Power & Water Resources Pooling Authority
Resolution 23-12-22

VERIFICATION, ESTIMATION AND EDITING OF INTERVAL METER DATA

WHEREAS Interval Meters are integral to achieving cost-effective energy efficiency in agricultural and municipal water systems by providing the technology to identify energy savings opportunities by measuring energy use and equipment operation that is critical to optimizing energy, equipment, and overall operations; and

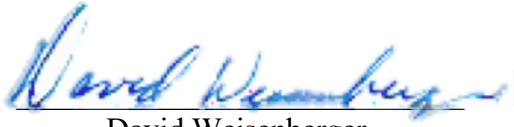
WHEREAS, under Article 5 of the ASA, the Pooling Authority Board of Directors is designated as the local regulatory authority with authority to make decisions and take actions on matters relating to the operation and implementation of the ASA.

NOW, THEREFORE, BE IT RESOLVED that the Pooling Authority Board of Directors ("Board") hereby:

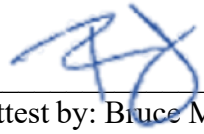
1. Approves updates to the "PWRPA Load Metering Policy," attached hereto as Attachment A, which describes the load metering requirements applicable for service under the ASA and the policy elements associated with: (a) the replacement and maintenance of Interval Meters; and (b) the validation, estimation and editing of interval meter data.
2. Authorizes and directs the General Manager to implement the PWRPA Load Metering Policy consistent with its terms.

PASSED AND ADOPTED by the Pooling Authority Board of Directors this 6th day of December 2023, by the following vote on roll call:

AYES	Arvin-Edison WSD, Banta Carbona ID, Byron-Bethany ID, Cawelo Water District, Glenn-Colusa ID, James ID, Lower Tule River ID, Princeton/Provident ID, RD 108, Santa Clara Valley WD, Sonoma County Water Agency, Westlands Water District, Zone 7 WA (*100.0*%)
NOES	None
ABSENT	None



David Weisenberger
Chairman



Attest by: Bruce McLaughlin
Secretary

PWRPA Load Metering Policy

In its role as the Local Regulatory Authority, the Power and Water Resources Pooling Authority (PWRPA) Board of Directors (Board) has approved this document for the purpose of describing the load metering requirements applicable for service under the Aggregation Services Agreement (ASA). This document sets forth policy statements and provides written implementation details for: (a) the replacement and maintenance of interval meters; and (b) the validation, estimation and editing of interval meter data. Upon subsequent approval by the Board, this document may be supplemented with additional documents that further describe the load metering requirements applicable for service under the ASA. Unless otherwise defined herein, capitalized terms used herein shall have the meaning given to such terms in the ASA.

Policy Goals

The following summarizes the goals of PWRPA's Load Metering Policy:

- Timely state estimation of the aggregate PWRPA load for power supply management.
- Proper metering for demand side management programs established to comply with the PWRPA Public Purpose Program guidelines.
- Improved settlement values through less estimation.
- Less reliance on (as well as autonomy from) PG&E to provide timely and accurate meter data.
- Settlement data provided at the same level of detail as power schedule data.
- Ensure the accurate submission of Settlement Quality Meter Data (SQMD)
- Improved capability to more efficiently bill for services under the ASA.

Policy Elements

1. PWRPA shall meter, or cause to be metered, each load point with Interval Meters that meet or exceed the standards acceptable to PWRPA for service under the ASA, subject to certain exceptions requested by a Project Participant and approved by the Board.

2. PWRPA shall provide, or cause to be provided, sufficient data acquisition and communication equipment at each meter point as required to communicate Interval Meter information in a cost-effective and timely manner to control locations that can then disseminate aggregated demand data to PWRPA meter data clients. Such data acquisition and communication equipment shall, to the extent possible, be standardized and procured in bulk to reduce initial costs and ongoing operation and maintenance costs. All equipment and associated services will at all times comply with a current list of approved equipment, services and vendors, where such list is to be developed and continuously maintained by PWRPA.

3. PWRPA shall provide or cause to be provided, operation and maintenance (O&M) services for each Interval Meter. Such O&M services shall at all times comply with standards established by PWRPA for service under the ASA.

4. PWRPA shall develop standards for the validation, estimation and editing of monthly and interval data.
    4.1. Data validation checks are designed to identify things that can go wrong at the meter/recorder and cause the data collected to not reflect actual usage. Data that has not gone through the validation process is raw data.
    4.2. General MDMA and MSP business practices should ensure that the meter is programmed correctly for the required revenue data and that the MDMA system is set up to accurately maintain information such as interval size, meter constants, and what quantity is recorded by what channel. These VEE rules do not require or describe how the MDMA verifies that the meter is programmed correctly.
    4.3. Several words are used to describe the quality of interval data.
        4.3.1. Raw data - data that has not gone through the VEE process.
        4.3.2. Valid data - data that has gone through all required validation checks and either passed them all or been verified.
        4.3.3. Verified data - data that failed at least one of the required validation checks but was determined to represent actual usage.
        4.3.4. Estimated - data that has been calculated based on standard estimation rules because the raw data was not valid.

5. Interval Data Estimation Rules
    5.1. Correcting Data Problems Attributable to Metering Problems
    5.2. Interval Meter Data doesn't match tariff or settlement requirements.
    5.3. Estimating Demand

6 The Board shall adopt a budget each year to initially install, replace, retrofit, operate and maintain Interval Meters required to comply with this Policy. Revenue needed to cover the costs reflected in the budget shall be derived from PWRPA's rates, applied to or otherwise allocated to each Project Participant as provided by the PWRPA Board.

1.1. The costs associated with the installation, replacement, retrofitting, operating and maintenance of Interval Meters and associated services shall be allocated as follows, subject to further direction from the Board:
    1.1.1. All costs reasonably associated with specific Interval Meters for each Project Participant shall be borne by such Project Participant. As described above, "Interval Meters" is defined to also include all associated telemetry equipment and communication service.
    1.1.2. All costs reasonably associated with the general implementation of the program, such as general research and design of the overall system, modifications to PWRPA's meter data management system or SAMBA and other similar general costs, shall be allocated in accordance with Section B (Metering and Meter Data Management) of the cost allocation algorithms set forth in Exhibit E of the ASA.
1.2. Project Participants may, at their election, advance funds to PWRPA in amounts determined by PWRPA to cover all or some of their respective costs of the Interval Meters and associated services.

2. Ownership of Metering Equipment
   2.1. Project Participants may own the physical metering equipment serving their respective load, subject to the following,
   2.2. All equipment so owned shall:
      2.2.1. at all times be in compliance with the current list of approved equipment, where such list is to be developed and continuously maintained by PWRPA,
      2.2.2. not be removed or modified without the written permission of PWRPA,
      2.2.3. be maintained pursuant to and in compliance with standards established by PWRPA for service under the ASA,
      2.2.4. be located in such a manner to allow:
         2.2.4.1. continuous electronic access, or other access as may be required pursuant to a PWRPA data access or communication system applicable to that load point,
         2.2.4.2. physical access to said equipment by PWRPA, its agents, and other personnel authorized by PWRPA.

3. Ownership of Data Acquisition and/or Communication Equipment
   3.1. Project Participants may own the physical data acquisition, and communication equipment associated with the physical metering equipment serving their respective load, subject to the following,
   3.2. All equipment so owned shall:
      3.2.1. at all times be in compliance with the current list of approved equipment, where such list is to be developed and continuously maintained by PWRPA,
      3.2.2. not be removed or modified without the written permission of PWRPA,
      3.2.3. be maintained pursuant to and in compliance with standards established by PWRPA for service under the ASA,
      3.2.4. be located in such a manner to allow:
         3.2.4.1. continuous electronic access, or other access as may be required pursuant to a PWRPA data access or communication system applicable to that load point,
         3.2.4.2. physical access to said equipment by PWRPA, its agents, and other personnel authorized by PWRPA.

4. Ownership of Data Acquisition or Communication Services, or contracts thereof
   4.1. Project Participants may contract in their own name for the data acquisition, and communication services associated with Interval Meters serving their respective load, subject to the following,
   4.2. All services shall:
      4.2.1. at all times comply with the current list of approved services and vendors, where such list is to be developed and continuously maintained by PWRPA,
      4.2.2. not be terminated or modified without the written permission of PWRPA,
      4.2.3. be maintained pursuant to and in compliance with standards established by PWRPA for service under the ASA,
      4.2.4. be maintained in such a manner as to be continuously available or as may be required pursuant to a PWRPA data access or communication system applicable

to that load point,

4.3. The Project Participant shall act so as to remain in good standing with the vendor with respect to credit, accounts payable and any other financial obligation so required by the vendor.