Transmission & Ancillary Services Formula Rates

Public Information Forums
November 19, 2014 - Omaha, NE
November 20, 2014 - Fargo, ND

Introductions

• Lloyd Linke – Operations Manager
• Gary Hoffman – Attorney-Advisor
• Ron Klinefelter – Attorney-Advisor
• Linda Cady-Hoffman – Rates Manager
• Steve Sanders – Operations and Transmission Advisor
• Sara Baker – Public Utilities Specialist
• Jana Lockie – Public Utilities Specialist
Purpose of Meeting

- Public Process Overview
- Background Information
- Transmission Rates
- Ancillary Services Rates
- Process Schedule
- Contact Information

Public Process Overview

- Alternative Operations Study (AOS)
- Rates FRN published November 3, 2014
- Information Forum
- Comment Forum
- 90-day Comment Period
- Comment Period Closes – February 2, 2015
Background Information

- Western Area Power Administration – Upper Great Plains Region (Western-UGP)
- Integrated System (IS)
- Status of Western-UGP Membership in Southwest Power Pool (SPP)
- SPP Information
Western – Upper Great Plains

- 378,000 square miles of service area.
- 118 substations and 7,920 miles of transmission lines (Federal owned).
- 360+ power and transmission customers
- 2,675 MW installed capability (2 BOR, 6 Corps facilities).
- Approx. 10,000 Gwh’s of energy produced in median year.
- Operate 2 Balancing Authority Areas (East and West systems).

Basin / Western / Heartland Integrated System

And Other Facility Owners:
Missouri River Energy Services
NorthWestern Energy
Alternative Operations Study (AOS)

- Recommendation to pursue formal negotiations with the Southwest Power Pool, a Regional Transmission Organization (RTO), concerning membership.
- Federal Register Notice (FRN) published November 1, 2013 and was the start of the public comment period.
  - [http://www.wapa.gov/ugp/PowerMarketing/AlternateOperationsStudy/AOS.htm](http://www.wapa.gov/ugp/PowerMarketing/AlternateOperationsStudy/AOS.htm)

Status of Membership

- Western-UGP and the other IS Owners completed formal negotiations with SPP concerning membership and have received SPP Board of Director's approval of the requested changes to the SPP Membership Agreement, SPP Bylaws, and SPP Tariff to accommodate the integration of the IS Owners into SPP, planned for October 1, 2015.
- All of the IS Owners have received necessary internal approvals and authorizations to proceed with joining SPP. On July 8, 2014, the Heartland Consumers Power District Board of Directors approved a resolution authorizing execution of a membership agreement with SPP. [Heartland Press Release](#). On July 9, 2014, Western's Administrator Mark Gabriel approved and directed Western's Upper Great Plains Region to take the necessary actions to accomplish full membership with SPP (contingent upon FERC approval of the Western negotiated provisions). [Western Press Release Western Approval Memorandum](#). On July 16, 2014, the Basin Electric Power Cooperative Board of Directors authorized joining of SPP subject to FERC approval of necessary documents. [Basin Press Release](#).
- SPP filed the proposed IS Owners' Member Agreements, Bylaws changes, and SPP Tariff changes on September 11, 2014 to FERC for approval (Dockets ER14-2850 and ER14-2851).
Status of Membership (Cont’d)

• FERC issued Order on November 10, 2014, approving the SPP filing including the proposed IS Owners' Member Agreements, Bylaws changes, and SPP Tariff changes subject to compliance filings and settlement hearings.

• Western-UGP and SPP are currently working on response to FERC’s Nov 10th Order.

• Western-UGP Website for SPP Integration Information Updates:
  http://www.wapa.gov/ugp/PowerMarketing/sppmembership/sppmembership.htm

Timeline

- 2014
  - January – April: SPP Stakeholder Approval of tariff, bylaw, and Membership Agreement Changes

- 2014
  - June – July: IS approval and execution of SPP Membership Agreement

- 2014
  - July – October: File any tariff, bylaw, and Membership Agreement Changes at FERC for Approval

- 2014-2015
  - July – October: Begin Integration of IS into SPP

- 2015
  - October: Complete Integration of IS (October 2015)
Transition from Integrated System (IS) to SPP

- The IS Owners intend to join SPP beginning October 1, 2015 contingent upon final FERC approval of the negotiated arrangements with SPP.
- Transmission Service will no longer be available on the IS under Western’s Tariff at that point.
- Transmission Service on Western-UGP’s transmission facilities will then be provided by SPP under the SPP Tariff.
- Western is working with SPP to finalize a transition plan for transmission services to SPP.
Southwest Power Pool (SPP) Fast Facts

- **Service territory**: 370k square miles
- **Substations**: 4,103
- **Generating plants**: 627
- **Wholesale demand response**: 1,563 MW (market footprint)
- **Coincident peak demand**: 46,136 MW (August 30, 2013: Reliability Coordinator footprint)
- **Energy consumption**: 230.9 TWh (market footprint)
- **Miles of transmission**: 48,930
  - 69 kV: 12,569
  - 115 kV: 10,239
  - 138 kV: 9,691
  - 161 kV: 5,049
  - 230 kV: 3,889
  - 345 kV: 7,401
  - 500 kV: 93
- **Generating capacity**: 77,366 MW
- **Market Operations**: The Integrated Marketplace launched in 2014, which includes a Day-Ahead Market with Transmission Congestion Rights, a Reliability Unit Commitment process, a Real-Time Balancing Market, and the incorporation of price-based Operating Reserve procurement. It is expected to yield its more than 115 participants up to $100 million in annual net savings.

SPP and the IS
SPP Upper Missouri Zone ("UMZ")
UGP East and UGP West

And Other Facility Owners:
Missouri River Energy Services
NorthWestern Energy
UGP East (Eastern Interconnection)

- The IS Transmission Facilities in the Eastern Interconnection will be included in the UMZ under the IS Owners (and other parties) Membership Agreements (or facility credits).
- Transmission Service on the Eastern Interconnection facilities will be provided by SPP on SPP’s OASIS under SPP’s Tariff.
- SPP Integrated Marketplace (IM) will extend over the Eastern Interconnection facilities. All east loads will be subject to SPP IM requirements.

UGP East (Eastern Interconnection)

- Western’s WAUE Balancing Authority Area (BAA) will be included in the SPP BAA.
- All Ancillary Services under the SPP Tariff.
UGP West / DC Ties

- The IS Transmission Facilities in the Western Interconnection will be included in the UMZ under contractual arrangements with SPP.
- Transmission Service on the Western Interconnection will be provided by SPP on SPP’s OASIS under SPP’s Tariff.
- SPP Integrated Marketplace will not extend into the Western Interconnection.
UGP West / DC Ties

- Western will maintain the WAUW Balancing Authority Area and provide required Ancillary Services as the BA.
- Western and SPP are finalizing contractual arrangements, provisions and requirements for service, and will be providing additional details once available.

Transmission Service

- All of the eligible IS transmission facilities (East/West) will be included in the new Upper Missouri Zone (UMZ) or Zone 19 in SPP.
- Expectation is that other transmission owners will add their facilities in the UMZ (e.g. Facility Credits under the current IS, other Facilities that meet Attachment AI of SPP Tariff, and any new Facility Credits provided by SPP).
- UMZ Zonal rates will be determined by final facilities/costs and zonal service.
- SPP transmission and ancillary rates will apply. Unique provisions in the Western Interconnection will be posted when finalized (e.g. application of regional costs, west-only service).
- External NITS Loads will be recognized, Western co-supply will be recognized.
SPP Transmission Criteria
(SPP Tariff, Attachment AI)

- Included Facilities:
  - Non-radial power lines, substations, and associated facilities operated at 60 kV or above, plus radial lines and associated facilities operated at or above 60 kV that serve two or more eligible customers.
  - Facilities utilized for interconnecting various internal Zones to each other and facilities that interconnect the transmission system with surrounding entities.
  - Control equipment and facilities necessary to control and protect a facility that qualifies as a Transmission Facility.
  - For a substation connected to the Transmission System, facilities on the high-side (60 kV or above) will be included with the exception of transformer isolation equipment.
  - The portion of direct-current interconnections with areas outside the SPP Region (DC ties) owned by a TO in the SPP Region, including the portions of DC tie that operate lower than 60 kV.
  - A facility operated below 60 kV meeting the seven factor test set forth in FERC Order No. 888 or any applicable successor test.

Transmission Rates

- Revenue Requirement Calculation Templates
- Forward-looking Formula Transmission Rates
- Effective Date - October 1, 2015
- Recalculation Date – January 1, 2016 (and annually on January 1 thereafter)
Revenue Requirement Calculation Templates

• Western proposes to use revenue requirement calculation templates
• Annualize Western-UGP’s transmission investment and transmission-related costs including:
  – Operations & Maintenance
  – Interest
  – Administrative & General
  – Depreciation

Forward-Looking Formula Transmission Rates

• Allows Western to accurately match cost-recovery with cost incurrence.
• Uses projections to estimate transmission costs for upcoming year in the ATRR.
• True-up cost estimates with actual costs
  – Rates will continue to be recalculated each year
  – Western will recover no more and no less than actual transmission costs for the year
2015 Estimated Annual Revenue Requirement

<table>
<thead>
<tr>
<th>Western-UGP Estimated Annual Revenue Requirement $</th>
<th>FY 2015 ATRR $ (existing IS)</th>
<th>FY 2015 ATRR $ (proposed SPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Revenue Requirement</td>
<td>141,122,511</td>
<td>140,624,962</td>
</tr>
<tr>
<td>Revenue Credits</td>
<td>18,168,167</td>
<td>2,224,307</td>
</tr>
<tr>
<td>Scheduling, System Control &amp; Dispatch Subtotal</td>
<td>77,985</td>
<td>11,942,735</td>
</tr>
<tr>
<td>Prior-Period True-up (2013)</td>
<td>(352,586)</td>
<td>(352,586)</td>
</tr>
<tr>
<td>Total Revenue Requirement</td>
<td>122,523,773</td>
<td>126,105,334</td>
</tr>
</tbody>
</table>

IS True-up

- Western-UGP intends to true-up cost estimates it uses in calculation of 2013, 2014 and 2015 IS rates in place prior to joining SPP when calculating the rates.
- True-up will only include Western-UGP’s portion of IS revenue requirement.
Scheduling, System Control & Dispatch Service (Entire UMZ)

• Required to schedule movement of power through, out of, within or into SPP and/or WAUW BAA(s).

• Western-UGP’s ARR will be utilized by SPP to calculate regional SPP Schedule 1 rate for:
  – SPP through and out transactions; and,
  – Zonal SPP Schedule 1 rate for the UMZ.

Scheduling, System Control & Dispatch Service (Cont’d)

• Annualize Western-UGP’s transmission investment and transmission-related costs for providing SSCD including:
  – Operations & Maintenance
  – Interest
  – Administrative & General
  – Depreciation

• Uses projections to estimate SSCD costs for upcoming year in the ARR.

• True-up cost estimates with actual costs
  – Rates will continue to be recalculated each year
  – Western will recover no more and no less than actual costs for the year
Scheduling, System Control & Dispatch Service Estimated Revenue Requirement

<table>
<thead>
<tr>
<th>Western-UGP Scheduling, System Control and Dispatch Service</th>
<th>FY 2015 ATRR $(proposed SPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation &amp; Maintenance Expense</td>
<td>11,190,489</td>
</tr>
<tr>
<td>A&amp;G Expense</td>
<td>207,246</td>
</tr>
<tr>
<td>Depreciation Expense</td>
<td>267,582</td>
</tr>
<tr>
<td>Cost of Capital (Weighted Composite Interest Rate * Net Plant Investment)</td>
<td>277,418</td>
</tr>
<tr>
<td>Revenue Requirement</td>
<td>11,942,735</td>
</tr>
</tbody>
</table>

Regulation & Frequency Response Service (WAUW)

- Western-UGP will need to provide Regulation and Frequency Response Service in the WAUW as the BA.
- Service provided primarily by Corps facilities at Fort Peck.
- Western-UGP’s annual revenue requirement would be recovered under the SPP Tariff.
 Regulation & Frequency Response Service Rate (WAUW)

<table>
<thead>
<tr>
<th>Western UGP Regulation &amp; Frequency Response Service</th>
<th>FY 2015 ATRR (proposed SPP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corps Fixed Charge Rate</td>
<td>18.033%</td>
</tr>
<tr>
<td>Corps Generation Net Plant Costs ($)</td>
<td>448,203,339</td>
</tr>
<tr>
<td>Capacity Used for Regulation (kW-yr)</td>
<td>8,861</td>
</tr>
<tr>
<td>Total Regulation Revenue Requirement (including true-up) ($)</td>
<td>294,308</td>
</tr>
<tr>
<td>Load in WAUW Control Area (kW-yr)</td>
<td>109,250</td>
</tr>
<tr>
<td>Regulation Charge ($/kW-Yr)</td>
<td>2.69</td>
</tr>
<tr>
<td>Regulation Charge ($/kW-mo)</td>
<td>0.22</td>
</tr>
</tbody>
</table>

Energy Imbalance Service (WAUW)

Three deviation bandwidths – applied hourly to any energy imbalance as a result of Transmission Customer’s scheduled transaction(s) -

1. Deviations within ±1.5% (minimum 2 MW) will be netted on a monthly basis and settled financially at the end of the month at 100% of the average incremental cost for the month.
Energy Imbalance Service (Cont’d)

2. Deviations greater than ±1.5% up to 7.5% (greater than 2 MW up to 10 MW) will be settled financially at the end of the month at:
   - 110% of incremental cost when energy taken in a schedule hour is greater than energy scheduled; and
   - 90% of incremental cost when energy taken in a schedule hour is less than the scheduled amount.

Energy Imbalance Service (Cont’d)

3. Deviations greater than ±7.5% (or 10 MW) will be settled financially at the end of the month at:
   - 125% of the highest incremental cost that occurs that day when energy taken in a schedule hour that is greater than energy scheduled; or
   - 75% of the lowest incremental cost that occurs that day when energy taken is less than the scheduled amount.
Energy Imbalance Service (Cont’d)

Incremental Cost -

• Western’s incremental cost will be based upon a representative hourly energy index or combination of indexes.
• Index will be posted on OASIS prior to use.
• Will not be changed more often than once per year (unless Western determines existing index is no longer a reliable price index).

Operating Reserves Service-Spinning and Supplemental (WAUW)

• Western-UGP will provide service in the WAUW as the BA
• Will substitute the reserve requirement of the reserve sharing group under which Western-UGP is currently a member for its transmission system in the Western Interconnection
### Operating Reserves Service-Spinning and Supplemental Rate (WAUW)

<table>
<thead>
<tr>
<th>Western-UGP Operating Reserves Service – Spinning &amp; Supplemental</th>
<th>FY 2015 ATRR (proposed SPP)</th>
</tr>
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<tbody>
<tr>
<td>Corps Fixed Charge Rate</td>
<td>18.033%</td>
</tr>
<tr>
<td>Corps Generation Net Plant Costs ($)</td>
<td>448,203,339</td>
</tr>
<tr>
<td>Plant Capacity (kW)</td>
<td>2,500,000</td>
</tr>
<tr>
<td>Western's Max Load in WAUW Control Area (kW)</td>
<td>142,000</td>
</tr>
<tr>
<td>Max Generation in WAUW Control Area (kW)</td>
<td>97,500</td>
</tr>
<tr>
<td>Capacity used for Reserves (kW)</td>
<td>7,185</td>
</tr>
<tr>
<td>Annual Reserves Revenue Requirement (including any true-up) ($)</td>
<td>232,291</td>
</tr>
<tr>
<td>Annual Charge ($)</td>
<td>0.97</td>
</tr>
<tr>
<td>Monthly Charge ($)</td>
<td>0.08</td>
</tr>
</tbody>
</table>

**Operating Reserves Service-Spinning and Supplemental (WAUW)**

- Western-UGP has no long-term reserves available beyond its own internal requirements.
- At Customer’s request, and if it is capable of doing so, Western UGP will acquire needed resources and pass the costs on to the Customer.
- In the event that Reserve Services are called upon, Western-UGP will assess a charge for energy used at the prevailing market energy rate in the WAUW.
Generator Imbalance Service (WAUW)

Three deviation bandwidths – applied hourly to any energy imbalance as a result of Transmission Customer’s scheduled transaction(s).

1. Deviations within ±1.5% (minimum 2 MW) will be netted on a monthly basis and settled financially at the end of the month at 100% of the average incremental cost for the month.

Generator Imbalance Service (Cont’d)

2. Deviations greater than ±1.5% up to 7.5% (greater than 2 MW up to 10 MW) will be settled financially at the end of the month at:
   – 110% of incremental cost when energy taken in a schedule hour is greater than energy scheduled; and
   – 90% of incremental cost when energy taken in a schedule hour is less than the scheduled amount.
Generator Imbalance Service (cont.)

3. **Deviations greater than ±7.5% (or 10 MW)**
   will be settled financially at the end of the month at:
   – 125% of the highest incremental cost that occurs that day when energy taken in a schedule hour that is greater than energy scheduled; or
   – 75% of the lowest incremental cost that occurs that day when energy taken is less than the scheduled amount.

**Exception:** Intermittent resources will be exempt from this deviation band and will pay the deviation band charges for all deviations greater than the larger of 1.5% or 2 MW.

Generator Imbalance Service (Cont’d)

Incremental Cost:
- Western’s incremental cost - based upon representative hourly energy index or combination of indexes.
- Index posted on OASIS prior to use.
- Will not be changed more often than once per year (unless Western determines existing index is no longer a reliable price index).
Generator Imbalance Service (Cont’d)

- Western may charge a Transmission Customer for either hourly generator imbalances or hourly energy imbalances for imbalances occurring within the same hour, but not both, unless the imbalances aggravate rather than offset each other.

Public Process Overview

- Rates FRN published November 3, 2014
- Public Information Meetings, November 19-20, 2014
- Public Comment Forums, December 17-18, 2014
- 90-day Comment Period
- Comment Period Closes – February 2, 2015
- Spring 2015, Western will publish a final FRN of Transmission and Ancillary Services Formula Rates
More Information

OASIS Page

Rates Information
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UGPTRates@wapa.gov

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 Questions?

Thank you for your attention. Please provide written comments at the public comment forums December 17th and 18th 2014, or send written comments, via email or letter by February 2, 2015.