

Business Practice #48: Intra-Hour Transmission Scheduling

Posted: ~~February 20, 2017~~ February 7, 2022
Effective: ~~March 6, 2017~~ TBD
Revision No.: ~~9.0~~ 10.0

NOTICE

A redline version of the most recent revisions to this business practice is available at:
<https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/BP48red.pdf>

Policy Reference

This practice addressing intra-hour scheduling intervals is consistent with the Federal Energy Regulatory Commission's ("FERC") Order No. 764.

In addition, the following sections of PacifiCorp's Open Access Transmission Tariff ("OATT") address the intra-hour scheduling of Point-to-Point Transmission Service: 13.8 - Scheduling of Firm Point-To-Point Transmission Service and 14.6 – Scheduling of Non-Firm Point-To-Point Transmission Service. Further, the following sections of PacifiCorp's OATT address curtailment of Point-to-Point Transmission Service: Sections 13.6 – Curtailment of Firm Point-To-Point Transmission Service, and 14.7 – Curtailment or Interruption of Service [of Non-Firm Point-To-Point Transmission Service]. Schedule 4 of PacifiCorp's OATT, Section 8 of PacifiCorp's OATT Attachment T and Section 9 of the PacifiCorp Energy Imbalance Market Business Practice ("EIM BP") address settlement impacts related to the use of Intra-Hour Schedules.

Definitions

No definitions other than the following and those currently contained in PacifiCorp's OATT and, as applicable, the North American Energy Standards Board ("NAESB") Electronic Tagging Functional Specification document and applicable Western Electricity Coordinating Council ("WECC") Regional Criteria, are required for this business practice.

Intra-Hour Schedule – for the purposes of this business practice, means the submittal of an e-Tag request (also referred to as a "Request for Interchange" ~~herein~~) for Transmission Service within the current operating hour (four intervals consisting of 15-minute schedules) for a schedule to begin within the same operating hour that falls within the parameters of the guidelines noted below.

PacifiCorp incorporates ~~s~~^d the recommendations and conclusions of the Final Committee Report of WECC's Order 764 Task Force (the "Task Force") in this business practice.

Purpose

To better accommodate changes in loads and resources that occur after the start of the operating hour, this business practice establishes the procedures by which a Transmission Customer may submit a new e-Tag, or adjustment to an existing e-Tag, for Transmission Service to PacifiCorp within the current operating hour for any of the four 15-minute scheduling intervals within such

operating hour. These requests shall be made using the “Normal” e-Tag transaction type, rather than the “Emergency” transaction type. New Transmission Service requests necessary to facilitate Intra-Hour Schedules will be granted if there is Available Transmission Capability (“ATC”).

This business practice does not address tagging practices for emergency situations. That information is provided in PacifiCorp’s Business Practice #5 – Real-Time Processing of Late Electronic Tags.

Practice

Pre-Requisites for Intra-Hour Requests for Interchange:

- PacifiCorp’s approval of Intra-Hour Requests for Interchange is subject to all applicable approval criteria and assessments required by the applicable Balancing Authority(ies) and Transmission Service Provider(s), and as outlined below in the “Process” section.
- Transmission Service must be purchased by the Transmission Customer before such service can be scheduled. Consistent with Order No. 764, any new transmission request on PacifiCorp’s Transmission System necessary to facilitate the Intra-Hour Request for Interchange must be for the full operating hour. The Transmission Customer will be charged for a full hour of Transmission Service, even when the reservation is used for less than a full hour.

Process

Intra-Hour Scheduling Process for PacifiCorp Transmission and PacifiCorp’s Balancing Authority Areas (PACE/PACW):

- Intra-Hour Scheduling Intervals:
 - The four intra-hour scheduling intervals shall be defined as :
 1. xx:00-xx:15
 2. xx:15-xx:30
 3. xx:30-xx:45
 4. xx:45-xx:00
 - Intra-hour profiling on a Request for Interchange shall be in intervals with start and stop times of xx:00, xx:15, xx:30, and xx:45.
 - Schedules will be allowed in 15-minute, 30-minute, 45-minute, one-hour, or greater than one-hour blocks of time, provided the start and stop times are consistent with the above scheduling intervals. (For example, a customer may have an e-Tag that starts at xx:15 and ends at xx:00, for a 45-minute e-Tag.)

- The exception to start and stop times for the scheduling intervals stated above is the start and stop times provided by a Reliability Adjustment Request for Interchange (*i.e.*, e-Tag curtailments and re-loads).
- Priority of Requests for Interchange:
 - E-Tags utilizing firm transmission capacity will have priority over an e-Tag utilizing non-firm transmission capacity if the e-Tag is submitted at least 20 minutes prior to the start of the impacted scheduling interval.
 - E-Tags utilizing non-firm transmission capacity will have priority over an e-Tag utilizing other types of lower priority non-firm transmission capacity if the e-Tag is submitted at least 20 minutes prior to the start of the impacted scheduling interval.
- Timing of Requests for Interchange:
 - Timing rules are consistent with hourly block schedules. A Request for Interchange must be submitted at least 20 minutes prior to the start of the impacted scheduling interval to be considered “On Time.” A request submitted less than 20 minutes prior to the impacted scheduling interval is considered “Late” and will be marked “Late” by the Interchange Authority. PacifiCorp denies Requests for Interchange designated with the transaction type of “Normal” if assigned a “Late” status (*i.e.*, not considered “On Time”).
 - Please refer to currently-effective North American Electric Reliability Corporation (“NERC”) Reliability Standard INT-006-54’s [Timing Tables](#) “Timing Requirements for WECC” defining when Requests for Interchange must be submitted to obtain an “On Time” assigned time classification by the Interchange Authority.
 - Examples for 15-minute scheduling intervals include:
 - A new Request for Interchange submitted for the scheduling interval of 21:15-21:30 PST must be submitted by 20:55 PST to be considered “On-Time.”
 - An adjustment submitted for the scheduling interval of 21:30-22:00 PST must be submitted by 21:10 PST to be considered “On-Time.”
- Curtailments:
 - If necessary, Reliability Adjustments will occur prior to the top of the hour for all scheduling intervals in the upcoming hour that exceed a path scheduling limit. Reliability Adjustments will also occur within the hour as required.
 - Curtailments for overscheduled paths will be performed for the next scheduling hour once all path limits are evaluated between xx:40 and xx:50 prior to ramp. This will include the first 15-minute scheduling interval (xx:00-xx:15).
 - Curtailments for overscheduled paths will be performed as required for the scheduling interval xx:15-xx:30, once all schedules are submitted and evaluated (between xx:55-xx:10). If curtailments were previously performed and limits are no longer exceeded, reloads will be performed. (If Transmission Customers do not want this to occur, they may elect to submit a

- market adjustment reducing the transmission profile after curtailments are performed matching the transmission profile to the curtailment request.)
- Curtailments for overscheduled paths will be performed as required for the scheduling interval xx:30-xx:45, once all schedules are submitted and evaluated (between xx:10-xx:25). If curtailments were previously performed and limits are no longer exceeded, reloads will be performed. (If Transmission Customers do not want this to occur, they may elect to submit a market adjustment reducing the transmission profile after curtailments are performed matching the transmission profile to the curtailment request.)
 - Curtailments for overscheduled paths will be performed as required for the scheduling interval xx:45-xx:00, once all schedules are submitted and evaluated (between xx:25-xx:40). If curtailments were previously performed and limits are no longer exceeded, reloads will be performed. (If Transmission Customers do not want this to occur, they may elect to submit a market adjustment reducing the transmission profile after curtailments are performed matching the transmission profile to the curtailment request).
 - An implemented Intra-Hour Schedule shall be subject to curtailment priority as set forth in Sections 13.6 and 14.7 of PacifiCorp's OATT.
 - Net Scheduled Interchange Accounting and Sub-Hourly Schedule Integration:
 - Net Scheduled Interchange will be treated in the same manner as prior to the effective date of Order No. 764 (*i.e.*, integrating to an hourly value at the end of each hour).
 - Schedules with duration of less than one hour will integrate at the end of the hour using currently-defined rounding rules established per NAESB's business practice standard WEQ-004-19.1 [and WEQ-004-19.2](#). Specifically, for time periods of an hour or less, MWh values shall be rounded to the nearest whole MWh (less than .50 will be rounded down, and greater than/equal to .50 will be rounded up) for each time interval; [and for time periods of an hour or more \(e.g. a day, a week, the off-peak hours for a day, etc.\), calculate and round the MWh values for each individual hour within the time period will be calculated and rounded, then the ~~sum~~ the hourly results summed to get the MWh value for the whole time period.](#)
 - Transmission Customers will provide energy schedules and e-Tags will provide the integrated value at the conclusion of each hour. Examples include:
 - A Transmission Customer owns a 50 MW reservation for HE 09 and schedules 50 MW for the first scheduling interval (08:00-08:15) and nothing for the rest of the hour. The Transmission Customer will put 50 MW in the energy profile for the interval 08:00-08:15. The e-Tag will provide the integrated value of 13 MW for HE 0900 (12.5 MW rounded up).
 - A Transmission Customer owns a 50 MW reservation for HE 11 and schedules 50 MW for the first scheduling interval (10:00-10:15), zero for the second scheduling interval (10:15-10:30), 15 MW for the third scheduling interval (10:30-10:45), and 40 MW for the fourth scheduling interval (10:45-

11:00). The e-Tag will integrate to 26 MW for HE 1100 (26.25 MW rounded down).

- Ramp Rates:
 - The top of the hour ramp will remain at 20 minutes. Ramp duration for the intra-hour scheduling intervals will be a 10-minute straddle ramp.
- Coordinated Checkouts of Balancing Authorities:
 - Consistent with the WECC Task Force recommendations, Balancing Authority Checkouts will occur for Net Scheduled Interchange values as reflected below:

Net Schedule Interchange		
Horizon	Value	Check Out
Preschedule – 15:00 PPT	Hourly MW Integrated Value	Always
Real Time Before-the-Hour	Hourly MW Integrated Value and Non-integrated MW Value for each scheduling interval within the hour.	Only upon a value change
Real Time Intra-Hour XX:00-XX:15	Non-integrated MW Value	Only upon a value change
Real Time Intra-Hour XX:15-XX:30	Non-integrated MW Value	Only upon a value change
Real Time Intra-Hour XX:30-XX:45	Non-integrated MW Value	Only upon a value change
Real Time Intra-Hour XX:45-XX:00	Non-integrated MW Value	Only upon a value change
Real Time Reliability Curtailments	Hourly Integrated Value	After Hour Completes
Real Time After-the-Hour – Hourly Net Scheduled Interchange	Hourly Integrated Value	Always
After-the-Fact – Hourly Net Scheduled Interchange	Hourly Integrated Value	Only upon a value change

- Settlement Impacts: Intra-Hour Scheduling shall be considered an operational adjustment for purposes of settling Interchange Instructed Imbalance Energy (“IIE”), pursuant to Schedule 4 of PacifiCorp’s OATT, Section 8.1 of PacifiCorp’s OATT Attachment T and Section 9.1 of the PacifiCorp Energy Imbalance Market Business Practice (“EIM BP”).

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Revision History

Version	Date	Change Summary
10.0	TBD	Clarifying edits
9.0	3/6/17	Update to NERC Reliability Standard and NAESB’s business practice standard references
8.0	1/31/15	Revised Curtailments language to add further clarity.
7.0	11/1/14	Revised BP to align with OATT Attachment T requirements.
6.0	9/6/2013	Revised BP to align with Order 764 intra-hour scheduling compliance requirements.
5.0	11/28/12	Notice section updated with new web OASIS link.
4.0	2/28/12	Revised to add further clarity and formatted to standard template.
3.0	7/11/2011	BP becomes active with effective date of 8/1/11.

3.0 DRAFT	06/24/11	Comments received. Edits to add clarity. Re-posted for public comment.
3.0 DRAFT	06/02/11	Align with Joint Initiative standardized business practice
2.0	02/18/11	Removed “DRAFT” from title; added in link to redline version and updated Revision History.
1.0	01/14/10	Added reference to emergency tagging practice under the Purpose section.
0.0	12/01/09	BP becomes effective
DRAFT	03/17/09	Posting for public comment