

## Self-Supply of Balancing Services

Effective: 4/4/2014

In planning the balancing reserve capacity quantities for the FY 2014-2015 rate period, Bonneville Power Administration (BPA) included provisions in the Ancillary and Control Area Services (ACS) Rate Schedule to allow any variable energy resource to supply their own regulation reserves, following reserves, and imbalance reserves (Balancing Services) in lieu of purchasing Variable Energy Resource Balancing Service (VERBS) provided by BPA in the Ancillary and Control Area Services Rate Schedule. This business practice outlines the requirements for a variable energy resource to self-supply VERBS. A Self-Supply customer will make resources available to BPA for dispatch by BPA for the total amount BPA would have otherwise held for them based on their election.

A variable energy resource customer may elect Full Service Self-Supply or Base Service Self-Supply as defined in the Balancing Services Elections for DERBS and VERBS Business Practice. Customers who elect Full Service Self-Supply will also need to follow the election provisions of the Full Service Elections Business Practice.

A variable energy resource customer that desires only to self-supply imbalance reserves may do so pursuant the BPA Customer Supplied Generation Imbalance (CSGI) Programs and related business practices.

This business practice describes BPA's proposal for implementing Self-Supply of Balancing Services for Variable Energy Resources. The opportunity for Load and Dispatchable Energy Resources to Self-Supply Balancing Services for the FY 2014-2015 rate period expired on April 5, 2013 election deadline.

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### Definitions

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1. Balancing Services: Regulation reserves, following reserves, and imbalance reserves services, which include Incremental (INC) and Decremental (DEC) capabilities, as those products are described in BPA's applicable Ancillary and Control Area Services Rate Schedule.
2. Base Service Self-Supply: A Self-Supply Customer that brings to BPA for BPA dispatch the amount of reserves that BPA would have otherwise provided at the Base Level of VERBS as defined in the ACS Rate Schedule.
3. Full Service Self-Supply: A Self-Supply Customer that brings to BPA for BPA dispatch the amount of reserves that BPA would have otherwise provided at the Base Service Level plus Full Service Level of VERBS as defined in the ACS Rate Schedule.
4. Self-Supply of Balancing Services Participant Agreement: The agreement describing the rights and obligations of a Self-Supply Customer and BPA.

5. Self-Supply Centroid: A point, unique to each Customer, designated by BPA within the BPA system to be used by each Customer as a Point of Delivery for each INC Resource and as a Point of Receipt for each DEC Resource.
6. Self-Supply Balancing Resources: Resources that a Self-Supply Customer makes available to be dispatched by BPA for the purpose of self-supplying Balancing Services. Self-Supply Balancing Resources must be dispatchable and may include On Demand Resources, Demand Response Resources, or other resources capable of meeting performance metrics for one or more of the components of Balancing Services.
7. Self-Supply Customer: An Ancillary and Control Area Services customer who elects to supply their own Balancing Services at either the Base Service Level or Full Service Level.

#### A. General Requirements

A Self-Supply Customer must:

1. Elect to Self Supply Balancing Services in accordance with the Balancing Service Election for Dispatchable Energy Resource Balancing Service (DERBS) and Variable Energy Resource Balancing Service (VERBS) business practice;
2. Identify the generation facilities for which it desires to self-supply Balancing Services;
3. Obtain BPA's approval of the Self-Supply Balancing Resources under the Balancing Services Resources Prequalification business practice.
4. Supply the incremental and decremental components for regulation reserves, following reserves, and imbalance reserves as defined in an executed Self-Supply of Balancing Services Participation agreement;
5. Allow BPA to dispatch its Self-Supply Balancing Resources;
6. Identify each proposed Self-Supply Balancing Resource that it intends to make available to BPA for the purpose of self-supplying Balancing Services;
7. Certify that it is the operator of all Self-Supply Balancing Resources or otherwise has the contractual right to cause such resources to operate pursuant to BPA's instructions;
8. Identify transmission reservations for the generation facilities for which it desires to self-supply Balancing Services;
9. Install, at its expense, any communication or other equipment or systems necessary to effect self-supply of Balancing Services;
10. Apply for and receive an award of Dynamic Transfer Capability for each INC Resource and each DEC Resource it expects to use as a Self-Supply Balancing Resource for supplying the regulation reserves and following reserves services;
11. Submit a transmission schedule for each Self-Supply Balancing Resource.
12. Execute a Self-Supply of Balancing Services Participant Agreement with BPA; and
13. Meet the requirements of all other applicable BPA Business Practices.

#### B. Self-Supply of Balancing Services Participation Agreement

The Self-Supply of Balancing Services Participation Agreement:

1. Sets forth technical requirements necessary to effect self-supply of Balancing Services;
2. Identifies the generation facilities for which the customer will be self-supplying Balancing Services. See Section C below for further details;

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3. Identifies Self-Supply Balancing Resources approved by BPA, including any restrictions on use. See Section D below;
4. Sets the minimum reserve requirements for a Self-Supply Customer to provide for BPA dispatch. See Section G below for further details;
5. Identifies transmission reservations upon which the Customer intends to rely to deliver the Self-Supply Balancing Resources to or from the Self-Supply Centroid;
6. Sets forth the rights and obligations to supply Balancing Services and BPA's obligation to dispatch Self-Supply Balancing Resources; and
7. Sets forth any additional rights and obligations of a Self-Supply Customer and BPA;

### **C. Procedures for Identifying the Generating Facilities for which the Applicant will Obtain Balancing Services**

1. A Customer that wishes to self-supply Balancing Services for one or more generating facilities must submit a request by e-mail to the Customer's Transmission Account Executive, providing the following information:
  - a. The name of each generating facility;
  - b. Each generating facility's nameplate capacity rating;
  - c. The interconnection point for each generating facility on BPA's system;
  - d. The owner and operator of the generating facility;
  - e. Provide any other pertinent information requested by BPA Transmission Services.

### **D. Procedures for Identifying Self-Supply Balancing Resources**

1. The owner or operator of a Self-Supply Balancing Resource who desires to provide balancing reserves to a Self-Supply Customer of BPA must prequalify to do so in accordance with the Balancing Services Resources Prequalification Business Practice [\(LINK\)](#).
  - a. A Self-Supply Balancing Resource may provide Incremental or Decremental regulation reserves, following reserve, or imbalance reserves.
2. A Customer that wishes to self-supply Balancing Services from a Self-Supply Balancing Resource must submit a request by email to the Customer's Transmission Account Executive, providing the following information:
  - a. name of the Self-Supply Balancing Resource;
  - b. nameplate capacity rating;
  - c. interconnection point on BPA's system;
  - d. operating characteristics of the resource;
  - e. anticipated Balancing Services this resource will supply, including its INC and DEC capabilities;
  - f. ramp rates and other limitations on the use of that resource to supply Balancing Services, including the maximum amount of Balancing Services the Self-Supply Customer expects to supply from that Self-Supply Balancing Resource;
  - g. each transmission reservation that will be used to schedule from the Self-Supply Balancing Resource to the Self-Supply Centroid; and



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2. Additional information on scheduling for self-supply can be found in the Scheduling Transmission Service business practice and the Requesting Transmission Service business practice.
3. A firm reservation is required to submit an e-Tag for a Self-Supply Balancing Resource. See the Requesting Transmission Service and the Scheduling Transmission Service business practice.
4. The Participant shall submit a dynamic or capacity e-Tag for each Self-Supply Balancing Resource it has acquired in accordance with the provisions of the Dynamic Scheduling Business Practice.
5. A Self-Supply Balancing Resource schedule submission must comply with all applicable timelines and other requirements for submitting an e-Tag.

### **G. Balancing Services Obligation for a Variable Energy Resource**

1. Base Service Self-Supply
  - a. The amount of reserves, in megawatts, a Base Service Self-Supply customer must provide for BPA dispatch is the generating facility's proportional share of the reserve requirement needed to support VERBS Base Service of BPA's Transmission and Ancillary Service Rate Schedules, Section III E.2, based upon the scheduling election and other factors of the customer. The reserve requirement will be communicated to each Self-Supply Customer on a planning basis at the start of the rate period for each month of the rate period, as the reserve requirement quantity may differ from month to month.
    - i. If for any month during the rate period the reserve requirement for the Self-Supply Customer changes by 1 MW or more, the customer will be notified of the increase or decrease within 5 business days prior to the start of each month. The Self-Supply Customer will be required to provide the new reserve requirement for the remainder of the rate period.
  - b. The methodology setting the reserve requirement to be held for Incremental and Decremental regulation reserves, following reserves, and imbalance reserves for a Self-Supply Customer will be specified in the Self-Supply Participation Agreement. The Spinning portion of each component shall be, at a minimum, as follows:
    - i. Regulation reserves = 100% Spinning<sup>1</sup>
    - ii. Following reserves = 50 % Spinning (the remaining 50% can be Spinning or Non-Spinning<sup>2</sup>)
    - iii. Imbalance reserves = 0% Spinning (can be provided by Spinning or Non-Spinning)
  - c. Base Service Self-Supply customers are subject to the same operational requirements of customers taking Base VERBS Service, as defined in the ACS Rate Schedule.
2. Full Service Self-Supply

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<sup>1</sup> "Spinning" reserve may be provided by generating units that are on-line and loaded at less than maximum output.

<sup>2</sup> "Non-spinning" reserve may be provided by generating units that are on-line but unloaded, by quick-start generation, or by interruptible load, and is fully responsive within 10 minutes.

- a. The amount of reserves, in megawatts, a Full Service Self-Supply customer must provide for BPA dispatch is the sum of i plus ii below:
  - i. The requirements specified in Section F.1 above; and
  - ii. Any additional imbalance reserve amounts needed beyond the base amount of reserves held for Base Service, for those parties that have elected Full Service Self-Supply.
    1. BPA's determination of additional imbalance reserve need will incorporate forecasted volatility during the upcoming period.
    2. BPA will notify Full Service Self-Supply customer on or prior to the preschedule day of the WECC 5 day Pre-schedule calendar of the Full Service Self-Supply customer's need to provide BPA with additional imbalance reserves for the next preschedule period.
- b. A Full Service Self-Supply customer must elect, and maintain eligibility for, a committed scheduling paradigm, as described in the "Committed Scheduling for the 2014-2015 Rate Period" Business Practice.
- c. If a Full Service Self-Supply customer is moved to Uncommitted Scheduling, as outlined in section H of the "Committed Scheduling for the 2014-2015 Rate Period" Business Practice, it will also no longer qualify for Full Service Self-Supply.

#### **H. Self-Supply of Balancing Services for a Dispatchable Energy Resource**

1. At the service election deadline of April 5, 2013 for the FY 2014-2015 Ancillary and Control Areas Services rate period there were no elections by Dispatchable Energy Resources to enter into Self-supply arrangements. Dispatchable Resources next opportunity to elect self-supply will be for the FY 2015-2016 Ancillary and Control Area Services rate period.

#### **I. Self-Supply of Balancing Services for Load**

1. At the service election deadline of April 5, for the FY 2014 for the 2013-2015 Ancillary and Control Areas Services rate period there were no elections by Load resources to enter into Self-supply arrangements. Load resources next opportunity to elect self-supply will be for the FY 2015-2016 Ancillary and Control Area Services rate period.

#### **J. Failure to Meet Self-Supply Obligations**

1. Self-Supply Customer
  - a. A Self-Supply Customer that does not schedule sufficient Balancing Resources to meet their Self-Supply obligations will be assessed a strike, and will be at risk for any additional allocation of costs BPA may incur to acquire reserves to meet any shortfall, referred to in BPA's ACS Rate Schedule as Purchases Charge for Direct Assignment of Costs.
  - b. If a Self-Supply Customer receives three strikes in a rolling 30-day calendar period because of the Customer's failure to provide BPA Transmission Services the amount of capacity needed to meet the Customer's Balancing Services Requirement for any hour, the Customer's ability to supply Balancing Services will be suspended for the remainder of the rate period.

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- i. A Self-Supply Customer will not be assessed more than 1 strike per Heavy Load Hours or Light Load Hours in a 24 hour period.
    - ii. A Self-Supply Customer is exempt from a strike if a Self-Supply Balancing Resource has a qualifying contingency event in accordance with BPA's Operating Reserves Business Practice and the Self-Supply Customer schedules a replacement Self-Supply Balancing Resource within 60 minutes of the start of the qualifying contingency event.
    - iii. BPA will attempt to make available, subject to reliability or operational limitations, the reserves to meet a shortfall of a Self-Supply Customer. Any related costs will be passed on to the Self-Supply Customer subject to the provisions in the ACS Rate Schedule under the Purchases Charge for Direct Assignment of Costs.
  - c. BPA Transmission Services will notify the Self-Supply Customer of a strike and the current 30 day strike count by letter or email within 10 business days.
  - d. The Self-Supply Customer will be notified in letter, email, or FAX of the effective date of the suspension of its ability to self-supply Balancing Services.
  - e. BPA reserves the right to selectively limit generation or selectively curtail generation schedules submitted by a Self-Supply Customer that does not supply sufficient capacity or energy to meet its Self-Supply obligations.
2. Self-Supply Balancing Resource
  - a. A Self-Supply Balancing Resource will be assessed a strike if it fails to respond as directed by BPA Transmission Dispatch and is subject to the Failure to Comply (FTC) penalty charge.
  - b. If a Self-Supply Balancing Resource receives three strikes in a rolling 30 day calendar period because of the failure of the Self-Supply Balancing Resource to deploy the amount of energy dispatched by BPA Transmission Services, the Self-Supply Balancing Resource will be disqualified from providing Balancing Services.
    - i. A Self-Supply Balancing Resource will not be assessed more than 1 strike per Heavy Load Hours or Light Load Hours in a 24 hour period.
    - ii. A Self-Supply Balancing Resource is exempt from a strike if a Self-Supply Balancing Resource has a qualifying contingency event in accordance with BPA's Operating Reserves Business Practice.
  - c. BPA Transmission Services will notify both the Self-Supply Balancing Resource and the Self-Supply Customer of a strike and the current 30 day strike count by letter or email within 10 business days.
  - d. Both the Self-Supply Balancing Resource and the Self-Supply Customer will be notified in letter, email, or FAX of the effective date of the suspension of the ability of the Self-Supply Balancing Resource to supply Balancing Services.

## **K. Compliance with Dispatcher Directives**

1. A Self-Supply Customer and the Self-Supply Balancing Resource are subject to Dispatcher directives.
2. A Self-Supply Customer or a Self-Supply Balancing Resource that provides capacity through an approved e-tag but does not respond appropriately to a Dispatcher directive is subject to a Failure to Comply (FTC) penalty charge.

## **L. Billing Procedures for a Self-Supply Customer**

1. A Self-Supply Customer's VERBS charges will be offset by billing credits for Self-Supplied Balancing Services.
2. BPA Transmission Services shall calculate Generation Imbalance charges, including Persistent Deviation charges, for each Self-Supply Customer, taking into account Balancing Services scheduled to and from the Self-Supply Centroid.
3. Generation Imbalance charges, including Persistent Deviation charges, shall be applied in the same manner as they would apply in the absence of the Self-Supply Program, taking into account Balancing Services scheduled to and from the Self-Supply Centroid.
4. Unless treated otherwise in this Business Practice, all other rates and charges shall be applied in the same manner as they would in the absence of the Self-Supply Program.

## **M. Managing Contingencies**

1. If a Self-Supply Balancing Resource experiences a contingency, the owner or operator is required to call on contingent reserves consistent with the provisions of the Operating Reserves Business Practice.
2. If the operator of an INC Resource in the BPA Balancing Authority Area supplying Balancing Services declares a contingency, no Balancing Reserves may be supplied above the contingency operating level from that INC Resource in the same hour until the contingency is terminated.
3. If the operator of a DEC Resource in the BPA Balancing Authority Area supplying Balancing Services declares a contingency, Balancing Services may be supplied from that DEC Resource in the same hour to the extent actual generation can be reduced, notwithstanding the contingency, until the contingency is terminated.

## **N. Additional Information**

### **Related Business Practices**

- Requesting Transmission Service
- Scheduling Transmission Service
- Generation Imbalance
- Failure to Comply
- Requesting and Awarding Access to Dynamic Transfer Capability
- Dynamic Transfer Operating and Scheduling Requirements
- On Demand Resource Scheduling
- Oversupply Management Protocol
- Operating Reserves
- Balancing Services Resources Prequalification