

Operating Reserves Billing Rules

Rules for Determining Operating
Reserve Obligations for Transmission
Customers and Self Suppliers

Dec. 3, 2014

Meeting Purpose

- Follow up from Transmission Customer Forum 40
 - See Presentation – [Operating Reserves: Billing Implementation Update](#)
- Clarify implementation of [Billing Factors for Operating Reserves](#) – Billing rules

Introduction

- The FERC approved standard BAL-002-WECC-2 for Contingency Reserves was effective on 10/1/14.
- Rules for assigning responsibility for Operating Reserve Requirements are used to determine the Operating Reserve (OR) requirement for each BPAT transmission customer based on:
 1. NERC Standard BAL-002-WECC-2
 2. BPA's established [Operating Reserve Rate Schedules and business practice](#)
- The [NERC Standard for Contingency Reserve BAL-002-WECC-2](#) states:

The Operating Reserve (Contingency Reserve) requirement = (3% of hourly integrated load) + (3% of hourly integrated generation).
- The assignment of the requirement is based on examination of the transmission schedule tags:
 - Source and sink control area
 - Transmission Provider (TP)
 - Transmission Contract Holder (TCH)
 - Tag type
 - Amount scheduled

Introduction

- A control area and a Balancing Authority Area (BAA) are the same for OR purposes.
- Transmission Contract Holders (TCH's) where BPAT provides their reserve requirements are charged monthly. TCH's that self or 3rd party supply their operating reserve requirement will not be charged for OR, but have to meet the technical requirements for suppliers in the Operating Reserve business practice.
- A tag previously provided data in the Responsible Entity field showing if the generator reserve responsibility is moved from the source BAA to the sink BAA. This field is no longer used as WECC changed the regional business practice effective 10/1/14. The responsible BAA for OR depends only on whether the generator or load is in that BAA.

These rules are subject to change for consistency with scheduling practices and applicable NERC, WECC, and NWPP standards.

Schedules: Source

Source: Generator in BPA Control Area

- If the source is in the BPA BA, assign 3% of the hourly schedule as the OR requirement to the TCH on the segment where BPA is the TP.
 - If the source is not in the BPA BA, there is no OR obligation.
1. If BPA is a TP on one or more segments, the TCH of the first segment from the generator with BPA as a TP is assigned the OR requirement.
 2. If BPA is not a TP on a segment, the generator (GPSE) entity is assigned the OR requirement.
 3. If the schedule is a BPAP transfer load, no OR is assigned to the schedule to prevent double counting. These are tags with a reference type of MOA.
 4. If the schedule has a sink of BPAPower or BPAload, there is no OR assigned for generation.
 5. If the source is not a generator (load entity), the TCH will not be assigned an OR requirement.

Schedules: Sink

Sink: Load Entity or Generator for Station Service in BPA Control Area

- If the sink *is* a load entity or a generator for station service in the BPA control area, assign 3% of the energy profile on the segment where BPA is the TP.
- If the sink *is not* in the BPA BA, there is no OR assigned for load.

1. If BPA is a TP on one or more segments, the TCH of the last BPA segment before delivery to the load is assigned the OR.
2. If BPA is not a TP, the sink load (LPSE) entity is assigned the OR requirement.
3. Normally, the only schedule to a generator is for station service except for BPAP. BPAP Schedules with BPAPOWER or BPALOAD as the sink should not be charged for OR for either generation or load. Any schedule that sinks at BPAPOWER or BPALOAD is sent out on new tags(schedules). These new schedules have BPAPOWER as the source and will be charged for OR.
4. Schedules where the source is a load entity in the BA will reduce the load entities' OR for load.
 - That is, the obligation for load will have the total of all schedules out subtracted. This is because the obligation for load is the total of: (schedules into the load entity) + (behind the meter generation) = (the total load + schedules out). This is to avoid double counting load OR, as schedules out are not part of the load entity load so should not be part of the load entity OR.

Dynamic Schedule Tags

- If the source and sink are not in the BPA BAA, there is no reserve obligation.
- The OR requirement for other tags is on a case by case basis.
 - If there is an OR requirement, the analysis uses the general rules for schedules for assigning the requirement (It uses the energy profile to determine the OR amount).
- No reserve requirement is assigned to Dynamic schedules used for customer supplied wind balancing.
 - *Note:* Dynamic schedules used for customer supplied wind balancing such as PPMI have an (AREF=SERVICE-BR).
 - This also applies to schedules for other balancing type services that will be identified by their POR/POD. These are:
 - 3rd party supply (BPA.3PS)
 - Supplemental Service (BPA.SUP)
 - Self-supply of Balancing Services (BPA.SS)
 - This is because the OR requirement is based on the schedule from the wind generators. As the wind output decreases, the balancing resource increases, keeping about the same total BAA generation and associated BAA OR.

Loss Return Schedules

A portion of the BAA contingency reserve obligation (CRO) is 3% of BAA load, where **BAA load = (BAA generation) – (net interchange)**. This results in system losses being included in the determination of total BAA load.

In kind loss return: Loss return schedules are treated the same as normal schedules. The sink (BPALOSS) is always in the BPA control area, so there will always be a minimum 3% requirement for the TCH. If the source is a generator in the control area, there is an additional 3% requirement.

Billing for federal power requirements customers and Slice customers:

For delivery of federal power where there is no loss return schedule, there is a 6% requirement for the loss amount assigned to the TCH. The loss is provided by BPA (Power Services) so both the source generator and sink load (the loss) are in the BAA. The losses returned from Slice have the 6% OR assigned to the Slice customer.

Financial customers: For energy purchased from BPAP for losses in the BPA BAA, both the source and sink are in the control area so the TCH is assigned 6% of the loss amount.

Power Services: BPAP does not return losses to BPAT as it is the loss supplier. OR is set aside for the generation providing these losses, so there will be an OR charge. The amount of losses associated with the BPAP schedules is determined by applying 1.9% for Network transactions and 3% for Southern Intertie transactions (current wheeling loss factors).

Other Schedule Exceptions

On Demand Schedules (Capacity Tag): The purpose of these tags is to supply either spinning reserves (C-SP) or non-spinning reserves (C-NS) to another BAA. If BPA is the source BAA for a capacity schedule where BPAP is providing the service, BPAP will increase its reserve capacity by the tag transmission allocation profile and the capacity will not be included in the BPAT billing. For BPAT billing, OR will be charged based on the tag energy profile (generation included in total BAA generation). If BPA BAA is the sink, there will be no OR charge. If the schedule is for third party supply where the sink is BPA.3PS, or for supplemental service where the sink is BPA.SUP, or for Self-Supply of Balancing Services where the sink is BPA.SS, there will be no charge.

Pseudo-Tie Tags: A resource or load integrated using a pseudo-tie will be considered in the control area shown on the tag unless other arrangements are in place.

Recallable Tags: This tag type has no special treatment for the source (3% OR for generation in the BA will be charged based on the energy profile). The sink will have a reserve requirement of 100% of the schedule. If BPAT is the source, it will use the amount as supplemental reserve which can be called on by curtailing the tag.

Reserve Schedules: Schedules to supply contingency reserve energy in the BA or for NWPP reserve sharing do not have an OR obligation. These schedules are identified with a sink of CA_RES_SelfSup for contingency reserve self-supply and for NWPP with a sink of “NWPP_RES_SelfSup” or NWPP_RES_IMP or a source of NWPP_RES_EXP.

Unscheduled Transmission (Block Delivery): Delivery from Power Services of block sales is not scheduled. The amount deemed delivered will be assessed 3% of the hourly schedule to the TCH, as BPA Power is in the BPA BAA. The amount will also be assessed 3% for load if the load is in the BPA BAA. This will be added by Billing.

Unscheduled Delivery

1. **Unscheduled Delivery:** Delivery to federal power customers who are load following or served by transfer and do not have a standard tag.
2. Since this transaction is not scheduled, the Billing analysis is similar to the method previously used for load following customers and will require case-by-case analysis for each load entity. The load entity TCH's load served by federal power is determined at the end of the month by reducing total load by the energy from other non-federal sources or internal generation, resulting in the residual load served by federal resources. Then 3% will be assigned to the TCH for load served by federal generation and 3% will be assigned to the load entity load in the BAA.
3. For TCH's served by other TP's (GTA type), the same analysis as previously used will be done. As these loads are normally outside the BPA balancing area, only 3% OR will be assigned for generation.
4. If any TCH's elect to self or 3rd party supply, load estimates must be submitted for the load served to determine the OR requirement that must be supplied. See the Operating Reserve business practice for requirements.

Behind The Meter Generator Transactions

1. If a generator in the BPA BAA is a non-federal resource and is not transmission scheduled, it is behind the meter (internal).
2. The OR requirement is assigned to the BAASA entity. If there is no BAASA, the requirement is assigned to the load entity where the generator is connected. If the load entity self or 3rd party supplies *and* is not the BAASA entity, the generator should not be included in the supplier obligation.
3. The OR requirement is 6% times the generator actual output, as this is for both the generation and load served behind the meter. If the entity responsible for the generator uses self or 3rd party supply, the Generator Estimate is used to determine the OR requirement for the pre-schedule amount. Billing uses the metered amount. AGC determines the real time requirement from SCADA data.

Appendix

List of Acronyms and Abbreviations

AGC	Automatic Generation Control
AREF	Assignment Reference Number
BAA	Balancing Authority Area (same as Control Area)
BAASA	Balancing Authority Area Services Agreement
BPAP	BPA Power Services
BPAT	BPA Transmission Services
CRO	Contingency Reserve Obligation
GPSE	Generation Purchasing/Selling Entity
GTA	General Transfer Agreement
HCD	Hourly Coordination Delivery
LPSE	Load Purchasing/Selling Entity
LSE	Load Serving Entity or load entity
MOA	Memorandum of Agreement-Contract Type associated with the tag
NWPP	Northwest Power Pool
OR	Operating Reserves
SCADA	Supervisory Control and Data Acquisition
SUP	Supplemental Service
TCH	Transmission Contract Holder
TP	Transmission Provider
XFR	Transfer Agreement-Contract Type associated with the tag