



California ISO
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California ISO

Station Power Program Overview

Version 1.1

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1. Introduction

Station Power is the Energy used to operate auxiliary equipment and other Load that is directly related to the production of Energy by a Generating Unit (ex. Heating and lighting for offices located at the plant). FERC has established a policy that allows a single entity that owns one or more Generating Units to self-supply Station Power over a monthly netting period using Energy generated on-site or remotely. Through the CAISO Station Power Program, Generators can convert their Station Power from retail service to wholesale service.

Station Power may be supplied in three ways:

- On-site Self-Supply: Energy from a Generating Unit that is deemed to have self-supplied all or a portion of its Station Power load without use of the ISO Controlled Grid during the Netting Period.
- Remote Self-Supply: Positive Net Output from generating resources in a Station Power Portfolio that is deemed to have self-supplied Station Power load of other Generating Units in the Station Power Portfolio during the Netting Period, where such supply requires the use of the ISO Controlled Grid
- Third Party Supply: Energy that is deemed to have been purchased from third parties to supply Station Power load during the Netting Period

Generating Units may self-supply Station Power from on-site Generation or from Generation produced by remote Generating Units under the same ownership. FERC has stated that Third Party Supply involves a retail sale and is subject to state jurisdiction,¹ and the state also has jurisdiction when distribution facilities are used to self-supply Station Power.² However, FERC has found that no retail sale occurs when Station Power is self-supplied over a monthly netting period.³ FERC has also concluded that unless distribution facilities are involved, or retail service is being provided, that the FERC jurisdictional tariff alone determines what charges apply.⁴ Provisions for implementing the Station Power program at the CAISO are embodied in the Station Power Protocol in the CAISO Tariff. The purpose of this document is to provide additional information on the self-supply of Station Power.

2. Terms and Definitions

The following terms are also defined in the CAISO Tariff.

¹ FERC has affirmed its conclusion that "the third-party provision of station power is not within our jurisdiction as it is a sale for end-use", "Keyspan II", 100 FERC 61,201 at p.2. Each order defining the FERC precedent is identified in the November 19 Order in directing the ISO to file tariff language consistent with the FERC precedent. The November 19 Order can be found at <http://www.caiso.com/docs/2004/12/27/2004122711461318509.pdf>

² "The delivery of station power may also involve the usage of local distribution facilities; this aspect of the transaction may be subject to regulation by a state regulatory authority." PJM II 94 FERC 61,251 at n. 60.

³ The proposition that self-supply of station power is a sale for end use has been previously litigated and rejected. Nine Mile Point Nuclear Station, LLC v. Niagara Mohawk Power Corporation, 110 FERC 61,033 (2005) at P. 23.

⁴ FERC has determined that "(a) state may approve whatever rate level it deems appropriate, including recovery of stranded costs and benefits, when a utility is selling station power at retail or is using local distribution facilities for the delivery of station power.... When neither of those services is being provided, however, and a merchant generator is self-supplying its station power requirements in accordance with the NYISO's Service Tariff, and any delivery is transmission service, the charges specified in the NYISO's tariffs apply to the exclusion of any retail tariff." AES Somerset, LLC v. Niagara Mohawk, 110 FERC 61,032 (2005) at P. 46.

Net Output - The gross Energy output from a Generating Unit less the Station Power requirements for such Generating Unit during the Netting Period, or the Energy available to provide Remote Self-Supply from a generating facility in another Control Area during the Netting Period.

Netting Period - A calendar month, representing the interval over which the Net Output of one or more generating resources included in a Station Power Portfolio is available to be attributed to the self-supply of Station Power in that Station Power Portfolio.

On-Site Self-Supply - Energy from a Generating Unit that is deemed to have self-supplied all or a portion of its associated Station Power load without use of the ISO Controlled Grid during the Netting Period.

Remote Self-Supply - Positive Net Output from generating resources in the Station Power Portfolio that is deemed to have self-supplied Station Power load of other Generating Units in the Station Power Portfolio during the Netting Period, where such self-supply requires use of the ISO Controlled Grid.

Station Power - Energy for operating electric equipment, or portions thereof, located on the Generating Unit site owned by the same entity that owns the Generating Unit, which electrical equipment is used exclusively for the production of Energy and any useful thermal energy associated with the production of Energy by the Generating Unit; and for the incidental heating, lighting, air conditioning and office equipment needs of buildings, or portions thereof, that are owned by the same entity that owns the Generating Unit; located on the Generating Unit site; and used exclusively in connection with the production of Energy and any useful thermal energy associated with the production of Energy by the Generating Unit. Station Power includes the Energy associated with motoring a hydroelectric unit to keep the unit synchronized at zero power output to provide Regulation or Spinning Reserve. Station Power does not include any Energy used to power synchronous condensers; used for pumping at a pumped storage facility; or provided during a Black Start procedure. Station Power does not include Energy to serve loads outside the ISO Control Area.

Station Power Portfolio - One or more generating resources eligible to self-supply such Station power, including Generating Units in the ISO Control Area, and generating facilities outside the ISO Control Area, where all such facilities are owned by the same entity.

Third Party Supply - Energy that is deemed to have been purchased from third parties to supply Station Power load during the Netting Period.

3. Eligibility

Only Generating Units that operate under the terms of a PGA, QF PGA or MSS Agreement are eligible to self-supply Station Power service. A Qualifying Facility (QF) that is not bound to the CAISO Tariff (e.g., when operating solely under the terms of a pre-existing power purchase agreement) is not eligible to self-supply Station Power in accordance with the Station Power Protocol. Any QF that has the right to net schedule Generation and on-site load has no additional obligations or metering requirements, unless it elects to self-supply Station Power, and meets the associated ownership, contractual and metering requirements.

Station Power may be self-supplied by a single corporate entity or joint powers agency or other legal entity organized under the laws of the State of California, but such self-supply may only be provided to and from facilities owned solely by that entity. That is, Station Power may not be self-supplied among affiliates, among members of a joint powers agency, or among other affiliated but legally distinct entities.

If an entity owns a portion of a jointly owned Generating Unit it may remotely self-supply the Station Power of its other Generating Units up to the amount of its entitlement to Energy from the jointly-owned Generating Unit provided that: (i) the entity has the right to call upon that Energy for its own use; and (ii) the Energy entitlement is not characterized as a sale from the jointly owned Generating Unit to any of its joint owners.

4. Application Process

A Station Power Portfolio application process is available on the CAISO website for Generator owners desiring to self-supply Station Power. The application process includes the following requirements:

- 1) The owner-applicant must identify and provide one-line diagrams of all Generating Units and Station Power meters for the “portfolio” over which Station Power is proposed to be self-supplied. Meter location and ownership of facilities should be clearly shown.
- 2) The owner-applicant must be the sole owner of the Generating Units, or must be able to demonstrate the right to call on Energy for its own use for jointly owned units.
- 3) Each Station Power meter must be certified in accordance with the ISO Tariff, and all end uses served must meet the definition of Station Power. All load served by each Station Power meter must be consistent with the definition of Station Power, and any ineligible load must have appropriate retail metering in place.⁵ Under no circumstances may ineligible loads be served through a Station Power meter.
- 4) Each Station Power meter must be subject to a Meter Service Agreement for ISO Metered Entities.
- 5) Any costs associated with required metering or telemetry are the responsibility of the owner-applicant.
- 6) A single Scheduling Coordinator must be assigned to both the On-Site Self-Supply and Remote Self Supply Load IDs associated with each Station Power meter.
- 7) Each Generating Unit must be bound to the ISO Tariff by a PGA, QF PGA, or MSS Agreement.

⁵ Separate metering is not required if the values of two or more meters can be netted to properly record and report loads that are ineligible for Station Power service.

- 8) The owner-applicant must indicate its expected reliance on On-Site Self Supply and Remote Self Supply to assist the ISO in establishing Station Power Load IDs (as explained under "Scheduling, Metering and Settlement", below).
- 9) The owner-applicant must have arranged terms of service with the responsible UDC for the use of any distribution facilities required to self-supply Station Power.
- 10) A \$500 application fee submitted with the Station Power Portfolio Application Form.

The CAISO will review applications and take the following actions.

- 1) The CAISO will provide the appropriate UDC and the CPUC with one-line diagrams and information regarding the owner-applicant.
- 2) The CAISO will verify metering schemes and assign Load IDs to the responsible Scheduling Coordinators when a Station Power Portfolio is approved.
- 3) The CAISO will make a determination in consultation with the UDC and CPUC on the factual question of whether distribution facilities are involved.

5. Transmission Charges

Consistent with FERC precedent, Station Power load to which On-Site Self-Supply is attributed will not be subject to the Transmission Access Charge (TAC), while Station Power load to which Remote Self-Supply and Third Party Supply is attributed will be subject to the Transmission Access Charge.

6. Scheduling, Metering and Settlement

Station Power should be scheduled, and meter data will be collected by the CAISO. If the load associated with a Station Power meter is intended to be self-supplied only by On-Site Self-Supply, then two load IDs will be associated with the meter. The default load ID for each meter is the "On-Site Self-Supply Load ID", which would be assigned to the portfolio owner's SC. The portfolio owner's SC should use the On-Site Self Supply Load ID to schedule the Station Power load. However, in most cases a new resource ID will be created for the On-Site Self-Supply load ID and that ID will not be in the CAISO Network Model. The On-site Self-Supply ID can be added to the Network Model in future upgrades to that model. In the meantime, a portfolio owner's SC can use the Demand Zones, Load Groups or Load Points that are currently in the Network Model to schedule Station Power. The choice between using the On-Site Self Supply Load ID or other load scheduling IDs will make no difference in any settlement outcome among Scheduling Coordinators.

The second Load ID that will be assigned to each Station Power meter is the "Third Party Supply Load ID", which will be associated with the Scheduling Coordinator of the UDC responsible for retail service. This Third Party Load ID will be used by the CAISO after the Netting Period to identify Station Power load for which the portfolio owner failed to self-supply Station Power. No meter data will be reported under the Third Party Supply Load ID until a determination is made at the end of the Netting Period about whether or not the Generation in the Station Power Portfolio was sufficient to self-supply the Station Power load in the Station Power Portfolio. If Station Power load exceeds the available Generation, then the ISO will shift a portion of reported load to the Third

Party Supply Load ID.⁶ As explained below, the CAISO requires that the UDC's SC not schedule any load using the Third Party Supply Load ID.

If there are one or more Generating Units in the Station Power Portfolio that could remotely self-supply load served by a Station Power meter, then a "Remote Self Supply Load ID" will also be specified for that meter. The Remote Self-Supply Load ID will facilitate settlement of transmission charges, and will be associated with the portfolio owner's Scheduling Coordinator.⁷ The portfolio owner's SC will not be allowed to schedule using the Remote Self Supply Load ID, but will exclusively schedule any Load using the On-Site Self Supply Load ID.

The UDC's SC is precluded from scheduling to the Third Party Supply Load ID. Since the load that will be reported under a Third Party Supply Load ID for any interval is not determined until after the end of the month, it would be difficult or impossible to accurately schedule such load.⁸

A Station Power meter is an ISO meter that has been certified as serving eligible Station Power load. In this paper, the use of the term "self-supply" means to generate sufficient Energy from Generating Units included in an owner's Station Power portfolio to serve the Station Power load, as measured over a defined Netting Period. In the simplest configuration, a Station Power Portfolio may be a single Generating Unit that intends to self-supply its on-site Station Power load, with a single ISO certified meter where channel 1 is used to report Station Power load and channel 4 is used to report net Generation. In more complicated configurations, a Station Power portfolio may include several Station Power meters and several Generating Units. ISO Controlled Grid or distribution facilities under CPUC jurisdiction may separate one or more elements of the Station Power portfolio.

Any load that is not contemporaneously netted with Generation will be associated with the On-Site Load ID, unless some portion is reassigned to another Load ID at the end of the Netting Period. At the end of the month the CAISO will determine what portion of the metered Station Power load in each Settlement Interval was served by Remote Self-Supply or Third Party Supply, and will reassign load from the On-Site Self-Supply Load ID to the Remote Self-Supply Load ID or Third Party Supply Load ID accordingly. The meter data reallocation business rules for Station Power meter data are described in Appendix 1 of this document.

The ISO will make any reallocation of meter data to the Remote Self-Supply and Third Party Supply Load IDs for each unit by Settlement Interval before the Preliminary Settlement Statement is issued for the first day of the month. However, if some unforeseen problem prevents the reallocation from being performed before one or more Final Settlement Statements are published (i.e., reallocation among the load IDs occurs more than 51 business days after the first Trade Day of the month), then some market reruns and post-final adjustments may be necessary. In summary, CAISO settlement charges are assigned as follows.

⁶ For an example of the method for attributing Third Party Supply to units and intervals, see Appendix 2.

⁷ As explained earlier, On-Site Self Supply is not subject to the Transmission Access Charge under FERC precedent, while Remote Self-Supply is subject to the Transmission Access Charge.

⁸ If the UDC's SC determines that it should schedule load as a hedge against the possible assignment of charges for Third Party Supply (e.g., to avoid potential increases in Net Negative Uninstructed Deviations associated with unscheduled Third Party Supply), the UDC's SC may schedule its estimate of Third Party Supply at the demand zone.

- 1) The portfolio owner's SC is responsible for charges associated with self-supplied Station Power:
 - a. Load reported under the On-Site Self-Supply Load ID would be subject to all CAISO load-based charges except the Transmission Access Charge.
 - b. Load reported under the Remote Self-Supply Load ID would be subject to all CAISO load-based charges including the Transmission Access Charge.
- 2) The UDC's SC is responsible for charges accruing to the Third Party Supply Load ID:
 - a. Load reported under the Third Party Supply Load ID would be subject to all CAISO load-based charges including the Transmission Access Charge.
 - b. The UDC would bill any metered load associated with the Third Party Supply Load ID under the appropriate retail tariff.

Importantly, the total load reported for each Station Power meter is not changed in any metering interval -- the only change is that a portion of that load may be associated with a different Load ID. As a result, the reallocation of meter data described above has no impact on UFE or Imbalance Energy.

When the CAISO has to reallocate Station Power meter data from the On-Site Self-Supply Load ID to either the Remote Self-Supply Load ID or the Third Party Supply ID, the CAISO will charge a \$200 monthly fee per Station Power meter to the portfolio owner's SC under Charge Type 6609 – Station Power Fee. For example, if Station Power Portfolio contains two Station Power meters and both Remote Self-Supply and Third Party Supply is attributed to each Station Power meter, then the CAISO must reallocate meter data from the two On-Site Self-Supply Load IDs to the two Remote Self-Supply Load IDs and the two Third Party Load IDs. The portfolio owner's SC will receive four \$200 charges for this meter data reallocation for this month.

7. CPUC Charges

Under FERC precedent on self-supply of Station Power, the question of whether CPUC has jurisdiction to assess charges related to the self-supply of Station Power is a factual matter that rests on whether or not distribution facilities are used, which will be determined on a case-by-case basis. The CAISO will provide the PTO/UDC and the CPUC with information provided by any Station Power applicant regarding the facilities involved to assist the PTO/UDC and the CPUC in determining whether or not any distribution facilities are involved. However, FERC has clearly asserted that it has the authority to make the determination.⁹ Accordingly, the ISO would be hopeful that the applicant, the PTO/UDC and the CPUC would all be in agreement on this factual issue. To the extent that this is not the case, the ISO would expect the facility to begin its

⁹ FERC has stated that "(w)e disagree that it is solely the states that may make determinations about the nature of these facilities. This Commission must be able to assess whether facilities are transmission or local distribution facilities and thus whether they are subject to our jurisdiction." AES Somerset, LLC v. Niagara Mohawk, 110 FERC 61,032 (2005) at P. 35. "The fact that the New York Commission may have overlapping authority to determine which facilities are local distribution facilities does not negate our authority. Id.

participation in the Station Power program subject to the eventual legal determination of whether or not additional distribution-level charges apply.

FERC makes clear that any use of distribution facilities is subject to state jurisdiction, but does not prohibit self-supply in such circumstances. FERC has specifically ruled that any use of distribution facilities will be determined on a case-by-case basis, and that charges for such use are subject to state jurisdiction. As noted above, the CAISO will make provide the CPUC and the responsible UDC with information regarding each application so that they have full opportunity to evaluate whether or not distribution facilities are used in the self-supply of Station Power.

8. Congestion Management

The Station Power program makes no changes to the CAISO's Congestion Management process so Congestion Management will apply in accordance with the ISO Tariff. The Station Power Portfolio owner's SC may schedule Load and will be subject to Congestion Management according to the same rules that apply to any other scheduled load. All congestion costs will be borne by the Scheduling Coordinator scheduling the Station Power load. Usage Charges will be calculated and any imbalances between scheduled and metered Station Power load will be settled in accordance with the CAISO Tariff.

9. Summary of Operations

The first step will be for the Generating Unit owner that wishes to self-supply Station Power to complete the Station Power Portfolio application process, and for the CAISO to approve the plans and metering schemes in consultation with the responsible UDC and the CPUC. When this is complete, the CAISO will set up the Load IDs for all Station Power meters in the Station Power Portfolio, and the owner will be certified to begin self-supplying Station Power. The process from the Day-Ahead Market through final settlement is described below.

- 1) In the Day Ahead and Hour Ahead Markets Station Power load should be scheduled – even if a Generating Unit eligible to provide Remote Self-Supply is scheduled to operate in the same hour.
- 2) In the Day Ahead and Hour Ahead Markets, the UDC's SC will not be expected to schedule any load for Station Power that the owner has elected to self-supply, but may schedule at the demand zone level to hedge potential charges for Third Party Supply.
- 3) The CAISO will perform Congestion Management on each SC's portfolio in accordance with the CAISO Tariff. This means that scheduled Station Power load may be adjusted economically if Adjustment Bids are submitted, or uneconomically if no Adjustment Bids are submitted. Any Usage Charges attributable to the use of a congested inter-zonal interface to serve the Station Power load will be determined in accordance with the CAISO Tariff.
- 4) During the Operating Hour, the CAISO will Dispatch resources and take other actions in accordance with the CAISO Tariff. The self-supply of Station Power will have no impact on real-time operations.

- 5) The CAISO will poll channel 1 (Demand) and channel 4 (Generation) of all CAISO certified meters, including those serving Station Power load on the day after the Trade day.
- 6) Approximately 5 to 10 days after the end of the Netting Period, the CAISO will perform a calculation for each Station Power Portfolio to determine what source of supply is to be attributed to serving metered Station Power load (see Appendix 1).
- 7) The CAISO will allocate meter data to the Remote Self-Supply and Third Party Supply Load IDs before the Preliminary Settlement Statement on the first day of the Netting Period is issued (i.e., 38 business days after the Trade Day).
- 8) The CAISO will provide the responsible UDC with the amount of Third Party Supply serving Station Power load by meter ID and Settlement Interval to allow the UDC to assess the appropriate charges under the applicable retail tariff.
- 9) The CAISO will issue Preliminary and Final Settlement Statements with all applicable load-based charges accruing to the owner's SC for self-supply of Station Power, and to the responsible UDC's SC for all Third Party Supply of Station Power.

10. Simple Example of Station Power Self-Supply

The following example first explains how Station Power would be settled without the Station Power Program, and then how the CAISO will settle the service in accordance with the FERC Station Power precedent. Suppose a 50 MW unit has a 1 MW Station Power load, and that this generator can serve the Station power load without use of the ISO Controlled Grid or the distribution system of the utility with retail jurisdiction.

Suppose the netting period were two hours, and the unit were scheduled to operate in the first hour (generating 50 MWh) and to be shut down in the second hour (delivering 0 MWh). Without the Station Power Program, the generator can net the Station Power load in the first hour under Section 10.1.3 of the CAISO Tariff (permitted netting), so if the gross Generation is 50 MWh, and 1 MWh in Station Power is consumed, then meter data is netted so that 49 MWh of net Generation is reported. The Station Power load was self-supplied contemporaneously.

Suppose that the unit is off-line in the second hour, but there is still 1 MWh of Station Power. Without the Station Power Program, the UDC would serve this load under the applicable retail tariff. The ISO would bill the UDC's Scheduling Coordinator for cost of the wholesale service to that 1 MWh of retail load, which would include the cost of Imbalance Energy for any unscheduled Station Power, plus all load based charges, including the Access Charge. The UDC would then bill the Generator owner at the appropriate retail tariff for the Station Power service in hour 2.

Suppose the Generator owner applied to self-supply Station Power Load. First, the generator takes on the responsibility from the retail utility for the wholesale service provided by the CAISO to serve the 1 MWh of Station Power load. In other words, the Generator's Scheduling Coordinator is responsible for that load rather than the UDC's SC.

The effect of the station power service on each party is summarized below:

- 1) The generator avoids retail charges, and its SC pays wholesale charges excluding the Access Charge.
- 2) The UDC is no longer responsible for the cost of wholesale service provided by the CAISO to serve the Station Power, and does not bill the generator for retail service.
- 3) Instead of billing the UDC's SC for the wholesale services provided by the CAISO to the Station Power load, the ISO bills the generator's SC. The second effect is that the CAISO does not bill the Access Charge on the 1 MWh of Station Power load in Hour 2.

Under FERC precedent, Generation from hour 1 is attributed to self-supply Station Power load in hour 2. The station power in hour 2 was self-supplied non-contemporaneously but within the netting period. The only purpose of the netting process is to determine whether Station Power is self-supplied or procured from a third party. If on-site self-supply, then load based charges excluding the Access Charge apply. If Remote Self-Supply is used, then the Access Charge applies in addition to load-based charges.

Whether or not Third Party supply was involved cannot be determined until after the end of the netting period. This is because the Station Power Portfolio could show a net draw for other supplies through most of the netting period, and then on the last day generate enough energy to allow self-supply to be attributed to all Station Power load in the Netting Period.

If at the end of the Netting Period the ISO determines that the Generator used Third Party Supply to serve Station Power load, then the ISO will bill the UDC's SC instead of the Generator's SC for the load-based charges associated with the Third Party Supply. The UDC will then bill the generator for retail service to the extent that Third Party Supply is determined to have served Station Power.

Appendix 1 – Net Output Test and Meter Data Reallocation

Overview

The Station Power Program allows generator owners to be responsible for its Station Power Load. However, each month for the Station Power Portfolio SC to be responsible for all Station Power load in that month, the Station Power Portfolio has to pass a Net Output test. If a Station Power Portfolio has positive Net Output for the month (i.e. generation is greater than Station Power Load), then the Portfolio has self-supplied Station Power either through On-Site or Remote Self-Supply and no Third Party, or retail, Supply served that Station Power Load.

Station Power Portfolios can be comprised of several Sites and Generations Sources (as long all resources are owned by the same corporate entity). Each Site in a Station Power Portfolio contains Station Power Load and also may contain on-site generation sources. The portfolio may also contain a single Generation Source does not have on-site Station Power load. An example of a single generation source is an import also owned by the Generator owner where that Generation Source is eligible to remotely supply Station Power to the Sites with load.

The Meter Data Reallocation Process first performs a test on whether On-Site and/or Remote Self-Supply is applicable for the month. If the Net Output test finds that a Portfolio has Remote or Third Party Supply then meter data will have to be moved from the On-Site Self-Supply Load ID to the Remote Self-Supply or Third Party IDs through the use of the meter data reallocation business rules.

Step 1 – Determine the Net Output of Each Site

- Positive: On-site Self-Supply served all Station Power Load at that Site. No reallocation needed for the Station Power Load at that Site.
- Negative → Go to Step 2

Step 2 – Determine the Net Output of the Portfolio

- Positive: No Third Party Supply. All Station Power Load served by On-Site and/or Remote Self-Supply → Go to Step 3
- Negative: Third Party Supply occurs and ranking rules will determine which Site's Station Power Load gets allocated to Third Party Supply. Some Station Power Load may have been served by On-Site and Remote Self-Supply → Go to Step 3

Step 3 – If Remote Self-Supply or Third Party Supply occurs, then the CAISO has to reallocate the Station Power Load originally collected on the On-Site Self-Supply Load ID to the Remote and/or Third Party Supply Load IDs.

Meter Data Reallocation Business Rules

The following notation will be used in the equations:

| | |
|---|--|
| r | Is the additional Generation Source index |
| p | Is the Station Power Portfolio index |
| s | Is the Site index |
| m | Is the month index |
| f | Is the 5-minute interval index |
| t | Is the 10-minute interval index |
| g | Is 2 or the # of 5-minute intervals in a 10-minute interval |
| n | Is the index for the # of 5-minute intervals in a calendar month |
| k | Is the index for the # of Sites in a Station Power Portfolio |

Netting Period Calculations (Month-level)

| | Business Rule | Equation |
|-------------|---|--|
| BR01 | Monthly Net Generation for each Site IS COMPUTED AS FOLLOWS: Sum of 5-minute Channel 4 data for the Generating Units in that Site for the month – Sum of 5-minute Channel 1 data for the Station Power loads in that site for the month. | Net Generation $_{s,m} =$ $\sum_1^n \text{Channel } 4_{s,f} - \sum_1^n \text{Channel } 1_{s,f}$ |
| BR02 | Monthly Net Generation for each Station Power Portfolio IS COMPUTED AS FOLLOWS: Sum total of Monthly Net Generation for all Sites and other Generation Sources in the Station Power Portfolio. | Net Generation $_{p,m} =$ $\sum_1^k \text{Net Generation }_{s,m} +$ $\sum_1^n \text{Channel } 4_{r,f}$ |
| BR03 | Station Power Draw for each Site IS COMPUTED AS FOLLOWS: Sum of 5-minute Channel 1 data for that Generator for the month. | Station Power Draw $_{s,m} =$ $\sum_1^n \text{Channel } 1_{s,f}$ |
| BR22 | Monthly Net Load IS COMPUTED AS FOLLOWS: Sum of 5-minute intervals where Channel 1 in that interval is greater than Channel 4 in that interval. | Monthly Net Load $_{s,m} =$ $\sum_1^n \text{Net Load }_{s,f}$ Where Net Load $_{s,f} = \text{Max}(0, \text{Channel } 1_{s,f} - \text{Channel } 4_{s,f})$ |

Reallocation Calculations

| | Business Rule | Equation |
|--|---------------|----------|
|--|---------------|----------|

| | | |
|-------------|---|--|
| BR04 | <p>IF Monthly Net Generation for a Site is ≥ 0 THEN the Site has used On-Site Self Supply to serve Station Power Load and all 5-minute Channel 1 data will be assigned to the On-Site Self Supply Load ID for that Site.</p> <p>The rest of the calculations in Section 3.2.1.2 do not need to apply to this Site if this rule allocates all Channel 1 to the On-Site Self-Supply ID.</p> <p>Note: no reallocation is necessary if meter data collection for all Station Power Loads associated with a Site is by default collected in the On-Site Self Supply Load ID in MV-90.</p> | <p>IF Net Generation $s, m \geq 0$ THEN On-Site Self Supply $s, f = \text{Channel 1 } s, f$ AND Remote Self Supply $s, f = 0$ AND Third Party Supply $s, f = 0$</p> |
| BR05 | <p>IF Monthly Net Generation for a Station Power Portfolio is < 0 THEN Monthly Third Party Supply for the Station Power Portfolio = Absolute value of Monthly Net Generation for a Station Power Portfolio.</p> | <p>IF Net Generation $p, m < 0$ THEN Third Party Supply $p, m = \text{ABS (Net Generation } p, m)$</p> |
| BR06 | <p>Rank for Allocation for Sites in a Station Power Portfolio IS ONLY COMPUTED WHEN: Monthly Third Party for the Station Power Portfolio is > 0.</p> | |
| BR07 | <p>Rank for Allocation for each Site in a Station Power Portfolio IS COMPUTED AS FOLLOWS:</p> <p>No Rank for a Site in a Station Power Portfolio when Monthly Net Generation for a Site is ≥ 0</p> <ol style="list-style-type: none"> (1) Rank in the Station Power Portfolio IS ASSIGNED TO: the Site in that Station Power Portfolio with the highest negative Monthly Net Generation for a Site (2) Rank in the Station Power Portfolio IS ASSIGNED TO: the Site in that Station Power Portfolio with the second highest negative Monthly Net Generation for a Site (3) Rank in the Station Power Portfolio IS ASSIGNED TO: the Site in that Station Power Portfolio with the third highest negative Monthly Net Generation for a Site. | <p>IF Net Generation $s, m \geq 0$ THEN RANK = NA</p> <p>Rank $s, m = 1$ for Site with MIN (Net Generation s, m) where Net Generation $s, m < 0$</p> <p>Rank $r, m = 2$ for Site with MIN (Net Generation s, m of the sites without a NA Rank or 1 Rank) where Net Generation $s, m < 0$</p> <p>Rank $r, m = 3$ for Site with MIN (Net Generation s, m of the sites without a NA Rank or 1 Rank or 2 Rank) where Net Generation $s, m < 0$</p> <p>Note: Need a tie breaker rule</p> |
| BR08 | <p>Ranking continues until all Sites with negative Monthly Net Generation have a rank. Total rank numbers = total number of Sites in the Station Power Portfolio with negative Monthly Net Generation.</p> | <p>Total Rank Numbers $p, m = \text{COUNT OF Sites with Net Generation } s, m < 0$</p> |
| BR09 | <p>IF Site has no rank THEN Monthly Third Party Supply for that Site is 0.</p> | <p>IF Rank $s, m = \text{N/A}$ THEN Third Party Supply $s, m = 0$</p> |
| BR10 | <p>IF a Site in a Station Power Portfolio has a (1) Rank for Allocation THEN Monthly Third Party Supply IS COMPUTED AS FOLLOWS: Absolute Value of the MAX (Monthly Net Generation for (1) Rank Site, Monthly Net Generation for the Station Power Portfolio)</p> | <p>IF Rank $s, m = 1$ THEN Third Party Supply $s1, m = \text{ABS (MAX (Net Generation } s, m, \text{ Net Generation } p, m)$</p> |

| | | |
|-------------|---|---|
| BR11 | IF a Site in a Station Power Portfolio has a (2) Rank for Allocation THEN Monthly Third Party Supply IS COMPUTED AS FOLLOWS: - MAX (Monthly Net Generation for (2) Rank Site, Monthly Net Generation for the Station Power Portfolio + Monthly Third Party Supply for (1) Rank Site) | IF Rank _{s,m} = 2 THEN Third Party Supply _{s2,m} = ABS (MAX (Net Generation _{s,m} , Net Generation _{p,m} + Third Party Supply _{s1,m})) |
| BR12 | IF a Site in a Station Power Portfolio has a (3) Rank for Allocation THEN Monthly Third Party Supply IS COMPUTED AS FOLLOWS: Absolute Value of the MAX (Monthly Net Generation for (3) Rank Site, Monthly Net Generation for the Station Power Portfolio + Monthly Third Party Supply for (1) Rank Site + Monthly Third Party Supply for (2) Rank Site) | IF Rank _{s,m} = 3 THEN Third Party Supply _{s3,m} = ABS (MAX (Net Generation _{s,m} , Net Generation _{p,m} + Third Party Supply _{s1,m} + Third Party Supply _{s2,m})) |
| BR13 | Equations for Monthly Third Party Supply for a Site continues until all Sites with rank have been calculated. | |
| BR14 | IF Monthly Net Generation for a Site is < 0 THEN Monthly Remote Self-Supply for that Site IS COMPUTED AS FOLLOWS: MAX (0, Absolute value (Monthly Net Generation for the Site – Monthly Third Party Supply for the Site)) | IF Net Generation _{s,m} < 0 THEN Remote Self Supply _{s,m} = MAX (0, ABS (Net Generation _{s,m} - Third Party Supply _{s,m})) |

Allocation of Month Quantities to 5-Minute Intervals

| | Business Rule | Equation |
|--|---|--|
| BR04 (Duplicate from section 3.2.1.2) | IF Monthly Net Generation for a Site is >=0 THEN the Site has used On-Site Self Supply to serve Station Power Load and all 5-minute Channel 1 data will be assigned to the On-Site Self Supply Load ID for that Site. | IF Net Generation _{s,m} >= 0 THEN On-Site Self Supply _{s,f} = Channel 1 _{s,f} AND Remote Self Supply _{s,f} = 0 AND Third Party Supply _{s,f} = 0 |
| BR15 | IF (Monthly Net Generation for a Site) < 0 THEN Third Party Supply in 5-minute interval for the Site IS COMPUTED AS FOLLOWS: (“Net Load” for that 5-minute interval / “Total Net Load”) * Monthly Third Party Supply for that Site | IF Net Generation _{s,m} < 0 THEN Third Party Supply _{s,f} = (Net Load _{s,f} / Monthly Net Load _{s,m}) * Third Party Supply _{s,m} |
| BR16 | IF (Monthly Net Generation for a Site) < 0 THEN Remote Self Supply in 5-minute interval for the Site IS COMPUTED AS FOLLOWS: (“Net Load” for that 5-minute interval / “Total Net Load”) * Monthly Remote Self Supply for that Site | IF Net Generation _{s,m} < 0 THEN Remote Self Supply _{s,f} = (Net Load _{s,f} / Monthly Net Load _{s,m}) * Remote Self Supply _{s,m} |
| BR23 | IF (Monthly Net Generation for a Site) < 0 THEN On-Site Self Supply in 5-minute interval for the Site IS COMPUTED AS FOLLOWS: (“Channel 1 Load” for that 5-minute interval – “Third Party Supply” for that 5-minute interval – “Remote Self Supply” for that 5-minute interval. | IF Net Generation _{s,m} < 0 THEN On-Site Self Supply _{s,f} = Channel 1 _{s,f} – Third Party Supply _{s,f} – Remote Self Supply _{s,m} |

Conversion of 5-Minute Intervals to 10-Minute Intervals

| | Business Rule | Equation |
|-------------|--|---|
| BR17 | The 10-minute interval quantity of On-Site Self -Supply for a Site IS COMPUTED AS FOLLOWS: SUM of On-Site Self-Supply for the 2 5-minute intervals | On-Site Self-Supply $s,t =$ $\sum_1^{10} \text{On-Site Self-Supply}_{s,f}$ |
| BR18 | The 10-minute interval quantity of Remote Self -Supply for a Site IS COMPUTED AS FOLLOWS: SUM of Remote Self-Supply for the 2 5-minute intervals | Remote Self-Supply $s,t =$ $\sum_1^{10} \text{Remote Self-Supply}_{s,f}$ |
| BR19 | The 10-minute interval quantity of Third Party Supply for a Site IS COMPUTED AS FOLLOWS: SUM of Third Party Supply for the 2 5-minute intervals | Third Party Supply $s,t =$ $\sum_1^{10} \text{Third Party Supply}_{s,f}$ |

Reallocation Example

The following is an example assuming a Netting Period of 10 time periods with a Station Power Portfolio including 3 Sites all separated by ISO Controlled Grid where each site has a Station Power load meter and an on-site generator. For a calendar month with 30 days, there will be 4,320 time periods for a unit in a Station Power Portfolio (6 ten-minute intervals per hour * 24 hours* 30 days)

| METER DATA REALLOCATION PROCESS | | | | | | | | | | | | | | | | |
|--|--------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------------------------------|--------------------------------------|--------------------------------|---|-------------------------------|------------------------|
| ASSIGNMENT OF REMOTE SELF-SUPPLY AND THIRD PARTY SUPPLY TO SITES AND TIME PERIODS | | | | | | | | | | | | | | | | |
| "Netting Period" in this example is 10 Time Periods | | | | | | | | | | | | | | | | |
| Time Period | | | | | | | | | | | | | | | | |
| Sites: Gen/Load | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | (1) Monthly Net Generation | (2) Total Station Power Draws | (3) Rank for Allocation | (4) Allocation of Third Party Supply | (5) Remote Self-Supply | Sum of Net Load |
| Site 1 | Ch 1 | 1.3 | 2.4 | 2.1 | 1.9 | 2.3 | 2.4 | 2.0 | 2.0 | 2.0 | 13.6 | 20.4 | NA | 0 | 0 | 19.1 |
| | Ch 4 | 34.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| | Net Load | 0.0 | 2.4 | 2.1 | 1.9 | 2.3 | 2.4 | 2.0 | 2.0 | 2.0 | | | | | | |
| Site 2 | Ch 1 | 1.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 | 2.0 | 3.0 | -21.0 | 23.0 | 1 | 21 | 0 | 22.0 |
| | Ch 4 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| | Net Load | 0.0 | 2.0 | 3.0 | 2.0 | 2.0 | 3.0 | 3.0 | 2.0 | 3.0 | | | | | | |
| Site 3 | Ch 1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | -20.0 | 20.0 | 2 | 6.4 | 13.6 | 20.0 |
| | Ch 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | | |
| | Net Load | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | | | | |
| Portfolio | Total | | | | | | | | | | -27.4 | 63.4 | | 27.4 | 13.6 | 61.1 |

(6) On-Site Self-Supply Load ID

| Time Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|--------------|
| Site 1 | 1.3 | 2.4 | 2.1 | 1.9 | 2.3 | 2.4 | 2.0 | 2.0 | 2.0 | 2.0 | 20.4 |
| Site 2 | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 2.0 |
| Site 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | | | | | | | | | | | 22.4 |

Meter Data Assumptions

(7) Third Party Supply Load ID

| Time Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|--------------|
| Site 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Site 2 | 0.0 | 1.9 | 2.9 | 1.9 | 1.9 | 2.9 | 2.9 | 1.9 | 1.9 | 2.9 | 21.0 |
| Site 3 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 6.4 |
| Total | | | | | | | | | | | 27.4 |

(8) Remote Self-Supply Load ID

| Time Period | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|--------------|
| Site 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Site 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Site 3 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 13.6 |
| Total | | | | | | | | | | | 13.6 |

Notes:

- (1) Monthly Net Generation is Gross Generation less Gross Load over the Netting Period. If the value is positive for an individual site, then On-Site Self Supply is attributed to serving that site's Station Power load for the month. If the value for any individual site is negative, then Station Power load exceeded On-Site Self Supply in the Netting Period for each such site (i.e., a deficit in On-Site Self Supply existed). If the Total for the portfolio is positive, then Remote Self Supply is attributed to serving any deficits in On-Site Self Supply. To the extent that the Total for the portfolio is negative, then Third Party Supply has served Station Power in the portfolio.
- (2) The Station Power Draw is net Station Power load when a unit is off line, or generating less than its Station Power load. Total Station Power Draws represent the total Station Power Load excluding the Station Power that is netted under Permitted Netting.
- (3) When Third Party Supply is used, the magnitude of the Total Station Power Draws in the Netting Period is used to allocate Third Party Supply to each site. The site with the highest Total Station Power Draws will be allocated Third Party Supply until its negative Monthly Net Generation is fully served. If Third Party Supply remains to be allocated, then it is allocated to the site with the second highest Total Station Power Draws, and so on until the Third Party Supply is completely allocated.
- (4) The result of the assignment of Third Party Supply to each site as described in Note 3 is shown here.
- (5) Remote Self-Supply is attributed to serving any remaining Monthly Net Generation that is not assigned Third Party Supply as described in Note 3.
- (6) When Monthly Net Generation for an individual site is positive, then all of Station Power load is recorded onto the On-site Self-Supply Load ID for each period in the Netting Period. Zero load values should be recorded on that site's Remote Self-Supply and Third Party Self-Supply Load IDs.
- (7) The amount of Third Party Supply assigned to each site is distributed pro rata to the time periods in which each such site had a Station Power Draw. The assignment to each time period is: (Station Power Draw in that time period / Total Station Power Draws for that Site) X Allocation of Third Party Supply to that site. The site/time period allocation is to be used for rebating the cost of wholesale power.
- (8) Remote Self-Supply is assigned to each hour in the Netting Period as the difference between the Station Power load to be served and the amount of Third Party Supply assigned in that hour.