



Business Practice: Dynamic Transfer Capability on the COI**Posted:** October 1, 2015**Effective:** October 1, 2015**Revision No.:** 1

1. Purpose

PGE offers Dynamic Transfer Capability (DTC) on its ownership share of the JohnDay to COB and PGE to COB transmission paths in cooperation with PACW and BPA, who are also owners of the northern portion of the California Oregon Intertie (COI). PGE customers who have Firm Point-to-Point Transmission Service on the COI on the north to south paths and who have met all requirements set forth in this business practice may use DTC on PGE's ownership share of the COI. This capability is awarded pursuant to the allocation process described in Appendix A of this business practice. A PGE customer obtaining DTC as a utilization of their Firm PTP Transmission Service, known as a Dynamic Transfer Entity, must comply with this business practice.

2. Definitions

- 2.1. 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 (NERC definition).
- 2.2. Dynamic Transfer Capability – The Capability of the transmission system to accommodate continuous ramping of a resource(s) over a pre-determined range, such that the control of the electrical output of such resource(s) can be varied from moment to moment by an entity other than the host utility/host Balancing Authority Area operator (Path Operator definition)
- 2.3. Dynamic Transfer Entity – A transmission customer who has completed registration and has requested or is in the process of requesting Dynamic Transfer Capability as a utilization of their existing Firm PTP Transmission Service.
- 2.4. Transmission Operator - The entity responsible for the reliability of its "local" transmission system, and that operates or directs the operations of the transmission facilities. (NERC definition)
- 2.5. Path Operator – The Transmission Operator that operates or directs the operations of a transmission path. Specific to this business practice, BPA is the Path Operator of the northern portion of the COI.

3. Practice**3.1. Eligibility Requirements**

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- 3.1.1.The Dynamic Transfer Entity must have made arrangements with upstream Transmission Service Providers as needed.
- 3.1.2.The PGE customer must have firm transmission rights on the COI north to south to effect Dynamic Transfers on PGE's share of the COI.
- 3.1.3.The Dynamic Transfer Entity that requires a Dynamic Transfer shall be operating within a Balancing Authority Area recognized by the WECC.
- 3.1.4.The Dynamic Transfer Entity must coordinate with its Balancing Authority, PGE, and any other impacted Balancing Authorities to ensure that procedures are in place and appropriate agreements executed to facilitate the desired Dynamic Transfer.
- 3.1.5.The Dynamic Transfer Entity and all involved Balancing Authorities must comply with WECC and NERC (or successor organizations) standards and policies.

3.2. **Telemetry**

- 3.2.1.Each Dynamic Transfer established on PGE's ownership share of the COI will require that PGET establish telemetry with the PGE balancing authority and with the Source and Sink balancing authorities of the Dynamic Transfer. PGET will make arrangements to implement the appropriate telemetry after the customer completes and submits the form included as Attachment 1 to this business practice - Registration for Dynamic Transfer Capability on the COI.
- 3.2.2.Once the customer submits the registration form included as Attachment 1 to this business practice, it will take approximately 30 days to implement the necessary telemetry arrangements prior to a customer being eligible to submit requests via e-Tag to utilize awarded Dynamic Transfer Capability.
- 3.2.3.PGE will notify the customer when telemetry arrangements are complete. A customer's e-Tag request for Dynamic Transfer Capability will not be approved until the customer has submitted the registration form and PGE has notified the customer that communication arrangements are complete.
- 3.2.4.A Dynamic Transfer Entity's DTC e-Tag requests will be restricted to the Firm Point-to-Point Transmission reservation, Source, and Sink identified on the Dynamic Transfer Entity's registration form. A Dynamic Transfer Entity may not submit an e-Tag request that utilizes a different Firm Point-to-Point Transmission reservation, Source, or Sink until the Dynamic Transfer Entity has submitted a new registration form and received notice from PGE that appropriate telemetry arrangements are complete.

3.3. **E-Tagging Dynamic Transfers**

- 3.3.1.Dynamic Transfer requests are submitted and awarded via submission of a DYNAMIC type Request for Interchange (e-tag).
- 3.3.2.Each Dynamic Transfer shall be electronically e-tagged in accordance with current NERC and WECC requirements and PGE procedures.

- 3.3.3. The Transmission profile on the e-Tag will be used to determine the transmission demand set aside for a Dynamic Transfer. The dynamic capacity reserved shall be deemed as used.
- 3.3.4. The e-Tag for a Dynamic Transfer must include the following:
- 3.3.4.1. Transaction type “DYNAMIC” is required for Dynamic Schedules.
 - 3.3.4.2. Expected average Energy Profile delivered during the hour.
 - 3.3.4.3. Adjustment after the hour will use the integrated official Dynamic Transfer.
 - 3.3.4.4. The Dynamic Transfer Entity responsible for tagging Dynamic Transfers must ensure the e-Tag is updated for the next scheduling hour and future hours when:
 - 3.3.4.4.1. The average Energy Profile on the e-Tag deviates from the hourly average Energy Profile, as described in NERC Standard INT-004-2 (as may be replaced or modified);
 - 3.3.4.4.2. Requested by a Reliability Coordinator, BPA or PGE.
- 3.3.5. Real-time pro rata curtailments of transmission capacity that are being used to effect a Dynamic Transfer will be calculated based upon the actual Dynamic Transfer Return Signal at the time of the curtailment.
- 3.3.6. A limit or hold placed on a Dynamic Transfer will be communicated via the Dynamic Transfer Limit Signal to the impacted Transmission Provider and then to the balancing authorities impacted by the Dynamic Transfer.

3.4. **Apportioning California Oregon Intertie (COI) Dynamic Transfer Capability**

- 3.4.1. COI DTC is apportioned to the COI facility owners based on the Dynamic Transfer Limits established by the Path Operator and in proportion to facility ownership share of the total transmission capacity. The amount of COI DTC apportioned to PGE as one of the COI owners is based on PGE’s respective southbound transmission rights.
- 3.4.2. Use of COI DTC on PGE’s ownership share of the COI will be governed by PGE’s OATT and PGE’s business practices.
- 3.4.3. If a COI facility owner does not allocate its full share of apportioned COI DTC to its customers, then any remaining COI DTC will be reapportioned to the other COI facility owners based on their respective ownership interests.

3.5. **Allocating COI DTC**

- 3.5.1. The Path Operator will administer the allocation of COI DTC, for all owners and participants, according to the methodology described in Appendix A.
- 3.5.2. Requests for COI DTC must comply with this business practice in order to be considered for an allocation.

3.6. **Scheduling Procedures for Dynamic Transfers using COI**

3.6.1. Dynamic Transfer Entities who have a completed Registration for Dynamic Transfer Capability on the COI form (Attachment 1), that want to use their firm reserved capacity for a Dynamic Transfer over the COI must follow the procedures described below:

3.6.1.1. The Dynamic Transfer Entity must submit a request for a Dynamic Request for Interchange ("e-Tag") for hours covered by the WECC Preschedule day(s) before 08:00:00 PPT of the WECC Preschedule day from eligible Dynamic Transfer Entities whose Dynamic e-Tag is in a Confirmed state.

3.6.1.1.1. The Dynamic Schedule must include two tokens in the "MISC" field to receive an allocation.

3.6.1.1.1.1. "PGE", as the DTC Provider.

3.6.1.1.1.2. "DTC Requestor", being the Purchasing Selling Entity Code of the Dynamic Transfer Entity requesting DTC.

3.6.1.2. BPA will perform the allocation described in Appendix A in Preschedule by 10:00:00 PPT of the WECC Preschedule day above for Dynamic Schedules.

3.6.1.3. The amount of Dynamic Transfer Capability requested must be entered for each hour or the requested amount will be assumed zero, and the Dynamic Transfer Entity will have no allocation for that hour.

3.6.1.4. The maximum Dynamic Transfer Capability that a Dynamic Transfer Entity can request is limited to the lesser of:

3.6.1.4.1. the capacity available for Dynamic Transfers on other paths that must also be crossed; or

3.6.1.4.2. the total Dynamic Transfer scheduling capability described in 4.7.8; or

3.6.1.4.3. other factors limiting Dynamic Transfers.

3.6.1.5. The Dynamic Transfer Entity will then modify the Transmission Profile in its Dynamic e-tag to be equal to or less than its Dynamic Transfer Capability allocation by 1500 of the WECC Preschedule day.

3.6.1.6. The Dynamic Transfer Entity can decrease its Dynamic e-Tag as needed up to twenty minutes prior to the hour of delivery.

3.6.1.7. The Dynamic e-Tag should represent the Dynamic Transfer Capability needed to meet the Dynamic Transfer Entity's obligation in the CAISO market or other COI transaction as represented by valid e-Tags.

3.7. **Limitations on Dynamic Transfer**

3.7.1. A Dynamically scheduled resource will be allowed to move up to lesser of its Transmission Profile or its DTC Allocation according to Appendix A the

determined maximum allowed MW for a Dynamic Transfer within the Operating Hour in one direction over the path.

3.7.2. The Transmission Profile shall not be exceeded during the hour of flow. This applies to Dynamic Schedules.

3.7.3. Examples of when the Path Operator may take action to limit or freeze a Dynamic Transfer include, but are not limited to:

3.7.3.1. staying within acceptable limits during real-time operations;

3.7.3.2. performing acceptably after contingencies; and

3.7.3.3. effecting restoration after loss of system elements.

3.7.4. The Dynamic Transfer limit will be the lower of the Dynamic Transfer Limit Signal, the reliability limit, or the Transmission Profile on the e-Tag.

3.7.5. Each Dynamic Transfer over the COI must be monitored and operated through BPA's Balancing Authority Area without regard to whose transmission rights are used.

3.7.6. BPA expects to revise the Dynamic Transfer scheduling limits for the COI from time to time based on new studies as COI conditions change and will make any changes in limits available publicly. COI Dynamic Transfer schedules are currently limited to 400 MW in aggregate for all hours and all days.

4. Revision History

Version	Date	Change Summary
0	Draft 1 – September 29, 2014	<ul style="list-style-type: none">Initial draft posting
0	Draft 2 – October 15, 2014	<ul style="list-style-type: none">Revised Section 3.2 Telemetry, added Attachment 1 – Registration for Dynamic Transfer Capability on the COI
0	Draft 3 – October 23, 2014	<ul style="list-style-type: none">Reposted changes of Draft 1 that were inadvertently omitted in reposting of Draft 2 update in Section 3.2
0	November 17, 2014	<ul style="list-style-type: none">Initial production posting, effective Nov 1, 2014
1	October 1, 2015	<ul style="list-style-type: none">Step 3.7.6. Revised DTC limit to 400 MW for all hours, all days

Appendix A

Dynamic Transfer Entity's COI DTC Allocation

Dynamic Transfer Entity's COI DTC allocation will be based on a weighted allocation using the following methodology. The Dynamic Transfer Entity's Total Customer Weighting (TCW) is equivalent to: the proportion of (A) the transmission customer's COI DTC request to (B) the total of all COI DTC requests for that Transmission Provider, multiplied by (C) the Dynamic Transfer Entity's current reserved long-term firm point-to-point transmission service capacity on the COI to (D) the Transmission Provider's total transmission capacity (TTC) on the COI N-S

Restated as a formula: $TCW = A/B \times C/D$

And a Dynamic Transfer Entity's initial COI DTC allocation is equal to the proportion of the customer's Total Customer Weighting to the sum of all Total Customer Weightings for the Transmission Provider multiplied by the Transmission Provider's DTC share, which is the proportion of (E) the Transmission Provider's COI transmission facility ownership share to (F) the rated total transfer capacity of the COI N-S multiplied by the total DTC for the COI (G).

$$DTC1 = (TCW/\text{sum of all TCWs for TP}) \times ((E/F) \times G)$$

where DTC1 is the amount of DTC to be allocated to transmission customer 1 in the first round of allocation.

Further, if after the first round of allocating to all transmission customers making COI DTC requests, a Transmission Provider has unallocated COI DTC remaining, the Transmission Provider will release its unused COI DTC share ("Remainder") to Transmission Providers with remaining unfulfilled requests for COI DTC ("Remaining TPs"), according to (E) transmission facility ownership share of each Remaining TP relative to (G) the sum of the transmission facility ownership of all Remaining TPs.

$$TP \text{ Remainder (TPR)} = \text{Remainder} \times E/G$$

BPA will then allocate its share of the Remainder to its Dynamic Transfer Entities with remaining unfulfilled requests according to the same formula as first-round allocation.

$$DTC2 = (TCW/\text{sum of all TCWs for TP}) \times TPR$$

The sum of the two distributions described above is the total DTC allocation per transmission customer for the time period calculated.

$$\text{Customer's total allocation} = DTC1 + DTC2$$

Attachment 1

Registration for Dynamic Transfer Capability on the COI

This registration must be completed by a current PGE Customer of Firm Point-to-Point Transmission Service that plans to utilize Dynamic Transfers on PGE ownership share of the JohnDay to COB or PGE to COB posted paths. The information identified below allows the PGE BA to establish the necessary communications between Source BA, Sink BA, BPA BA, and the Transmission Customer with the PGE BA.

Customer Information

Company _____
Contact Name _____
Contact Phone _____
Contact E-mail _____
24 Hour Contact _____
24 Hour Contact Phone _____
A-Ref # of Firm Point-to-Point Transmission _____

Source BA Information

Source BA of Dynamic Transfer _____
Source Generator _____
Source BA Contact Name _____
Contact Phone _____
Contact Email _____

Sink BA Information

Sink BA of Dynamic Transfer _____
Sink BA Contact Name _____
Contact Phone _____
Contact Email _____

Submitted by: _____ Date: _____
Signature

Submit the completed application via e-mail to the PGE Transmission Preschedulers:

Transmission.Prescheduling@pgn.com
503-464-8802

Approximately 30 days is needed to implement the necessary communication arrangements prior to a customer being eligible to submit requests via e-Tag to utilize awarded Dynamic Transfer Capability. PGE will notify customer when communication is complete.

A customer's e-Tag request for Dynamic Transfer Capability will not be approved until the customer has submitted this registration form and PGE has notified the customer that communication arrangements are complete.