

15-Minute Scheduling

February 13, 2014



Session 1 Agenda

Time	Topic	Presenter
2:00	Introduction	Andy Macklin
2:05	Update on project and implementation timelines (including elections)	Andy Macklin
2:15	How 15MS works - Timing - General principles	Holly Jackson
3:15	Changes to Customer Facing Systems	Roger Bentz
3:45	Customer Questions and Discuss Session 2 Agenda	BPA Team
3:55	Closing Comments	Will Rimmer

Introduction

Project Updates

- Implementation progress continues
- Broad scope with impacts to systems, processes, and some practices
- Systems and processes must be able to handle anticipated volume of tags and tag changes
- Ongoing coordination with other internal project teams

Implementation Scope

- Significant technology Changes
 - OATI tools
 - AGC ramps & user interface
 - Data flows and internal calculations
 - Real-time scheduling user interface
 - Curtailment tools
 - Billing system updates
 - Hydro operations user interfaces and supporting data flows
 - Other minor changes

Implementation Scope

- Process impacts include
 - Real-Time Scheduling
 - Dispatch
 - Hydro Operations
 - Marketing
- Practice impacts include
 - Billing
 - Curtailments

Implementation Timing

- Implementation window narrowing to end of summer (September likely)
- Key dependencies are
 - OATI software delivery following webTrans 5.2 implementation
 - Single curtailment tool for use by Dispatch and Real-Time

Important Upcoming Dates

- 2/27 – Second half of customer webinar
- 4/4 – Committed rate elections
- July/Aug TBD – Customer training for impacted OATI functionality
- Aug/Sept – 15-minute scheduling offering
- 10/1 – Mid-term rate period begins

Current Intra-Hour Scheduling

- Current practices will remain in effect now through initialization of BPA's offering of 15-minute transmission scheduling
- Current Intra-Hour Business Practice
 - E-tags can be Firm or Non-Firm
 - Can be new e-tags or adjustments to existing e-tags
 - E-tag must be submitted between XX:00 and XX:15
 - E-tag start time must be XX:30 of the operating hour
 - E-tag stop time must be XX:00 of the next hour
 - The ramp will be a 10 minute straddle ramp
- http://transmission.bpa.gov/ts_business_practices/Content/PDF_files/Individual_BPs/Intra_Hour_Scheduling.pdf

Current Intra-Hour Scheduling (cont.)

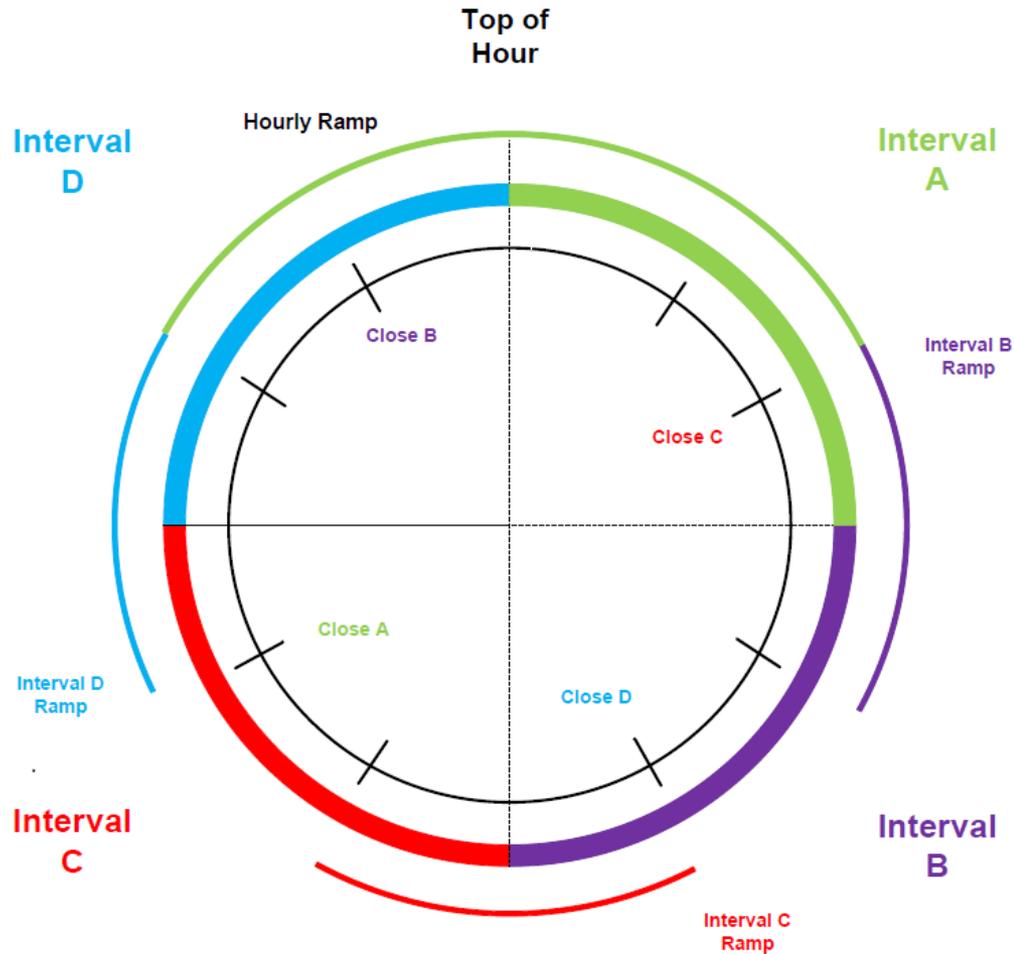
- Intra-Hour requests may be denied due to system conditions or operational actions
 - If the e-tag is expected to exceed the System Operating Limit (First Come, First Served (MOD29))
 - When Network flows have or are expected to exceed the Flowgate System Operating Limit

Current Intra-Hour Scheduling (cont.)

- Intra-Hour Reservations
 - Any previously purchased reservations may be used
 - NF-Hourly PTP and NF-Secondary Hourly PTP may be purchased up to the end of the operating hour
 - Redirects may also be utilized

15-Minute Scheduling

15 Min Scheduling – Timing



15 Min Scheduling - Mechanics

■ General Guidelines

- Will predominantly follow WECC recommendations
- Intervals must start/stop on the quarter hours
 - XX:00
 - XX:15
 - XX:30
 - XX:45
- Four Straddle Ramps
 - Top of the hour ramp will remain 20 minutes
 - Intra Hour ramps will be 10 minutes each
- E-tags will be accepted up to 20 minutes before the interval start time

15 Min Scheduling - Mechanics

- Congestion Management & Curtailments
 - All paths will be managed both before the interval as well as within interval
 - NERC priority will be preserved through preemption (not first come, first served)
 - Pro Rata
 - Based on schedules not reservations

15 Min Scheduling - Mechanics

- Practices that will remain unchanged
 - Reservations will be full hours
 - Intra-hour schedules can utilize new or existing reservations
 - Non-Firm will remain available for purchase or redirects
 - Generation and Load Estimates will be for full hours
 - Outages will be in full hours
 - Preschedule and After-the-Fact checkouts will be done in full hour integrated values (via WIT)
 - Transmission losses will be based on hourly integrated values
 - 15-minute schedules will not be allowed on the Pacific DC Intertie

Changes to Customer-Facing Systems

- Shared Path Summary (Applies only to path owners)
 - New time selection filter for “this Hour & Next hour”
 - Ability to configure the display to show data in 5, 10, 15, 20 or 60 minute granularity for the current hour & next hour
 - For dynamic, Capacity & Pseudo-tie tags, use the lower of the transmission or the reliability limit as the schedule contribution
 - Employ auto-refresh for this hour and next if data on the display changes
 - Shared Path summary alarm, employed for any increment in the current or next hour where the “Remaining” MW of an owner’s share is negative

Changes to Customer-Facing Systems

- Initialization Reports (ATC & AFC Initialization Reports in OASIS)
 - The current hour and next hour data will be captured in a new grouping called the “Minute Real-Time Horizon”
 - Those reports will show data in minute-by-minute granularity
- Curtailments
 - BPA will be managing path capacity on a 15-minute granularity and as such customers will see curtailments implemented as required throughout the hour to ensure that the sum of schedules on any path do not exceed the SOL at the close of each 15-minute scheduling increment.

Changes to Customer-Facing Systems

- Tag Validation
 - New tag timing validations will be implemented to insure that e-tags intra-hour e-tags are submitted consistent with FERC Order 764 and the NERC Standard INT-006.3 WECC

Further Discussion

- Comments
- Questions
- Proposed agenda items for 2/27 conversation

POC: Will Rimmer (wtrimmer@bpa.gov)

Mike Norris (mjnorris@bpa.gov)

Session 2 Agenda

Time	Topic	Presenter
10:00	Introduction	Will Rimmer
10:05	Congestion Management	BPA Team
11:00	15-min Scheduling Billing Practices	Chris Gilbert
11:30	Mid-Term Rate Election	Russ Mantifel / Chris Gilbert
11:45	Questions	BPA Team
11:55	Closing Comments	Will Rimmer