Poudre Valley REA Member Owned Secondary Service Conductor Specifications and Installation Guidelines

The following specifications and guidelines pertain to:

- Member owned gang meter sockets on a building or structure.
- Individual service meter sockets out of a pad mount transformer with Poudre Valley REA (PVREA) supplied CT's and/or PT's.

All gang metering and associated equipment shall be supplied and installed by the Member, Builder or Electrical Contractor. The metering shall be located in an accessible area on the building or structure. The demarcation point between PVREA ownership and Member ownership is at the transformer secondary lugs. PVREA maintains ownership of the meter(s).

On individual CT-PT rated services PVREA will supply and install the CT's, PT's and Meter socket. PVREA will bolt the individual meter socket to the side of the PVREA supplied transformer. The CT's will be located on the transformer secondary bushings inside the transformer. The PT's (if required) will be bolted inside the transformer secondary compartment. The demarcation point between PVREA ownership and Member ownership is at the transformer secondary lugs. PVREA maintains ownership of the meter, CT's, and PT's.

All Member owned associated equipment and the required secondary service conductors shall be supplied and installed by the Member, Builder or Electrical Contractor. The Member is fully responsible for indicating the correct size and number of secondary service conductors out of the transformer. PVREA will install the proper size terminal blocks according to the secondary conductor size and quantity.

The Member shall furnish, install, and terminate the secondary service conductors according to PVREA's specifications. The Member is responsible for connecting all secondary service conductors to any form of Member owned disconnecting device(s) and/or equipment. The Member is also responsible for the secondary service terminations at the PVREA power transformer. In the case that there are existing secondaries already connected to the transformer PVREA may decide to terminate the Member owned secondaries. This may be done to avoid power interruptions to the existing Members. Under these circumstances the member will be required coordinate the installation and termination of their secondary service conductors with PVREA Engineering and/or Operations Department.

The Member is fully responsible for the correct secondary phasing. When parallel service conductors are run, conductors of the same phase must be identified as such. The Member's service conductors shall be marked (tagged) at the transformer and at the Member's service equipment entrance. The Member service cables are to be installed as a set per conduit (i.e., 3 phase service A, B, C, N in one conduit) and marked accordingly for cable identification. Properly colored secondary cable insulation is preferred, although colored electrical tape will suffice for cable tagging. The cable color identity is based on voltage, phase, neutral, and ground. The identity colors shall be as follows:

Voltage	Phase A	Phase B	Phase C	Neutral	Ground
120/208/240V	Black	Red	Blue	Grey or White	Green, Green w/ Yellow Stripe, or Bare
277/480V	Brown	Orange	Yellow		

(Color coded 277/480V phasing example with colored secondary conductor installation)

The proper conductor length is the responsibility of the Member. The Member installed underground service conductors shall be of sufficient length to allow the Member to complete the final electrical connections. The Member shall wire brush all conductors, apply a non-grit type inhibitor, and terminate them to the manufacturer's specifications. The Member shall verify and torque all secondary service connections to the manufacture's specifications on all Member owned and PVREA owned equipment.

The class and type of service being rendered determines the number and size of secondary service conductors. The secondary service conductors shall be a continuous length of properly sized and insulated conductors prescribed by the NEC and/or the authorities having jurisdiction. Refer to the NEC for requirements. For loads where parallel or multi-run phase and neutral service entrance conductors are installed, the Member shall consult with the PVREA Engineering Department early in the design phase. Typical PVREA secondary service conductor limitations are as follows:

Maximum Conductor Size and # of Ru ıs		
3-Phase Transformer KVA	**Max Conductor Size**	**# of Runs**
30-750	500MCM	6 to 7
1000≤	750MCM	7 to 14

In the case that the Member specifies the incorrect secondary size and/or quantity during the design/engineering phase the Member will be responsible for the additional costs associated with the replacement of the transformer secondary terminal blocks.

The Member will own and maintain the secondary service conductors after installation as well as all necessary non-electrical facilities required for the underground conductor installation. These facilities include, but are not limited to; trenching, backfill, conduits, ducts, concrete slabs, handholes, etc. The Member shall coordinate with the PVREA Operations Department for any connection, disconnection and/or maintenance of Member owned secondary service conductors. Please contact the PVREA Operations Department at 1-800-432-1012.