Western Area Power Administration
Desert Southwest Region

Public Information Forum
March 10, 2011

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Agenda

❑ Welcome and Introductions

❑ Background Information

❑ Rate Proposals

- Network Transmission Service
- 7 Ancillary Services, including new Schedule 9, Generator Imbalance

❑ Process and Timelines

❑ Next Steps

❑ Contact Information

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Background

- ❑ Western's OATT (Open Access Transmission Tariff)
  - ▪ Originally filed 1/6/98, Revised 1/25/05
  - ▪ To comply with FERC 888

- ❑ Revised OATT filed 9/30/09 (effective 12/1/09)
  - ▪ To comply with FERC 890 and Western's statutory & regulatory requirements

- ❑ Move toward common interpretation and implementation of Tariff provisions

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Why We're Here

- ❑ Current DSW Network Integration Transmission and Ancillary Services Formula rates(Rate Order WAPA-127)

- ❑ Formula rates under WAPA-127, effective July 1, 2006, expires June 30, 2011

- ❑ WAPA-127 will be extended through September 30, 2013

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Rate Process Proposed Timeline for
Network Transmission & Ancillary Services

Date	Action
Sept 22, 2010	Informal meeting held with Customers in Phoenix
February 2011	Federal Register Notice (FRN) for Rate Proposal Published February 15, 2011 *Publish Rate Extension for Current Rates
March 10, 2011	Public Information Forum
April 6, 2011	Public Comment Forum
May 17, 2011	End of Consultation & Comment Period
August 2011	Publish FRN for Final Rate Formulas
October 2011	New Rate Formulas in Effect

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Network Integration Transmission Service

❑ Network Service in DSW will remain project-specific

- Service on the Parker-Davis Project and Intertie Project are offered under this rate order (Rate Order No. WAPA-151)
- Central Arizona Project will continue to be offered under a separate rate order (Rate Order No. WAPA-124)

❑ No changes proposed to existing formula rates for Network Service

- Monthly charge = Load Ratio Share (LRS) x 1/12 x Annual Transmission Revenue Requirement (ATRR)
- LRS = Each month, the network customer's hourly load coincident with the transmission system peak
- A network customer's LRS is calculated on a rolling 12-month basis (12 CP)

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Ancillary Services

❏ Supplied from generation resources (except Scheduling service)

- Necessary to provide transmission service
- Needed to correct the effects of transmission service transactions
- Apply within entire WALC balancing area
- Defined in Western's OATT

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Ancillary Services Provided

❏ Scheduling, System Control and Dispatch Service (Scheduling)

❏ Reactive Supply and Voltage Control from Generation Sources (VAR Support)

❏ Regulation and Frequency Response Service (Regulation)

❏ Energy Imbalance Service

❏ Generator Imbalance Service (Schedule 9 in revised OATT)

❏ Operating Reserves (Spinning and Supplemental Reserve)

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Scheduling Service
Schedule 1

❑ Schedules the movement of power through BA, within BA, into or out of BA

❑ Must be purchased from Transmission Provider

❑ <u>Existing</u> (current) Rate Schedule formula:

(Annual capital cost per Tag) + (Hourly Labor rate X average time acting on tag)

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Scheduling Service – *Cont'd*

❑ Proposed change in Data Collection:

- Under Rate Order No. WAPA-151, proposal is to count only tags that result in a schedule—more appropriate measure of cost of providing service
- WALC currently counts tags at time of creation and any subsequent modifications where WALC is the Transmission Provider and/or the BA

❑ Proposed minor change on Implementation/Billing:

- The charge will be divided equally among all transmission providers on the schedule that are inside the WALC BA
- Federal transmission exempt from billing

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Scheduling Service -- *Cont'd*

❑ Proposed Rate Formula:

$$\frac{\text{Total Annual Revenue Requirement for Scheduling}}{\text{Number of Schedules per Year}}$$

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Reactive Supply and Voltage Control
Schedule 2

No change to Existing Rate Formula

❑ Service needed to maintain voltage levels on transmission system

❑ Proposed formula:

$$\frac{\text{TARRG x \% of Resource}}{\text{Load Requiring VAR Support}}$$

- TARRG = Total Annual Revenue Requirement for Generation
- Percentage of Resource used for service = 1-Power Factor
- Load Requiring VAR support = transmission reservation capacity less capacity from entities providing VAR to WALC

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Regulation Service

Schedule 3

❑ Regulation Service necessary to provide continuous balancing of resources with load and maintain frequency

❑ Frequent Changes in output:

  ▪ Results in increased Operations & Maintenance costs

  ▪ Increased wear and tear on generating units

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Regulation Service, *Cont'd*

❑ Four components proposed to WALC Regulation Service rate:

  ❑ Load-Based Assessment
    ❑ Existing charge is energy based; proposal changes to load (capacity) based charge
    ❑ WALC retaining requirement for non-conforming loads

  ❑ Exporting Intermittent Resource Requirement

  ❑ Self Provision Assessment using AGC

  ❑ Third-party/Other self-supply of Regulation

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Regulation Service, *Cont'd*

❑ Proposed formula for Load-Based Assessment:

Total Annual Revenue Requirement for Regulation
Balancing Authority Load requiring Regulation
+
Installed Nameplate Capacity of Intermittent Resources Serving
Load in the BA

❑ Formula the same as existing, with exception of adding intermittent resource requirement

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Regulation Service Load Based Assessment

❑ WALC Revenue Requirement Includes:
- Capacity for Service x Capacity Rate of providing project; includes capital/plant and O&M costs of providing units
- Purchases of a regulation product, if needed
- Power purchases in support of regulation
- Purchases of transmission incurred due to load following issues and/or regulating units trapped geographically inside another BA

❑ Denominator includes BA load plus nameplate capacity of intermittent resources serving load in BA
- Load based charge would apply to all entities' auxiliary load (total less Federal entitlements) plus name plate capacity of intermittent resources serving load within WALC

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Regulation Service Exporting Intermittent Resource Requirement

❑ Intermittent Resource defined:

- A Generator that is not able to be dispatched and cannot store its fuel source, and therefore cannot respond to changes in system demand

❑ An entity exporting the output from an intermittent resource to another BA would be required to dynamically meter or dynamically schedule out of WALC

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Regulation Service Self Provision Assessment

❑ Customers will continue to be allowed to self supply

❑ Self Provision generally requires:
- Well defined boundary with WALC-approved revenue quality metering; accurate as defined by NERC
- Have Automatic Generation Control (AGC) capability
- Demonstrate capability to self provide regulation

❑ Proposal is to add an assessment if self-provision falls below a defined threshold

❑ Assessment based on entity's 1-minute Area Control Error (ACE); calculated hourly.

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Regulation Service Self Provision Assessment

❑ Value of ACE used to calculate Regulation Self Provision assessment as follows:

- Avg. ACE $\geq$ 1.5% of hourly avg. load, WALC will assess Regulation Service charge (load based rate) to entire load

- Avg. ACE >.5% but < 1.5% of hourly avg. load, assess regulation charge based on linear interpolation of zero charge and full charge, using load-based rate

- Avg. ACE $\leq$ .5% of hourly avg. load, no regulation charge

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Regulation Service Third-Party Supply

❑ Upon request and evaluation by WALC

- An entity may be allowed to self-supply its regulation requirement even without well-defined boundary metering
- Contracting with a third party **may** also be allowed

❑ Case by case evaluation

- WALC will evaluate entity's metering, telecommunications and regulating resource availability
- Review required level of regulation and determine whether entity meets qualifications to supply regulation

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Regulation Service Non Conforming Loads

❑ Non-Conforming Loads
- Proposing to retain existing policy; no change from existing rate schedules
- Provides for additional charge for loads with large swings to compensate for additional burden
- Non-conforming (or non-standard) Regulation provided for in separate service agreement

❑ WALC Rate Schedule definition
- Single plant or site (e.g., smelters, arc furnaces)
- $\geq$ 5 MW on recurring basis
- Capacity requirement $\geq$ 10% of its average load

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Energy Imbalance (EI) Service Schedule 4

❑ Difference between scheduled and actual delivery of energy to load with a BA on an hourly basis

❑ Transmission provider must offer service when transmission is used to serve load within BA

❑ Existing Rate under DSW EI2—settlement via energy return to make up deviations or pay based on Palo Verde (or other index of Western's choosing); at Western's discretion

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Energy Imbalance, *Cont'd*

❑ FERC Order 890; very specific EI requirements

❑ FERC concern: Excessive EI rates amount to a form of "discriminatory" behavior

❑ Order 890 model lays out tiered structure nearly identical to one in use at the time by Bonneville Power Administration

❑ Order 890 model states EI is settled financially

❑ Western's tariff revision leaves development of EI rate to Public Rate Adjustment process

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Energy Imbalance, *Cont'd*

❑ FERC 890: Tiered structure
❑ 3 specific bandwidths
❑ Calculated as a percentage of scheduled energy

Applicable Hours	Bandwidth	Penalty
All Hours	+/- 0% to 1.5% 0 to 2 MW minimum	No Penalty within band
All Hours	+/-1.5% to 7.5% 2 to 10 MW minimum	10% (110% of incremental cost for under-delivery, 90% for over-delivery
All Hours	> 7.5% > 10MW minimum	25% (125% of incremental cost for under-delivery, 75% for over-delivery

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Energy Imbalance, *Cont'd*

❑ Existing WALC EI structure differs from 890
❑ Treats peak and non-peak hours differently
❑ Based on percentage of metered load
❑ Tiered structure similar to 890 model; settlement in
  energy returns (financial at Western's option)

Applicable Hours	Bandwidth	Penalty
On-Peak	+/- 0% to 1.5% 0 to 5MW minimum	No penalty within band; 110% under-delivery, 90% over-delivery
Off-Peak	+1.5% to -3% 2MW over-delivery minimum, 5 MW under- delivery minimum	No Penalty within band; 110% under-delivery 60% over-delivery

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Energy Imbalance, *Cont'd*

❑ WALC Proposal: similar to 890 model; adjusted for
  operating realities
❑ Propose retaining peak/off peak treatment; peak hour
  treatment consistent with 890 model
❑ Calculation of Imbalance a percentage of metered load

Applicable Hours	Bandwidth	Penalty
Peak Hours	+/- 0% to 1.5% 0 to 4 MW minimum	No penalty within band
Peak Hours	+/-1.5% to 7.5% 4MW-10MW minimum	110% for under-delivery, 90% for over-delivery
Peak Hours	> 7.5%, > 10MW minimum	125% for under-delivery, 75% for over-delivery

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Energy Imbalance, *Cont'd*

❑ Off-peak hour treatment consistent with existing structure

❑ Off-peak treatment aids in protecting resource during WALC's most limited periods

Applicable Hours	Bandwidth	Penalty
Off-Peak	-3% to ≥ 7.5%, 2MW minimum for over-delivery; 5MW minimum for under-delivery	110% under-delivery, 60% over-delivery

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Operating Reserves Schedules 5 and 6

❑ No change to rate schedules for Spinning and Supplemental Reserves

❑ No long-term Reserves are available beyond internal WALC requirements

❑ At a customer's request, WALC may purchase Reserves and pass through that cost, plus the costs to acquire

❑ May be provided on a short-term basis-only as available; provided at market rates

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Generator Imbalance (GI) Service Schedule 9

❑ New Rate Schedule For WALC

❑ Imbalance occurs when there's a difference between scheduled and actual output of a generator in the BA

❑ Generator Imbalance Implementation:

   ❑Same bandwidth and penalty structure as with Energy Imbalance Calculations

   ❑Calculated on metered generation (vs. load)

   ❑No 7.5% bandwidth for intermittent resources

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## Unreserved Use Schedule 10

❑ FERC Order 890 addresses a new Schedule 10 -- Unreserved Use Penalty
- Occurs when use of transmission system exceed amount reserved

❑ DSW Rate Schedules for Firm Transmission Service include provision for overrun of capacity reserved

❑ Ancillary Service rate schedules will not address (not a FERC defined Ancillary Service)
- When adjustments made to existing power system rates, unreserved use will be addressed/modified as appropriate
- Schedule 10 of OATT points to the "appropriate rate schedules" for Unreserved Use

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Questions??

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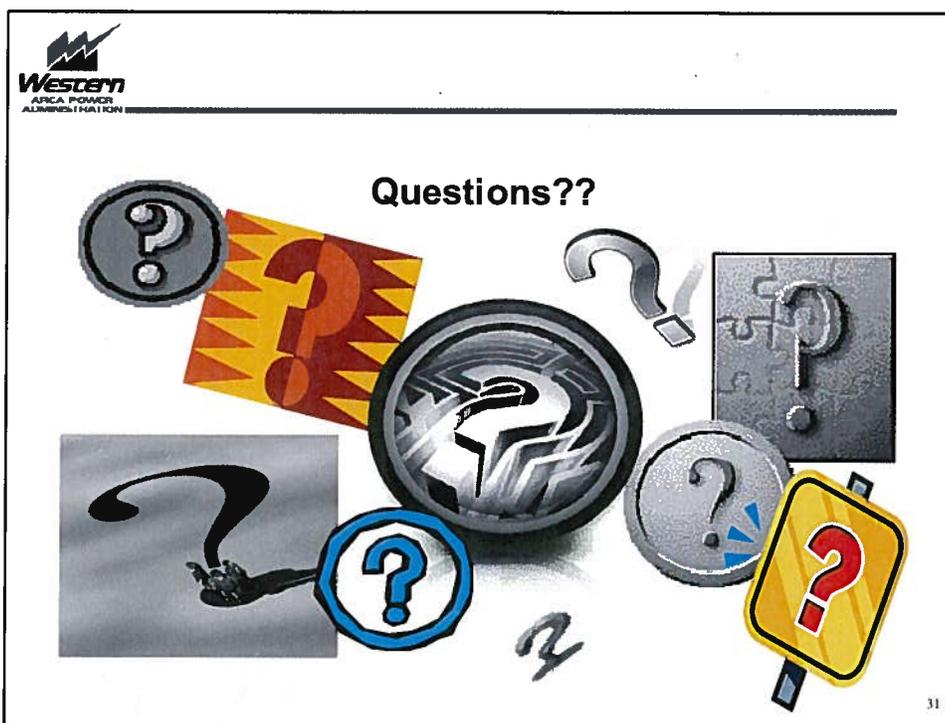
Next Steps

❑ Western will evaluate comments/feedback received during consultation and comment period

❑ Public Comment Forum Wednesday, April 6, 2011, at 1:00 pm

❑ Consultation and comment period ends May 16, 2011

❑ Rates become effective October 1, 2011

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Contact Information

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website at http://www.wapa.gov/dsw/pwrmkt/ANCSRV/ANCSRV

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For further information relating to these rate proposals, visit our
website at http://www.wapa.gov/rm/ratesRM/2012/default.htm

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Thank you for you interest in this process!

Please contact us with any questions or
comments you might have.

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