or less.

If a temporary primary voltage extension for service is requested, the applicant shall pay the actual construction costs, actual retirement costs less salvage material, plus electric usage, and other associated costs.

6.2 New Permanent Primary Service

PEC will extend its primary single- or three-phase electric service to a permanent structure or service such as a home or business that will be utilized on a year-round basis. Fees are based on total footage cost for individual services and a combination of per lot and extended footage for platted subdivisions.

6.3 Emergency Service Disconnect

One- and two-family dwelling unit services are required to have an emergency service disconnect switch per the 2023 National Electric Code and Rules adopted by the Minnesota Board of Electricity. The switch must be wired on the load side (after) of the meter, outside of the structure adjacent or near the meter socket, and free from obstructions such as HVAC equipment, decks, or shrubbery.

6.4 Incentive Rate Services

PEC offers incentive programs/rates such as, but not limited to dual fuel, subtractive metering, off-peak heating storage, and EV charging. As part of participating in these programs, a separate service entry is required to be installed to provide electricity to the systems panel. A meter socket with a lever bypass is required for the incentive rate meter.

Control wiring is also required to be run from the control panel of the system, to an agreed upon location next to the meter, to allow for control under the incentive program. This wiring will be connected to the equipment used to communicate to the system under the rules of the program.

For systems with larger controls, the Cooperative's engineering department will need to be consulted on whether a separate secondary voltage line from the service transformer is required.

6.5 Electric Vehicle Charging Station Service

For the installation of a level 3 charging station, PEC requires a separate service entry, which is in parallel to the main service. This is also recommended for level 2 chargers. For both level 2 and level 3 charging stations, PEC requires notification from the member to allow for verification of available service transformer capacity for the new load.

6.6 Standby/Emergency Backup Generators

PEC requires a) an accessible disconnect switch to be installed for the safety of its crews and the public, and b) the member must submit a Service Modification to the Cooperative before the installation of a backup generation/source. These requirements are independent of the backup generation/source being a temporary generator connector only during time of outages, or the backup generation/source being a battery system or generator permanently wired to the service with a utility rated automatic load transfer switch. Programs, such as those described in Section 6.4, may not be allowed after the installation of the backup generation/source, without reconfiguring the member's existing system. This will be determined by Engineering during the application process.

6.7 Distributed Energy Resource (DER) interconnection

PEC has adopted the Cooperative Minnesota Interconnection Process (C-MIP) and technical requirements documented within IEEE Standard 1545 as its implementation of Minnesota Statute 164B.1611. As part of the interconnection, PEC requires the installation of a production meter for DER facilities which qualify for net-billing, or for services that offset load using electricity generated by the DER facility. The C-MIP process can be viewed on the Cooperative website. Questions on the process, or specific to a possible DER installation, can be sent to the DER Coordinator at DERinterconnect@peoplesrec.com.

Appendix A – Service Connect Checklist

Electrician/Installer doing the work: _____

Service address: _____

Date service is ready: _____

Items completed:

- ☐ Service wire is installed.
- ☐ Service wire is backfilled.
- ☐ Service entrance is installed.
- ☐ Service panel cover is installed.
- ☐ Service wire is installed at proper depth.
- ☐ Service wire length is adequate to reach PEC connection point.
- ☐ Service wire is trenched to correct connection point.
- ☐ Service wire is correct size to meet PEC and NEC requirements.
- ☐ Service wire is not damaged.
- ☐ Temporary service has ground fault breaker.
- ☐ Service wire neutral has been identified.
- ☐ 200 amp jaw clamping lever bypass is installed. For service above 200 amps call PEC.
- ☐ Meter socket height is installed at no less than 48" and no more 65 inches.

Questions to ask PEC: _____

Appendix B – Approved Electric Meter Equipment

B.1 Approved Sockets

Refer to the sections below for PEC approved meter sockets and secondary metering connection cabinets. Meter installations made with unapproved sockets or cabinets will not be energized. Services energized with unapproved equipment will be subject to disconnection until the service is corrected.

B.2 Sockets for Self-Contained Meters, Single Position

Residential use – All are ringless, weatherproof, four terminal, 600 volts or less and require a manual bypass. Overhead and underground shall have 200-amp minimum sockets. An approved manual bypass must be on 320-amp sockets.

<u>Manufacturer</u>	<u>Part Number</u>	<u>Overhead (OH)/Underground (UG)</u>
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B.2.1 320 Amp Socket

Talon	320A 4J RGLS 1POS LVRBPS MS	OH/UG -SW
Milbank	U1079-R	OH
	U1129-O-K3L-K2L	UG

B.2.2 200 Amp Socket

Milbank	U4801-XL	OH/UG
	U9318-XL	OH
	U9319-XL	OH/UG
Talon	200A 4JRGLS 1POS NO BPS MS	OH/UG

B.3 Service at 480 Volts

Meter sockets used on 480-volt service must have a flash shield over the jaws and an approved bypass mechanism. 480-volt services must include enough space for PEC to install its VT packs within CT cabinets. The only approved meter sockets for 480-volt use are 200-amp commercial types. Self-contained 480-volt services require cold sequence metering.

<u>Manufacturer</u>	<u>Part Number</u>	<u>Overhead (OH)/Underground (UG)</u>
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B.3.1 Single-Phase CT Service Socket

Milbank	U4490-XL (6-terminal Lever Bypass)	OH/UG
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B.3.2 Poly-Phase CT Service Socket

Milbank	U4493-XL (13-terminal Lever Bypass)	OH/UG
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B.4 Pad Mounted Secondary Metering Cabinets (CT Cabinets/ Transition Cabinets)

Secondary metering cabinets with donut and/or bar type CT mounting provisions are to be used for metering large underground services.

All cabinets shall be constructed of galvanized and painted steel. No side-entry raceway will be allowed from the transformer to the connection cabinet.

The following connection cabinets with CT mounting provisions have been approved for use in the PEC service area. Any cabinet not on this list will require prior approval by PEC Engineering Department before the service will be connected.

<u>Manufacturer</u>	<u>Part Number</u>	<u>Size</u>
American Midwest Power	CTS4-4L	400 amp
	CT46-4L	400/600 amp
	SCC8-4ACT	800 amp
	SCC12-4ACT	1200 amp
	SCC16-4ACT	1600 amp
	SCC20-4ACT	2000 amp
	SCC25-4ACT	2500 amp
	SCC30-4ACT	3000 amp
	SCC40-4ACT	4000 amp
EMI, Inc	CTC-WP3800P	800 amp
	CTC-WP1000P	1000 amp
	CTC-WP1200P	1200 amp
	CTC-WP1600P	1600 amp
	CTC-WP2000P	2000 amp
	CTC-WP2500P	2500 amp
	CTC-WP3000P	3000 amp
	CTC-WP4000P	4000 amp