

**Requirements for Dynamically Transferred Resources into the PSEI Balancing
Authority via a Dynamic Schedule
Effective May 1, 2015**

Purpose

The purpose of this business practice is to identify the requirements to establish a Dynamic Schedule into the Puget Sound Energy (PSEI) Balancing Authority Area (BAA) to facilitate a Dynamic Transfer of a resource. This business practice shall be applied to requests of Transmission Customers to dynamically transfer a resource into PSEI's BAA through use of a Dynamic Schedule. This business practice does not define requirements for facilitating Dynamic Transfers through Pseudo-Ties.

This business practice applies to all Transmission Customers unless explicitly contradicted by existing contract terms.

Definitions

Attaining BA - A Balancing Authority bringing generation or load into its effective control boundaries through Dynamic Transfer from the Native Balancing Authority.

Balancing Authority Area - The collection of generation, transmission, and loads within the metered boundaries of the BA. The BA maintains load-resource balance within this area.

Dynamic Schedule – A type of Dynamic Transfer where the Dynamic Transfer Signal is updated in Real-time and included in the Net Interchange Schedule term (NIS) used as a schedule in the affected Balancing Authorities' control ACE equations (or alternate control processes). The integrated value of the Dynamic Transfer Signal is treated as a schedule for interchange accounting purposes.

Dynamic Transfer - The provision of the real-time monitoring, telemetering, computer software, hardware, communications, engineering, energy accounting (including inadvertent interchange), and administration required to electronically move all or a portion of the real energy services associated with a generator or load out of one Balancing Authority Area into another.

Dynamic Transfer Signal - The electronic signal used to implement a Pseudo-Tie or Dynamic Schedule using either a metered value or a calculated value.

Integration - in the terms for Dynamic Schedule and Pseudo-Tie above means the value could be mathematically calculated or determined mechanically with a metering device.

Native BA - A Balancing Authority from which a portion of its physically interconnected generation and/or load is assigned from its effective control boundaries to the Attaining BA through Dynamic Transfer.

Pseudo-Tie – A type of Dynamic Transfer where the time-varying energy transfer is updated in Real-time and included in the Net Actual Interchange term (NIA) in the same manner as a Tie Line signal in the affected Balancing Authorities' control ACE equations (or alternate control processes).

Practice

Transmission Customers may desire to establish dynamic transfer capability into PSEI's BAA through a Dynamic Schedule. In order to accomplish this Dynamic Transfer, certain

requirements must be met; such requirements will depend on the technical and operational circumstances and characteristics of each individual resource.

The following are PSEI's baseline requirements for establishing a Dynamic Schedule of a resource into its BAA; however, this list is not intended to identify all possible requirements by PSEI for a specific resource.

1. Transmission Service

A Transmission Customer that desires to establish a Dynamic Schedule must secure and pay for all costs associated with transmission service across the systems of all transmission service providers necessary to deliver power from the resource to PSEI's BAA (PSEI is the Attaining BA). For resources interconnected to non-PSEI, Native BA facilities, the amount of transmission service across all other transmission service providers must be equivalent to the maximum amount of generation which the Transmission Customer will dynamically schedule to PSEI's BAA. For resources interconnected to PSEI BAA in a remote pocket, the amount of transmission service across all other transmission service providers must be equivalent to the maximum amount of generation which the Transmission Customer will dynamically schedule to PSEI's BAA less any local area load and transmission losses.

PSEI will require evidence of a contractual arrangement supporting transmission rights across adjacent transmission systems prior to implementing a Dynamic Schedule for a specific resource. In addition, the Transmission Customer must make all necessary transmission arrangements with PSEI in accordance with Parts II or III of PSEI's OATT.

2. Metering

PSEI will require dynamically scheduled resources to have telemetering capabilities with PSEI's control centers (Redmond and Bellevue). PSEI will require primary and backup meters compatible with PSEI's MV-90 system and which meet PSEI's technical metering requirements. PSEI will define the metering design requirements, including hardware inputs and outputs, software specifications, and real-time data to be telemetered based on the circumstances and characteristics of each individual resource.

3. Communications

PSEI will require dynamically scheduled resources to have the primary and secondary metering of the Dynamic Transfer Signal routed to PSEI's control centers (Redmond and Bellevue) on different circuits. The primary meter value will be input to a remote terminal unit (RTU) and carried to the control centers over that RTU's Supervisory Control and Data Acquisition System (SCADA) communications line. The secondary meter value will be carried to the control centers on a separate SCADA communications line.

PSEI will define the equipment specifications, technical requirements, and SCADA requirements based on the circumstances and characteristics of each individual resource, including any requirements of the Native BA in which the Transmission Customer's resource is located. Communication sources may include telephone lines, fiber optic systems, microwave radio, other radio systems, or a combination of these systems.

4. Remedial Action Schemes

PSEI may require additional equipment for dynamically scheduled resources into PSEI's BAA if the resource is included in a remedial action scheme in its Native BA.

5. Costs

Costs associated with facilitating a dynamically scheduled resource will be allocated in a manner consistent with PSEI's OATT or any relevant contracts between the Transmission Customer and PSEI.

6. Reliability

PSEI will determine any additional requirements for each individual dynamically scheduled resource in order to ensure that PSEI can properly maintain system reliability.

Requesting Dynamic Scheduling for an External Resource

Transmission Customers desiring to establish a Dynamic Schedule for an external resource into PSEI's BAA, or resources interconnected to a remote pocket of a PSEI BAA with insufficient local area load to integrate the resource, should send a letter to PSEI requesting that a study be performed. PSEI will then contact the Transmission Customer to obtain further technical information about the resource to permit PSEI to sufficiently evaluate the request.

Requests should be sent to the following address:

Puget Sound Energy
 Manager, Electric Transmission Dept.
 P.O. Box 97034, EST-06E
 Bellevue, WA 98009-9734
 Attn: Debbie Yount

After the receipt of a Transmission Customer's request to establish a dynamically scheduled resource into PSEI's BAA, PSEI's process may include the performance of the following steps prior to the establishment of a Dynamic Schedule:

1. Tender a system impact and facilities study agreement
2. Perform a study to be presented to the Transmission Customer
3. Negotiate and execute a construction agreement
4. Perform construction consistent with requirements set forth above and contained in the final construction agreement

Contact for Assistance: transmaster@pse.com

Revision History

Version	Posted Date	Change Summary
Initial Draft	n/a	Initial draft for internal review and comment
0.0	2015-04-01	Initial draft for external comment
1.0	2015-05-01	Initial version