



WESTERN AREA POWER ADMINISTRATION  
An agency of the U.S. Department of Energy

**Sierra Nevada Region**

# Rate Schedule for Generator Imbalance Service

Informal Rates Meeting

January 28, 2010

Steve Richardson

# FERC ORDER 890

## Generator Imbalance Service

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- Three principles for imbalance provisions:
  - Charges based on incremental cost or some multiple thereof;
  - Charges must provide incentive for good scheduling practice; and
  - Provisions should address intermittent renewable resources (wind/solar) to waive punitive penalties
- Demand responses (emergencies/reserve activation) should not be penalized, but normal market prices will apply for energy purchased/received.

# FERC ORDER 890

## Generator Imbalance Service

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- Generator Imbalance Service is service provided by the Transmission Provider (TP), Balancing Authority (BA) or Sub-Balancing Authority (SBA) to manage imbalance between actual generation and scheduled generation
- Western's Schedule 9, Generator Imbalance Service, effective December 1, 2009:
  - <http://www.oatioasis.com/WAPA/WAPAdocs/WAPA-OATT-CLEAN-Effective-2009-1201.pdf>

# FERC ORDER 890

## Generator Imbalance Service

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- Generator Imbalance Service must be offered to qualifying generators within the TP's BA/SBA
- TP has an obligation to provide Generator Imbalance Service from its own resources only to the extent that it is physically feasible to do so
- TP is not obligated to provide the service if doing so would compromise system reliability

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## Generator Imbalance Service

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- If TP does not have resources to provide this service, the TP must attempt to procure the service for its customers
- If no other resources available for purchase, TP must work with generator owner and neighboring Balancing Authority(ies) to accomplish dynamic scheduling
- Transmission Customer (TC) has responsibility for finalizing arrangements with neighboring BA

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## Generator Imbalance Service

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- Each TP is required to reflect on its OASIS how much Generator Imbalance Service it can provide
- TP may also consider requests for Generator Imbalance Service on a case-by-case basis, performing system studies to determine if resources available to provide

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## Generator Imbalance Service

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- No penalties shall apply when imbalance is direct result of reliability actions taken by the generator in response to:
  - Frequency corrections;
  - Directives by BAs, TOPs, and RCs;
  - Reserve activations
  - Loss of generating units
- Increased penalty may be considered for intentional imbalance(s)

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## Generator Imbalance Service

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- Tiered Bandwidths:
  - Tier One: +/-1.5% of scheduled energy, netted on a monthly basis and then settled financially (2 MW Minimum Deviation)
  - Tier Two: Between greater than +/-1.5% and +/-7.5% of scheduled energy, settled financially each hour
  - Tier Three: Greater than +/-7.5% of scheduled energy, settled financially each hour

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## Generator Imbalance Service



- Charges within the Tiered Bandwidths:
  - Tier One: Netted, No Penalty, Cost Only
  - Tier Two: 10% penalty—Charged 110% for under delivery of energy, and credited 90% for over delivery
  - Tier Three: 25% penalty—Charged 125% for under delivery of energy, and credited 75% for over delivery
- Intermittent Renewable Resources' (Wind/Solar)  
Generator Imbalance Service is limited to 10% penalty

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## Generator Imbalance Service



- Example of methodology:

<u>Hour Ending</u>	<u>Scheduled Gen</u>	<u>Actual Output</u>
1700	200	150

- First bandwidth would be  $\pm 1.5\%$  of schedule (200 MWs) =  $\pm 3$  MW
- Second bandwidth would be greater than  $\pm 1.5\%$  up to  $\pm 7.5\%$  of schedule (200 MWs) =  $\pm 12$  MW
- Third bandwidth would be anything greater than  $\pm 7.5\%$  = 35 MW

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## Generator Imbalance Service



- If pricing is \$50 for the hour:
  - First 3 MW would be netted monthly
  - Second 12 MW x ( $\$50 \times 1.10$ ) = \$660.00
  - Third 35 MW x ( $\$50 \times 1.25$ ) = \$2,187.50

Totaling \$2,847.50 for the hour, excluding the outcome of the monthly netting

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## Generator Imbalance Service



- TP or SBA can charge customer for both Generator Imbalance Service and Energy Imbalance Service in the same hour, but not if the imbalances offset each other
  - For example – Customer “A”
    - » Generator Imbalance Service: -10 MW deficit
    - » Energy Imbalance Service: 5 MW surplus
    - » Customer “A” charged: 5 MW (GI charge)

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## Generator Imbalance Service

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- TP must include in its OATT the method by which it calculates incremental costs for purposes of imbalance charges, as well as the method it will use to obtain each component of the calculation
- TPs are directed to include this proposed tariff language as part of any compliance filing .

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## Generator Imbalance Service

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- FERC will accept alternatives to pro forma design if:
  - It complies with three imbalance principles (Slide 2)
  - If a TP desires to retain an existing tariff rate for this service, then it must be consistent with or superior to the 890 pro forma



# Proposed New Rate Schedule

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- The proposed new rate, Schedule 9, Generator Imbalance Service, will be effective October 1, 2011, through September 30, 2016
- Requesting Customer input regarding the methodology for this new ancillary service rate prior to the end of the informal public process

# Proposed Applicability



- Any generator in SNR's SBA taking GI service under Western's OATT.



# Questions?

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