

2010 BPA Rate Case

TR-10 Transmission & Ancillary Services

Customer Workshop

September 23, 2008



Agenda

- | | |
|-----------|-------------------|
| 1:00-1:30 | Opening |
| 1:30-2:00 | Segmentation |
| 2:00-2:30 | Failure to Comply |
| 2:30-3:00 | Next Steps |

Ancillary Services

- Ancillary Services are the services transmission customers must obtain to ensure the reliability of the transmission system, whereas Control Area Services apply to generation or load in our Balancing Authority that are not transmission customers, and therefore are not covered by ancillary services.
 - For example, generators that are not also the transmission contract holder. In this circumstance ancillary services apply only to entities that purchase transmission service under the tariff; we need control area services to cover everyone else.
- <http://www.transmission.bpa.gov/Business/Rates/>



Segmentation Study

Segmentation Background

- An integral part of the Transmission Rate Case.
- Purpose: Preliminary step determining the cost of serving our customers.
- Output: Segmented capital investment and historical O&M costs.
- Input to Revenue Requirements Study.



Background on Process

- Classify the facilities of the FCRTS and assign them to different segments (categories of service) according to the type of services they provide.
- Project investment and O&M costs associated with these segments over the rate period.
- The final Segmentation Study is an input to the Revenue Requirement Study, which results in the rates paid by users of the FCRTS being based on what segments they use.



Segment Categories

- **Generation Integration (GI)** – Connects Federal generation to the Network.
- **Integrated Network (Network)** – Bulk power transmission.
- **Southern Intertie** – AC and DC connections to California.
- **Eastern Intertie** – Garrison-Townsend 500 kV line and equipment.
- **Utility Delivery** – Facilities to deliver power to public customers at < 34.5 kV.
- **Industrial Delivery (DSI)** - Facilities to deliver power to Direct Service Industry (DSIs) at < 34.5 kV.
- **Ancillary Services** – FERC-defined facilities and operations necessary for reliable transmission service.



Generation Integration Segment

- Consists of all facilities that connect the **Federal** generating plants to the integrated BPA transmission network.
- Includes transmission lines and equipment between the Federal generator bus and the first BPA transmission system substation encountered by the generated power.
- The costs associated with this segment are assigned to Power Services.



Integrated Network Segment

- Consists of the facilities that:
 - Transfer bulk power from generation to load, including to the Delivery and Southern and Eastern Intertie segments.
 - Provide voltage regulation and overall reliability resulting from multiple transmission pathways.

- Consists of lines and substation equipment at voltages from 34.5kV to 500kV owned and operated by BPA.

- By far the biggest segment.



Southern Intertie Segment

- This segment is a system of transmission lines that interconnect the PNW and California power systems.
- The Southern Intertie consists of:
 - The Celilo Converter Station and 1,000kV direct-current transmission line originating at The Dalles, Oregon (the DC Intertie).
 - A set of 500kV alternating-current (A-C) lines and substations originating in North Central Oregon (the AC Intertie).



Eastern Intertie Segment

- Consists of the Garrison-Townsend 500 kV line and the associated substation facilities at Garrison.
- These facilities are used to connect power generated at Colstrip to the BPA network and to transfer power between the Northwest and Montana.



Delivery Segments

- The two delivery segments consist primarily of substation facilities required to "step down" (reduce) from prevailing transmission voltages for delivery to customers at voltages below 34.5kV. Consists of two sub-segments:
 - Utility Delivery Segment: Consists of the facilities required to supply power at delivery voltages to BPA's public utility customers.
 - Industrial Delivery (DSI) Segment: Consists of facilities required to supply BPA's industrial customers.



Ancillary Services Segment

- Services that the Transmission Provider is required by FERC order to supply.
- Required for reliable transmission service.
- Transmission facilities that support ancillary services are certain communications and control systems, SCADA equipment, and computer hardware and software located at the control centers.
- These costs are assigned to various Ancillary Services.



Summary of Segment Investments

| Segment | 2002 Rate Case | | Current Rate Case | |
|------------------------|----------------------|-------------|----------------------|-------------|
| | Investment | % | Investment | % |
| Generation Integration | 59,386,207 | 1% | 61,366,601 | 1% |
| Network | 2,943,631,077 | 74% | 3,703,930,733 | 79% |
| Southern AC Intertie | 328,980,846 | 8% | 325,146,229 | 7% |
| Southern DC Intertie | 338,951,087 | 9% | 386,975,421 | 8% |
| Eastern Intertie | 121,756,685 | 3% | 118,137,417 | 3% |
| Utility Delivery | 88,314,128 | 2% | 25,826,076 | 1% |
| DSI Delivery | 88,154,482 | 2% | 62,625,014 | 1% |
| Totals | 3,969,174,512 | 100% | 4,684,007,492 | 100% |



Method

- TBL transmission facilities are grouped as lines or substations and are assigned to segments on the basis of voltage and function.
- A number of technical sources are relied upon to identify facilities for specific segments.
- In some cases, as for Interties, contracts define some or all of the facilities in a segment.



Method

- After the facilities are identified by segment, the investment cost of each segmented facility is determined from accounting records.
- Some facilities are common to more than one segment.
 - For substations, the facility costs are divided among the segments based on the use of each major component of the substation, or in some cases by contract.
 - For lines, allocation is based on the miles in each segment, except for Buckley – Summer Lake, which has remained unchanged from the 1985 rate filing.
- Historical investment is through September 30, 2007.



Method

- Direct O&M expenses for each transmission line and substation are obtained from the plant and maintenance records for the latest 3 years (data available FY05-07).
- The historical segmented direct O&M costs are then used in the Revenue Requirements Study to allocate forecasted O&M costs and overhead to the test years.
- Investment and O&M associated with providing the FERC-defined Ancillary Services are identified.



Other Considerations

- BPA must anticipate sales of certain FCRTS assets (e.g., delivery substations) and exclude these facilities from rates.
- BPA projects plant investment through the test years and include it in the study.
- Corps of Engineers and Bureau of Reclamation transmission assets at Federal hydroelectric projects are segmented in the same way as BPA assets.



Segmentation Study Purpose

- The investment and O&M costs of the entire Transmission system are allocated into seven segments and used as an input to the Revenue Requirement Study.



History of Northern Intertie Segment

- At a previous workshop the issue of the Northern Intertie was raised, with respect to the possibility of re-establishing it. The following is intended as background:
 - The Northern Intertie was built in the 1940s.
 - Treated as a discrete segment beginning in 1983.
 - Rolled into the Network segment beginning with the 1996 rate settlement.
 - New treatment, proposed by parties to the rate case, was agreed to as part of settling the 1996 Rate Case.



Segmentation Summary

- Segments are defined primarily by voltage and function or, for some segments (e.g., the Eastern Intertie), voltage and contract.
- Investment and O&M costs are based on historical costs.
- Bonneville proposes **no changes** to segments at this time.



Failure to Comply Penalty Charge



Failure to Comply Penalty Charge

Purpose of the Penalty Charge: The Failure to Comply Penalty Charge was established in BPA Transmission Rates to provide a basis for assessing a penalty when generators fail to change generation levels or loads fail to shed load when directed to do so by BPA. The rate was established in 2001.

The current rate schedule states that the rate shall be the higher of:

100 mills per kilowatthour,

Any costs incurred by the BPA to manage the reliability of the FCRPS due to the failure to comply, or

An hourly market index price index plus 10%.



Failure to Comply Penalty Charge

Issue: We have experienced several events recently where generators did not respond to reliability directives from BPA including orders from dispatchers to modify operations, and events where generators failed to change levels when BPA curtailed schedules. These failures compromise the reliability of the transmission system.

We are now operating under new NERC reliability standards and the possibility of substantial penalties for violations. Failure to comply with a reliability directive or other act of a customer may subject BPA to these penalties. As a result, we are re-evaluating the rate design to assess whether or not it meets the purpose of the penalty rate.



Failure to Comply Penalty Charge

Specific Elements of the Rate for Discussion

“Highest Of” language: The current rate is set up as the “highest of” 100 mills/kwh, costs incurred to manage the reliability of the FCRTS, or market index plus 10%.

The 100 mills or 10% above market does not seem to promote compliance with a reliability directive. To avoid the rate being viewed as a business decision choice between modifying operations or paying the rate, the penalty should be more substantial. Is 1,000 mills/kwh more reasonable? If we set the penalty higher, would it be appropriate to eliminate the 10% above market element?

“And” language: While the 100 mills or 10% above is a penalty, costs incurred by BPA-TS to manage reliability is really designed to make BPA whole, and is not a penalty. Thus, the “OR” should be changed to “AND” any costs incurred by BPA-TS to manage reliability.



Failure to Comply Penalty Charge

- One element of the “highest of” rate is “any cost incurred by the BPA-TS in order to manage the reliability of the FCRTS due to the failure to comply”

This part of the rate needs revision. Most generators and load-serving customers are NERC registered and are responsible for complying with WECC requirements. Failure to comply with a reliability directive or other customer action may subject the customer and BPA to financial penalties by WECC. The above language therefore needs to specifically include the possibility that BPA may be penalized for the actions of a specific customer, and allow BPA to assign those costs to the specific customer.

Further, generators of 20MW or less are not required to register with WECC. A potential source of costs could arise if numerous small generators do not modify operations during a curtailment event and BPA-TS experiences an over limit Operating Transfer Capability violation, resulting in a financial sanction. In this situation, it seems appropriate to seek cost recovery through the Failure to Comply Penalty Rate, as an additional charge.

- **Linkage to Generation Imbalance (GI):**

It should be clear that when schedules are curtailed, there is no GI credit for the over generation. It may be appropriate to state that in the FTC Charge, or perhaps in the GI Rate, or both.



Next Steps



Next Steps

- The Customer Issues List is available for reference at:
http://www.bpa.gov/corporate/ratecase/2008/2010_BPA_Rate_Case/working-docs.cf
- Open for customer comment or suggestions.



Transmission Services Scheduled Workshops

- BPA Transmission Services has scheduled the following workshops:

| <u>Date</u> | <u>Topic</u> |
|-------------|--|
| ■ 31-Jul | Kickoff for 2010 BPA Rate Case (transmission focus) |
| ■ 6-Aug | Continued Discussion on Workshop Issues and Priorities |
| ■ 10-Sep | Wind Integration: Within-hour Balancing |
| ■ 23-Sep | Segmentation, Failure to Comply Penalty Charge |
| ■ 8-Oct | Segmented Revenue Requirement, Risk Analysis, Cost Allocation |
| ■ 21-Oct | LGIA Credits, Load Forecast, Compliance and Risk Analysis, UIC |
| ■ 22-Oct | <i>NEW!</i> Wind Integration: Within-hour Balancing |
| ■ 5- Nov | Rate Design |

- All workshops dates and topics are subject to change with notice. **More workshops may be scheduled.** Please regularly check BPA's "Agency Calendar" for workshop changes and updates at: http://www.bpa.gov/CORPORATE/PUBLIC_AFFAIRS/CALENDAR/



Appendix



Approach to 2010 BPA Rate Case

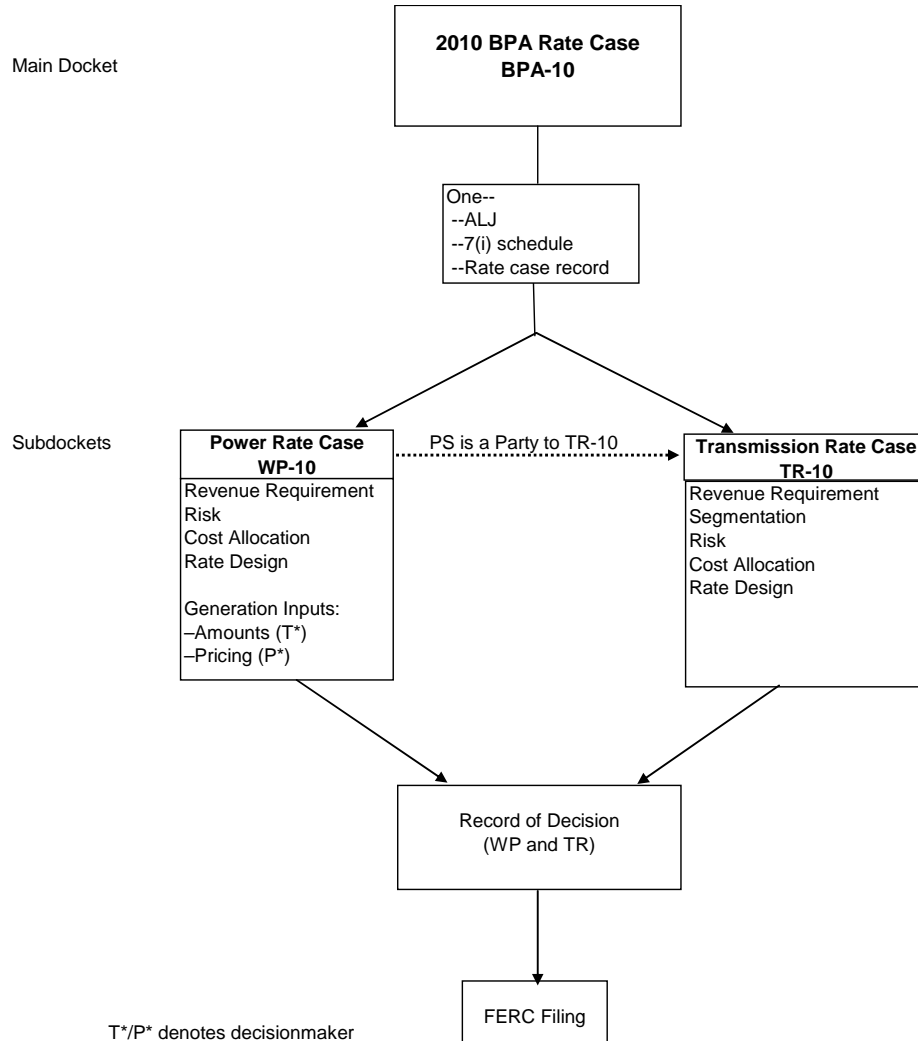


Approach to 2010 BPA Rate Case

- This will be the first year since 1996 that the Power Services and Transmission Services rate cases will be held simultaneously. The primary drivers behind our approach to the rate case are:
 - (1) to streamline the process, and
 - (2) to address generation inputs issues in both rate cases.
- One overall rate case (BPA-10) with two sub-dockets (WP-10 and TR-10). The TR-10 docket will include the transmission revenue requirement (including risk and segmentation), cost allocation, and transmission rate design. All other issues will be decided in the WP-10 docket, including all generation inputs issues. Power Services will be a party in the TR-10 docket.
- This proposal will allow for one FRN, one rate case schedule, one record, and one ROD. It will minimize the overall process while maintaining the separation between power and transmission rate making.



Approach to 2010 BPA Rate Case



T*/P* denotes decisionmaker

