



Business Practice

Intra-hour Transmission Scheduling

1. General Policies

- 1.1 The business practice establishes procedures for scheduling transmission service via an intra-hour request for interchange (e-Tag), to enable more timely and accurate responses to real-time changes in loads and resources.
- 1.2 Intra-hour scheduling is available to all transmission customers taking service under the Open Access Transmission Tariff (OATT).

2. Definitions

- 2.1 Point-to-Point (PTP) Transmission Service – The reservation and transmission of capacity and energy on either a firm or non-firm basis from the point of receipt to the point of delivery under Part II of the OATT.
- 2.2 Network Integration Transmission Service (NITS) – The transmission service provided under Part III of the OATT.
- 2.3 Secondary Network Service – Service provided under Part III, Section 28.4 of the OATT. This service may be used by the network customer to deliver energy to its network loads from resources that have not been designated as network resources.
- 2.4 Retail Network Integration Transmission Service (RNITS) – The transmission service provided under Part IV of the OATT in order to implement transmission service required as part of the Arizona Retail Electric Competition Program being implemented under the auspices of the Arizona Corporation Commission.
- 2.5 Intra-hour Transaction Schedule – A transaction submitted via an e-Tag with intervals of start and stop times of xx:00, xx:15, xx:30, and xx:45.

3. Transmission Reservations

- 3.1 All transmission reservations may be used for intra-hour e-Tags. This includes the use of firm or non-firm PTP transmission service, including but not limited to the use of PTP Redirect reservations, PTP Resale reservations or Original reservations, NITS, Secondary Network Service, and RNITS.
- 3.2 Transmission Service must be purchased for a minimum interval of an hour.
- 3.3 Transmission Service Requests (TSR) purchased for intra-hour e-Tags will be charged at the full hourly transmission rate.

4. Intra-hour Transaction Schedules

- 4.1 General
 - 4.1.1 Transmission service must be purchased before it is placed on an e-Tag.
 - 4.1.2 The e-Tag must pass all validity tests routinely applied to e-Tags.
 - 4.1.3 The e-Tag must receive the necessary approvals from all counterparties involved in the transaction.



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- 4.1.4 E-Tags may be submitted in Pre-Schedule using the APS intra-hour scheduling intervals.
- 4.1.5 E-tags submitted within the hour will allow the use of new or existing TSRs.
- 4.1.6 Scheduling intervals shall be defined as xx:00–xx:15, xx:15–xx:30, xx:30–xx:45, and xx:45–xx:00. Intra-hour profiling on an e-Tag 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, and 1-hour blocks or longer blocks provided the start and stop times are as reflected above.
- 4.1.7 APS reserves the right to deny any e-Tags that in our judgment are inconsistent with the safe and reliable operation of the APS transmission system or the Bulk Electric System.
- 4.2 Ramp Rates
 - 4.2.1 The top of the hour ramp is 20 minutes.
 - 4.2.2 Ramp duration for the 15-minute scheduling intervals will be a 10-minute straddle ramp.
- 4.3 Pre-emption
 - 4.3.1 Firm transmission capacity will preempt e-tags using non-firm transmission capacity if submitted at least 20 minutes before the impacted scheduling interval.
 - 4.3.2 Non-firm transmission capacity of a higher priority will preempt e-tags using non-firm transmission capacity of a lower priority if submitted at least 20 minutes before the impacted scheduling interval.
 - 4.3.3 Timing of e-Tags
 - 4.3.3.1 E-Tags must be submitted at least 20 minutes prior to the start of the impacted scheduling interval to be considered "On-Time" (not "Late").
 - 4.3.3.2 E-Tags that are "Late" (submitted with less than 20 minutes prior to the impacted scheduling interval's start time) will be marked as "Late" by the Interchange Authority and will be automatically denied, but may be accepted at the discretion of APS.
- 4.4 Curtailments
 - 4.4.1 If needed, Reliability Limits (curtailments/reloads) to e-Tags will occur prior to the top of the hour for all scheduling intervals in the upcoming hour that exceed a path scheduling limit.
 - 4.4.2 If submitted at least 20 minutes prior to the start of the impacted scheduling interval APS will approve an e-Tag that would require the curtailment of a transaction already implemented for the clock-hour.
 - 4.4.3 Reliability Limits (curtailments/reloads) will occur within the hour as needed.
 - 4.4.4 Curtailments required by transmission constraints shall be applied to all transactions following the terms of the OATT.
- 5. **Losses**



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- 5.1 Losses will be charged on the integrated hourly MW value scheduled. For example, a customer who schedules 100 MW for 30 minutes will be charged losses based on a 50 MW schedule times the Hourly Pricing Proxy calculated as described in Schedule 4, Energy Imbalance Service of the APS OATT.
- 5.2 Loss charges are to be paid back financially to APS from the customer. See APS's Business Practice for Transmission Loss Payment for Point-to-Point Service or Section 6.3 of the network or retail network operating agreement. Physical payback of losses may occur according to the NITS or RNITS operating agreement, if applicable.

This Business Practice describes general conditions and practices. There may be specific circumstances that require some variation from or are not addressed by this Business Practice.

Version	Effective Date	Change Tracking	Reviewed By	Approved By	Standard No.
Original	09/13/2012	Original	Eleanor Padilla	Robert Bean	N/A
1	11/01/2013	Implement FERC Order 764, enabling 15 minute intra-hour scheduling. Changed name from Intra-hour Reservations and Scheduling.	Eleanor Padilla	Robert Bean	N/A
2	11/6/2013	Eliminate Intra-hour TSR definition.	Eleanor Padilla	Robert Bean	N/A