BPA Metering Services' Editing and Estimating Procedures

Editing and Estimating Interval Data

1. Introduction

This section defines the meter interval data editing and estimation techniques performed by BPA's Metering Services organization for settlement data.

2. General overview and goal of estimations

When the meter hardware and/or field equipment experiences a failure and power is still flowing, but the meter does not "capture" the energy, resulting in erroneous, misleading, and/or inaccurate reads, BPA requires an accurate accounting of the energy delivered, so these interval reads must be corrected. Once BPA Field Personnel or Customers provide written confirmation that the meter intervals are erroneous and an unmetered estimation is required, Metering Services will correct the meter interval readings. This information is logged in the Events Application for alerting and audit purposes.

The goal of estimations is to calculate based on standard estimation rules because the raw meter data reading was deemed invalid.

3. Verifying an unmetered condition

An unmetered event will be identified through one of the following methods:
1) The Field Forms application (via Metering Services email),
2) An email notification from the field or customers, or
3) Discovered through validation failures and outage research by Metering Services staff.

4. Interval Data Estimation Rules

Periods for which unmetered estimations are required may run from as little as a few minutes, to multiple months.

Only valid historical intervals can be used for estimation. Valid intervals are defined as those that have passed all validation checks or have been verified. Previous estimated intervals cannot be used for estimation.

Whichever estimation method is deemed appropriate for the unmetered instance, the estimation methodology needs to be communicated with the assigned Revenue Analyst. All documentation needs to be saved and/or mapped to the Event applications for alerting and audit purposes.

- If interval data requiring estimation are two hours or less in duration, use point-to-point linear interpolation (straight line between valid readings) to estimate the data.

- If the interval data needing estimation is more than two contiguous hours in length, one of following methodologies will be used:

  ➢ Average of selected historical reference "same days" (Mon to Mon, Tue to Tue, etc) to estimate the data.

  ➢ Calculate average daily load shapes using data from historical reference days. Interval-by-interval averages from valid intervals from the three nearest days of the same or like day of the week, accounting for holidays.

  ➢ If start and stop meter readings are available and known to be reliable, they may optionally be used to scale the estimated interval data with a shape projection applied.

  ➢ If SCADA data is available and has been mapped to the point of metering, it may be used for load profiling.

  ➢ Customer meter data, if available and verifiable, can be imported and used in place of erroneous data.

  ➢ If there is no historical data that can be used, the data must be estimated manually and the process and assumptions documented.

5. **Audit trails and Documentations**
   Unmetered estimation summaries are attached to associated events in the Event application.

   The Estimation summary is an automated alert for subscribers such as Revenue Analysts or Account Executives. The Estimation Summary identifies meter information, estimation method used, modified by, notes and usage summary information.