

# **BPA Wind Initiative Update**

**Customer Forum 34**

February 9, 2012



# Topics

- Intra-Hour Scheduling Pilots
  - Troy Simpson
  
- Dispatcher Standing Order 216 Phase III
  - Kevin Johnson
  
- Customer Supplied Generation Imbalance Pilot Phase II
  - Scott Simons
  
- Request for Wind Generation
  - Frank Puyleart
  
- Dynamic Transfer Capability
  - Preston Michie & Bart McManus
  
- Business Practice Updates
  - Preston Michie & Mark Jackson

# Intra-Hour Scheduling Update



# Intra-Hour Scheduling Phasing Review

	<b>Phase I December 1, 2009</b>	<b>Phase II June 28, 2011</b>	<b>Phase III September 27, 2011</b>
Transmission Products Available In-Hour	1-NS Secondary 1-NS Non-Firm IH	1-NS Secondary 1-NS Non-Firm IH	1-NS Secondary <b>2-NH Non-Firm</b> <b>6-NN Non-Firm</b>
E-Tag Service Type	1-NS	1-NS	<b>All</b>
Request Type	New	New	<b>New/Adjusted</b>
Generation Resource	BPA Wind	<b>Any</b>	<b>Any</b>
Flow Type	Export	<b>Any</b>	<b>Any</b>
E-Tag Start Time	:30	:30	:30
Ramp Duration	10 Min.	10 Min.	10 Min./ <b>Blank</b>

**RED** indicates change from previous Phase

# Committed Intra-Hour Scheduling

## October 1, 2011

- Participating wind facilities agree to schedule every 30 minutes.
- Schedules must meet scheduling accuracy metrics.
- 34% credit on wind balancing rate.
- 34% reduction in wind balancing reserves held for participating generators.
- Currently limited to 1,200 MW.
- 547 MW subscribed.

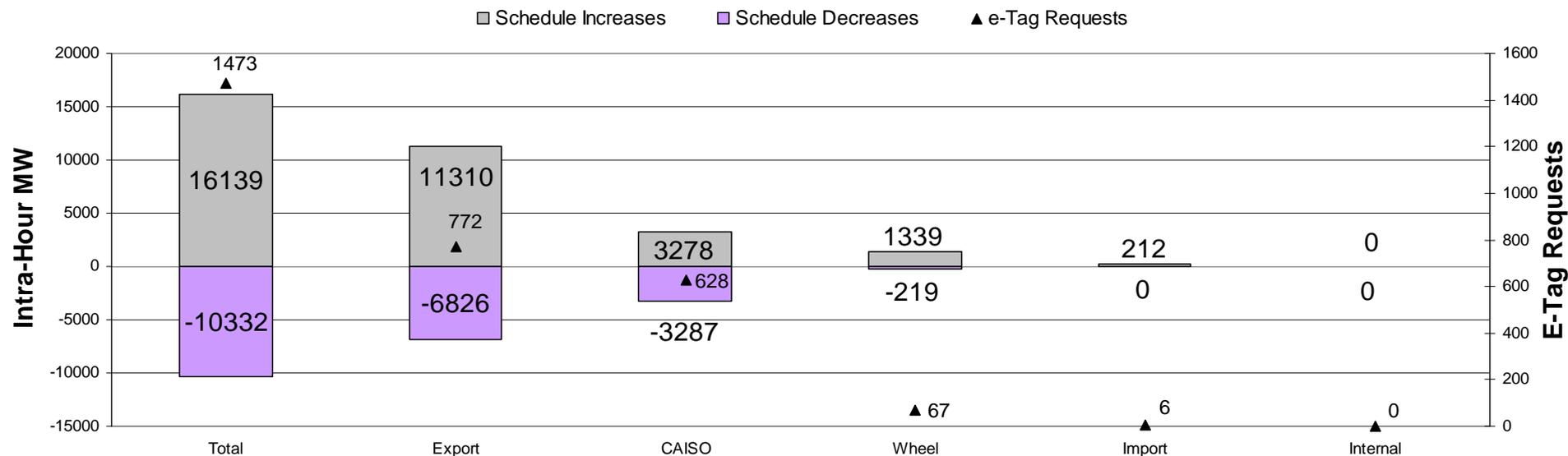
# CAISO Intra-Hour Scheduling

## October 17, 2011

- Dynamic schedule created from e-Tag.
- Updated every 30 minutes based on e-Tag adjustments.
- BPA updates the e-Tag after the hour with the integrated value as required by WECC.
- Utilizes CAISO balancing resources to Northwest wind generators.
- Currently limited to 200 MW.
- 200 MW subscribed (150 actively scheduled)

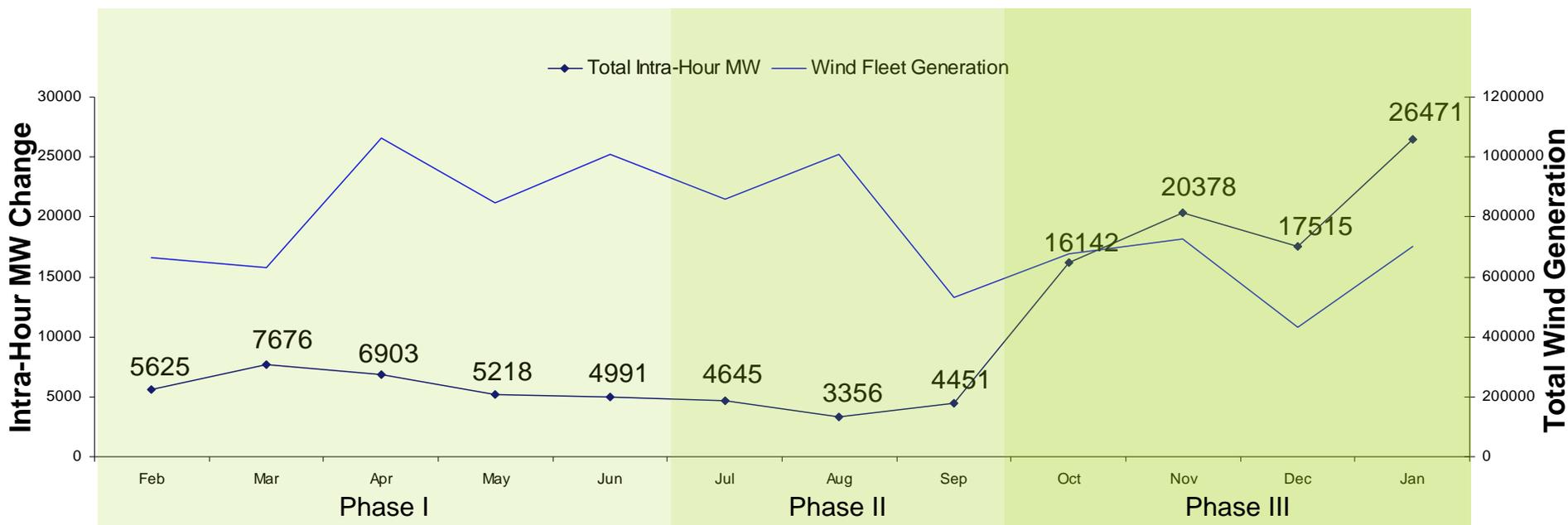
# January Intra-Hour Activity

## Intra-Hour Scheduling Activity – January 2012



# Intra-Hour Scheduling Activity

Intra-Hour Scheduling Activity – Last 12 Months  
 (Intra-Hour MW is the absolute value of the MW change)



# Next Steps

- Stay the Course
  - Evaluate for improvements
  - Expand participation in Committed Intra-Hour Scheduling
  - Expand participation in the CAISO Intra-Hour Scheduling Pilot
- Continue Work with Joint Initiatives
  - Four Step proposal
  - Currently in Step One
  - July 2012 Evaluation of Step 1
  - Determine BPA's Position
- FERC Notice of Proposed Rulemaking (NOPR)
  - 15 Minute Scheduling?

# Dispatcher Standing Order 216 (DSO216) Modifications



# DSO216 Modifications

Effective November 30, 2011

- Reserve levels assessed during the ramp
  - DSO216 is now allowed to trigger and implement during the last half of the hourly ramp
- Events during the ramp within the last two months:
  - One of the five generation limit events
  - Two of the three schedule curtailment events
- If reserves recover by the end of the Dispatcher review period, cancel the internal alarm
  - No Limits or Curtailments are initiated
  - Used at least once (during a ramp)
- Reset the Warning state back to Normal if reserves recover during the hour
  - Used at least 8 times

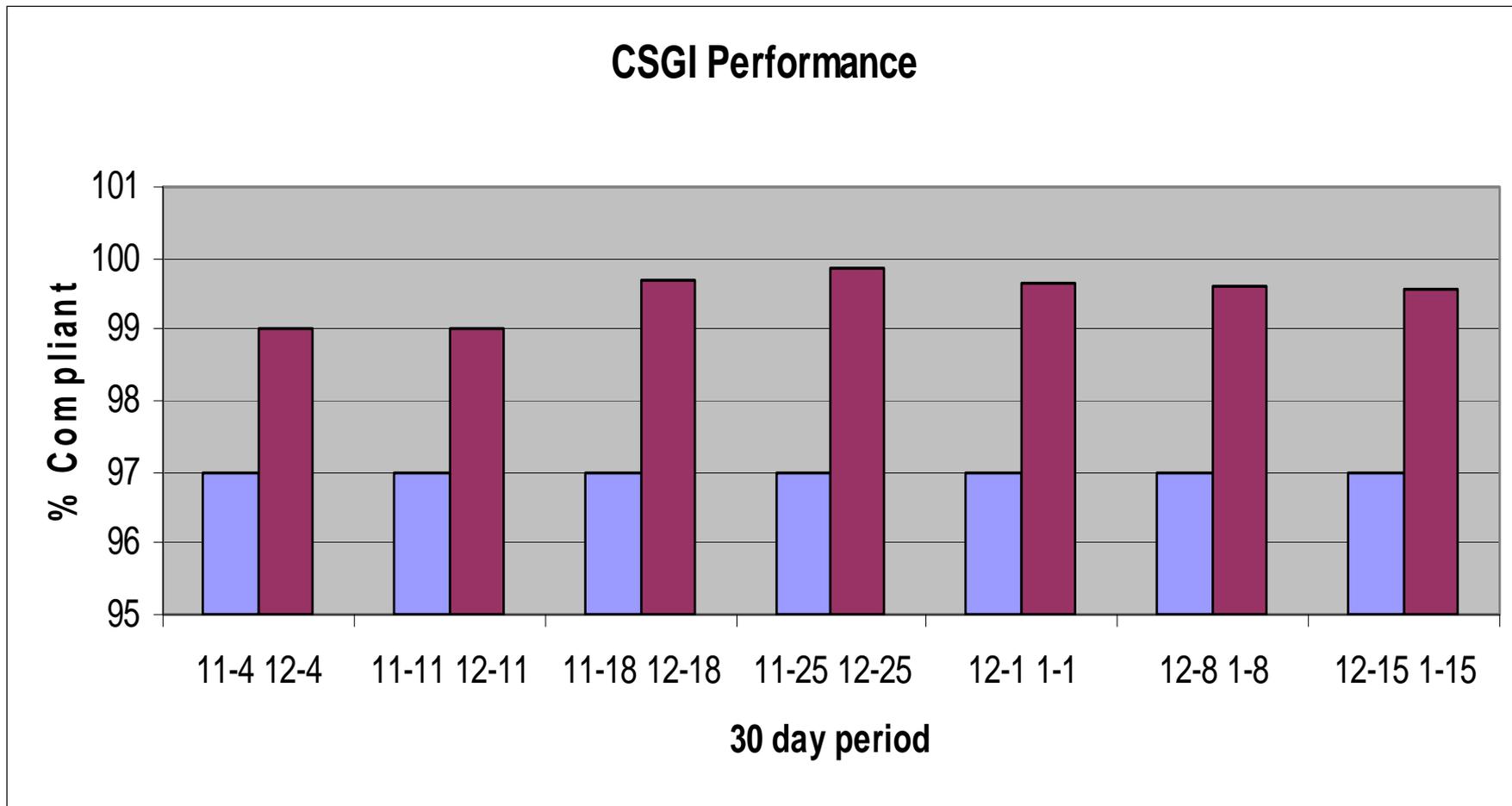
# Customer Supplied Generation Imbalance (CSGI) Pilot Update



# CSGI Status Update

- Working with participant to integrate additional balancing resources.
  - Dynamic Transfers.
  - Capacity type resources similar to On Demand.
  - Adding Market Transactions.
  
- Successful balancing performance based.
  - Running 30 day average.
  - Compliance minutes within 1, 30, and 60 minute metrics.
  - Weekly feedback began in November 2011.
  - 97% compliance required.

# CSGI Status Update (cont')



# Request for Wind Generation Data

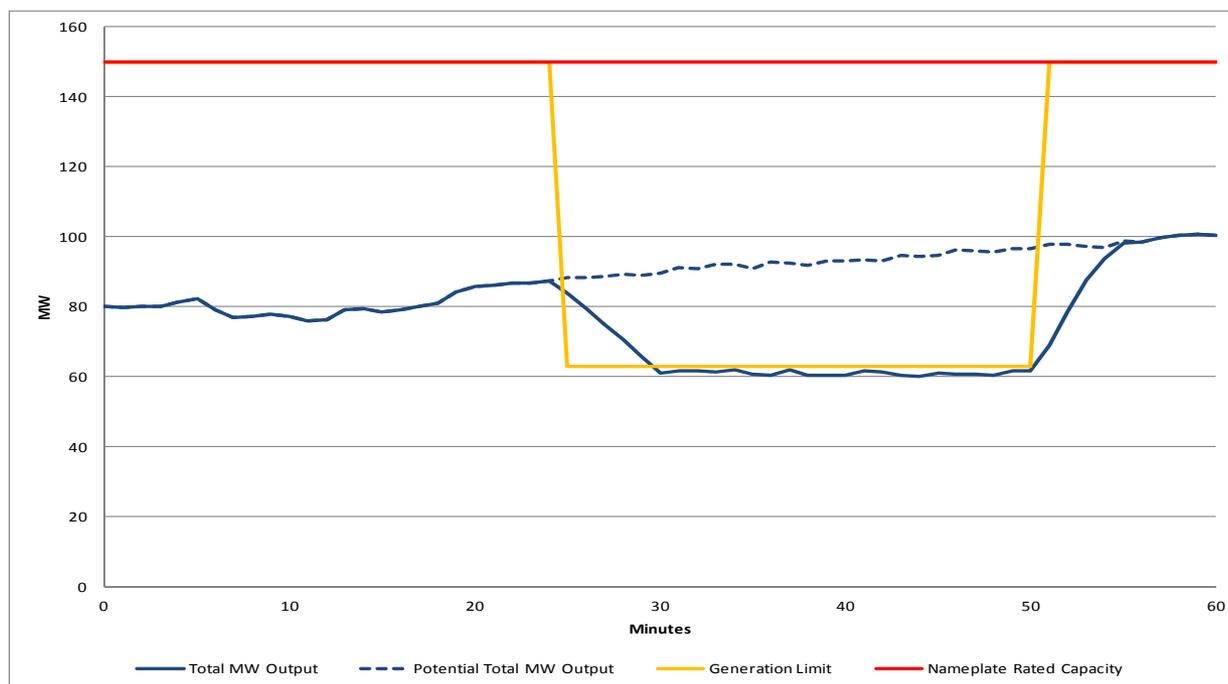


# Request for Wind Generation Data

- For previous rate cases, BPA has updated the data set used to forecast reserve requirements to incorporate the most recent actual generation data that has become available. This was done, in part, because of suggestions that using more actual generation data would result in a more accurate forecast.
- BPA-12 calculations used 2 consecutive years of historic generation data
  - Data time period deliberately chosen prior to initiatives that would alter wind generators output for reasons other than changes in wind
- Updating the data set for BPA-14 using more recent actual generation data leaves periods with generation data that is skewed due to limitations for the wind fleet during the times these initiatives were applied.
- BPA is seeking data from the wind fleet for these periods to help continue to improve the data set used to forecast the balancing reserve requirements.

# Request for Wind Generation Data (cont')

- Many plants calculate the “Potential Generation” output of their plant
  - MW output derived from a power curve and the anemometer data from each turbine.
  - While less accurate than actual generation data, it is more accurate than the output of a plant during operator control.



# Request for Wind Generation Data (cont')

- BPA is requesting the total Potential Generation for all Wind Plants, who have or can calculate and archive such data, connected to the BPA system in the smallest time increment available (one minute average preferred) for the period of October 1st, 2009 to Present.
  - If data is unavailable for this entire time period, please provide whatever data you do have.
  
- For those that are able to provide data to BPA immediately, please provide it (MW) in digital format (via email or mail a CD/DVD) to BPA in one of the following formats: comma separated variable (\*.csv), Excel (\*.xls or \*.xlsx), MatLab (\*.mat) or text (\*.txt).
  - For wind plants consisting of multiple phases, please include each phase as a separate total generation if possible.
  
  - Provide data to Frank Puyleart: [frpuyleart@bpa.gov](mailto:frpuyleart@bpa.gov)  
**OR** [Frank Puyleart, TOT-DITT-2, P.O. Box 491, Vancouver, WA 98663](mailto:frpuyleart@bpa.gov)
  
- Please contact Frank Puyleart at [frpuyleart@bpa.gov](mailto:frpuyleart@bpa.gov) with questions.

# Dynamic Transfer Capability (DTC) Pilot Phase II Update



# WIST Joint Initiatives DTC Task Force Update

- The DTC Task Force has produced a uniform regional methodology to set Transfer Variability Limits (TVLs) – a.k.a. dynamic transfer limits – that can be used by Balancing authorities across the Western Interconnection.
- This methodology is consistent with the methodology BPA has been using to assess dynamic transfer limits and evaluate DTC requests. BPA looked at the impact from dynamic variability across specific paths at POR/POD combinations; the Task Force looked at impacts from variability and most severe contingency.
- The Task Force recommending forming another group to look at commercial and policy issues related to implementation of their findings. They provided a starting list of potential commercial and policy issues.  
**Recommend BPA participate in the regional follow on activities.**
- Each Balancing Authority has the responsibility to determine when, how, and how much TVL to grow, if any. BPA will be reviewing its options for addressing DTC/TVL use prior to the next rate case.
- WIST DTC Task Force reports can be found at:

<http://www.columbiagrid.org/DTCTF-documents.cfm>

# BPA Wind Integration Team (WIT): DTC Pilot 2012 Work Plan Update

## Action

- Participate on JI-WIST DTC Task Force
- Develop BPA Initial Balancing Reserve Strategy
- Implement DTC Pilot Phase 2
- Dynamic Scheduling System (DSS) evaluation
- Rate Case Settlement follow-up on DTC-related issues
- Develop DTC Allocation, Methodology and Policies for FY14-15 Rate case workshops

## Status

- Done; Phase 3 report released in December 2011; BPA reviewing findings
- In progress; first customer mtgs in Spring 2012
- In progress; pilot evaluation starts Summer 2012
- In progress; specification review underway
- First customer DTC workshop held January 19, 2012
- Not yet started; planned for Summer/Fall 2012

# Additional DTC Activities

- BPA granted one new DTC award in January to PacifiCorp for 137MW DTC request for reliability and operating reserve purposes.
- A pre-rate case workshop on DTC issues was held January 19 to determine customer interests.
- Comments on workshop materials due February 10.
- Customers continue to be interested in:
  - DTC 101 mechanics — how does DTC methodology work?
  - Joint Initiatives Task Force findings and application of the JI DTC TF methodology to BPA.
  - Growing DTC for commercial purposes.

# Business Practice Updates



# Business Practices – Status Update

- BPA has posted the final business practice and provided response to customer comments on the following business practices:
  - Intra-Hour Scheduling Pilot Program (Phase III), V.4
  - Supplemental Service, V.1
  - Committed Intra-Hour Scheduling, V.2
  - CAISO Intra-Hour Scheduling Pilot Program, V.1
- BPA is preparing for posting or posted for customer comments:
  - Requesting Transmission Service, V.9
  - Scheduling Transmission Service, V.8
  - Potential changes to the CSGI, V.2 (V.3 to allow marketing to centroid)
- BPA is preparing the final version and response to customer comments on the following business practices:
  - On Demand Resource Scheduling, V.5

# Business Practices: Status Update

- Scheduling Transmission Service Business Practice.
  - Requires network customers to utilize 7-FN NERC priority code when tagging firm network schedules. Previously, just requested.
  
- BPA will post revisions to finalized the On Demand Rights business practice. We will propose:
  - Changing the name of the business practice to “On Demand Resource Scheduling” to more accurately reflect its content.
  - Allowing resources with BPA’s Balancing Authority to qualify as an On Demand Resource, a practice not currently allowed.
  - Allowing Demand Response resources to qualify as an On Demand resource.
  - Precluding “capacity” tags and “firm contingent” tags on the DC Tie to avoid reliability problems.
  - Other revisions to bring the business practice up to date