

INDEX

TESTIMONY of

DAVID W. BOGDON, REBECCA E. FREDRICKSON, DAVID L. GILMAN,
JANA D. JUSUPOVIC, TRACEY L. SALAZAR, AND DENNIS E. METCALF

Witnesses for Bonneville Power Administration

SUBJECT: TRANSMISSION RATES STUDY AND RATE DESIGN

	Page
SECTION 1: INTRODUCTION AND PURPOSE OF TESTIMONY	1
SECTION 2: OVERVIEW OF TRANSMISSION RATE DESIGN PROCESS	3
SECTION 3: NETWORK INTEGRATION TRANSMISSION SERVICE RATE DESIGN.....	3
SECTION 4: UTILITY DELIVERY RATE DESIGN	8

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6 **SUBJECT: TRANSMISSION RATES STUDY AND RATE DESIGN**

7 **Section 1: Introduction and Purpose of Testimony**

8 *Q. Please state your names and qualifications.*

9 A. My name is David W. Bogdon, and my qualifications are contained in BP-14-Q-BPA-07.

10 A. My name is Rebecca E. Fredrickson, and my qualifications are contained in BP-14-Q-
11 BPA-21.

12 A. My name is David L. Gilman, and my qualifications are contained in BP-14-Q-BPA-24.

13 A. My name is Jana D. Jusupovic, and my qualifications are contained in BP-14-Q-BPA-31.

14 A. My name is Tracey L. Salazar, and my qualifications are contained in BP-14-Q-BPA-56.

15 A. My name is Dennis E. Metcalf, and my qualifications are contained in BP-14-Q-BPA-47.

16 *Q. What is the purpose of your testimony?*

17 A. The purpose of our testimony is to sponsor the Transmission Rates Study (Study),
18 BP-14-E-BPA-07, as it pertains to the design and calculation of the proposed
19 transmission rates for BPA's wholesale transmission products and services for fiscal
20 years (FY) 2014 and 2015. We provide an overview of the methodologies used to
21 develop the proposed rates and describe specific changes in the rate design. We also
22 describe the organization of the other testimony panels that are supporting specific
23 aspects of the Study.

1 Q. *What other testimony panels are addressing portions of the Study?*

2 A. Three other panels address specific components of the Study. Fredrickson *et al.*,
3 BP-14-E-BPA-33, address cost allocation for the network segment. Chen *et al.*,
4 BP-14-E-BPA-34, address the transmission sales and revenue forecast. Metcalf *et al.*,
5 BP-14-E-BPA-35, address rate design and other issues related to the Montana Intertie.
6 Our testimony does not discuss the portions of the Study addressed by the other panels.

7 Q. *What specific aspects of the Study does your testimony address?*

8 A. Our testimony focuses primarily on areas of the Study where we are proposing changes
9 in the rate design and rate schedules for the current rates. Specifically, we address
10 changes in the rate design and the rate schedule for Network Integration (NT)
11 transmission service. We also address adjustments made in the calculation of the
12 proposed NT-14 rate to account for the costs of redispatch to serve NT customers.
13 Finally, we address changes proposed for Utility Delivery service.

14 Our testimony does not address all of the other rates described in the Study. The
15 Study itself describes and explains the design and calculation of all of the proposed rates.

16 Q. *Does the Study address the proposed rates for all of the Ancillary and Control Area
17 Services in the transmission rate schedules?*

18 A. No. The Study addresses the rates for Scheduling, System Control and Dispatch service
19 and Reactive Supply and Voltage Control from Generation Sources (also referred to as
20 Generation Supplied Reactive) service. The Study does not address the other Ancillary
21 and Control Area Services. The Ancillary and Control Area Services Rate Design
22 testimony, BP-14-E-BPA-28, and the Generation Inputs Study, BP-14-E-BPA-05,
23 describe the development and design of the rates for the other Ancillary and Control Area
24 Services.

1 **Section 2: Overview of Transmission Rate Design Process**

2 *Q. How does BPA generally design transmission service rates?*

3 A. Through the Integrated Program Review process, BPA develops the forecast of costs of
4 operating and maintaining its transmission system during the rate period. These costs
5 form the basis for the transmission revenue requirement and are allocated to the various
6 transmission segments based on the facilities assigned to each segment. *See*
7 *Transmission Segmentation Study, BP-14-E-BPA-06, and Transmission Revenue*
8 *Requirement Study, BP-14-E-BPA-08. The Transmission Rates Study forecasts the sales*
9 *for all transmission services and designs rates such that the revenues from the forecasted*
10 *sales recover the allocated costs.*

11 Some of the costs are associated with Ancillary and Control Area Services, in
12 particular the costs of generation inputs provided by BPA Power Services. As described
13 above, the Study does not address the rates for those services.

14
15 **Section 3: Network Integration Transmission Service Rate Design**

16 *Q. Are you proposing any changes to the NT Rate Design for the FY 2014-2015 rate period?*

17 A. Yes. We are proposing several modifications to the NT rate design to align with the
18 proposal to use the 12 NCP (non-coincidental peak) cost allocation method for the
19 Network segment. The testimony of Fredrickson *et al.*, BP-14-E-BPA-33, describes the
20 12 NCP cost allocation method and the reasons they are proposing to adopt it to set rates
21 for FY 2014-2015.

22 Changes to the NT rate design include the following. First, we are proposing to
23 change the NT billing factor. Second, we propose to charge a single NT rate as opposed
24 to an NT base charge and an NT load shaping charge. Third, we specify how load will be

1 measured at points of delivery that do not record load on an hourly basis. Finally, we
2 propose to delete the Metering Adjustment section of the current NT rate schedule.

3 *Q. What billing factor are you proposing for NT service in FY 2014-2015, and how is it*
4 *calculated?*

5 A. In current rates, the NT billing factor is the customer's hourly load on the hour of the
6 monthly transmission system peak, which is the hour of the month that load on the
7 transmission system is highest. We propose to change the NT billing factor to the
8 customer's highest hourly load during the billing month. The highest hourly load is the
9 hourly load at the points of delivery for a customer's Network Load on the hour of the
10 month in which the sum of the customer's load at all of its points of delivery is highest.

11 *Q. Why are you proposing to change the NT billing factor?*

12 A. As described in Fredrickson *et al.*, BP-14-E-BPA-33, we propose to adopt the 12 NCP
13 method to allocate costs for the Network segment for FY 2014-2015 rates. Under the
14 12 NCP method, the NT allocation factor is based on a forecast of the customer's highest
15 hourly load during the month. We propose to recover costs under the NT rate using the
16 same load assumptions as the NT allocation factor. By using consistent assumptions for
17 both the NT allocation factor and the NT rate, the NT rate will fully recover Network
18 segment costs allocated to NT customers.

19 *Q. Why does the current NT rate include a load shaping charge?*

20 A. The current NT rate, NT-12, includes both a base charge and a load shaping charge. The
21 base charge equals the Network segment unit cost, which is the cost recovered from each
22 kilowatt of Point-to-Point (PTP), Integration of Resources (IR), and NT service. The
23 load shaping charge recovers costs allocated to NT service that are not recovered by the
24 base charge, which recovers less than the full amount of Network segment costs that must
25 be recovered from NT customers. This shortfall exists because the base charge applies to

1 the NT load on the hour of the monthly transmission system peak, whereas costs are
2 allocated to NT service based on the NT load on the hour of the annual transmission
3 system peak. NT load during the annual transmission system peak is higher than the NT
4 load during the monthly transmission system peaks. As a result, the base charge in the
5 current rate schedule under-recovers costs. The load shaping charge recovers this
6 shortfall.

7 *Q. Why are you proposing to eliminate the load shaping charge?*

8 A. For FY 2014-2015, we propose to use the same NT load assumptions for the NT-14
9 billing factor, the NT allocation factor, and calculation of the Network segment unit cost.
10 Because the NT billing factor and the allocation factor are based on the same load
11 forecast assumptions, the proposed NT rate will fully recover Network segment costs
12 allocated to NT customers. Therefore, the load shaping charge is unnecessary.

13 *Q. How will load be measured at points of delivery that do not record load on an hourly
14 basis?*

15 A. Some customers' point of delivery meters do not provide the customer's highest hourly
16 load for the point of delivery. Instead, these meters record peak load for the month. The
17 meters do not record the hour the peak occurred or the load on an hourly basis. Because
18 we cannot use the hourly load at these points of delivery for the calculation of the
19 customer's highest hourly load, we propose to use the peak load.

20 *Q. Why do you propose to delete the "Metering Adjustment" section in the NT-12 rate
21 schedule?*

22 A. As discussed above, in current rates, the NT billing factor is the customer's load on the
23 hour of the monthly transmission system peak, but some customers' points of delivery do
24 not record load on an hourly basis. Without hourly load data, BPA cannot determine the
25 load on the hour of the monthly transmission system peak. The Metering Adjustment is

1 an alternative way of calculating the customers' loads at these points of delivery on the
2 hour of the monthly transmission system peak. As discussed above, we propose a new
3 method to calculate the customers' loads at these points of delivery for the proposed NT
4 billing factor. Therefore, the Metering Adjustment is no longer necessary.

5 *Q. Please provide background on the adjustment that is made to the Network segment for*
6 *NT Firm Redispatch.*

7 A. NT Firm Redispatch is a type of redispatch that Power Services provides to Transmission
8 Services under Attachment M of BPA's open access transmission tariff. Under
9 Attachment M, Power Services provides three types of redispatch at the request of
10 Transmission Services: Discretionary Redispatch, NT Firm Redispatch, and Emergency
11 Redispatch. Attachment M redispatch is discussed further in the Generation Inputs
12 Study, BP-14-E-BPA-05.

13 BPA's tariff provides that NT customers will make their Network Resources
14 available for redispatch to avoid curtailments to firm transmission to serve NT load
15 during transmission constraints. Section 33.3 of the tariff provides that NT customers are
16 responsible for the redispatch costs associated with firm service to NT load.

17 Historically, BPA has provided redispatch to avoid curtailments to NT service
18 under Attachment M of the tariff. As in past rate periods, BPA expects to continue to
19 provide redispatch service to NT customers from the Federal system resources under
20 Attachment M through NT Firm Redispatch.

21 *Q. How are you proposing to allocate the costs of redispatch under Attachment M?*

22 A. We are proposing to allocate the costs of redispatch provided by Power Services for the
23 purpose of maintaining firm NT service (NT Firm Redispatch) solely to NT customers
24 because the redispatch benefits only NT customers. These costs are forecast to be
25 \$350,000 per year. Generation Inputs Study, BP-14-E-BPA-05, section 7. We are

1 proposing to allocate the forecast costs of Discretionary Redispatch to all Network
2 segment users because Discretionary Redispatch benefits all Network segment users.
3 These costs are forecast to be \$50,000 per year. *Id.* The costs of Emergency Redispatch
4 are forecast to be zero. *Id.*

5 *Q. How are the costs of NT Firm Redispatch allocated to NT customers?*

6 A. We have removed the forecast NT Firm Redispatch costs from the segmented revenue
7 requirement for the Network segment. We accomplish this by applying a credit of
8 \$350,000 to the segmented revenue requirement for each year of the rate period, which
9 reduces the segmented revenue requirement that is used to develop rates for Network
10 segment users. We then include the \$350,000 in the rate for NT service by developing a
11 per-unit redispatch cost that is added to the NT rate.

12 *Q. How did you calculate the per-unit NT Firm Redispatch cost?*

13 A. We calculated the per-unit redispatch cost by dividing the forecast NT redispatch costs
14 (\$350,000) by the NT sales forecast (7,434 MW). We then divided that figure by 1000 to
15 convert the unit cost from megawatts to kilowatts, and then by 12 to convert it from an
16 annual cost to a monthly cost. The resulting per-unit redispatch cost is \$0.004 per
17 kilowatt-month. Transmission Rates Study, BP-14-E-BPA-07, section 4.2.

18 *Q. What is the proposed NT rate?*

19 A. The proposed NT rate is developed by adding the Network segment unit cost (\$1.540 per
20 kilowatt-month) and the redispatch unit cost (\$0.004 per kilowatt-month). The resulting
21 proposed NT rate is \$1.544 per kilowatt-month. *Id.*

22 *Q. Are you forecasting any costs related to redispatch other than those for redispatch under*
23 *Attachment M)?*

24 A. We plan to forecast costs associated with redispatching NT customers' non-Federal
25 Network Resources (we refer to this type of redispatch as non-Federal NT redispatch).

1 We are currently evaluating how to implement non-Federal NT redispatch, and the Initial
2 Proposal revenue requirement and proposed rates do not include a forecast of costs for it.
3 However, we expect to implement non-Federal NT redispatch during the rate period and
4 therefore plan to include the forecast costs in the Final Proposal revenue requirement.

5 Our initial estimates are that the costs of non-Federal NT redispatch could range
6 from \$80,000 to \$150,000 per year during the rate period. These figures reflect the
7 estimated costs of implementation of non-Federal NT redispatch and updates to
8 communications software that will be necessary to send communications signals to non-
9 Federal resources that would be used for the redispatch. We plan to allocate these costs
10 to NT rates, because this redispatch benefits only NT customers.

11 *Q. How do you propose to allocate the costs of non-Federal redispatch to NT customers in*
12 *the Final Proposal?*

13 *A.* We expect that the costs of non-Federal NT redispatch will be addressed in the same
14 manner as the costs of Attachment M NT Firm Redispatch. That is, we expect that the
15 costs of non-Federal redispatch will be included in the segmented revenue requirement
16 for the Network. We will then credit the segmented revenue requirement in the amount
17 of those costs, and we will apply those costs solely to NT customers by using them to
18 develop a per-unit non-Federal NT redispatch cost that will be added to the NT rate.

19
20 **Section 4: Utility Delivery Rate Design**

21 *Q. What is the Utility Delivery Charge?*

22 *A.* The Utility Delivery Charge is a charge for the delivery of power over the Utility
23 Delivery segment. The Utility Delivery segment consists of substations and other
24 transmission facilities that deliver power to utility customers at voltages below 34.5 kV.

1 *Q. What billing factor are you proposing for the FY 2014-2015 Utility Delivery Charge?*

2 A. Our proposed billing factor for the Utility Delivery Charge depends on the type of
3 transmission service the customer is taking. For customers taking NT service, the
4 proposed billing factor for the Utility Delivery Charge is the customer's hourly load at
5 the points of delivery specified as Utility Delivery facilities on the hour of the customer's
6 highest Network Load. One Utility Delivery customer, however, takes PTP service and,
7 as a result, does not have Network Load. For that customer, the proposed billing factor
8 for the Utility Delivery Charge is the customer's hourly load at the specified Utility
9 Delivery points of delivery on the hour in which the sum of the customer's load at all
10 points of delivery is highest. This hour is the equivalent to a NT service customer's
11 highest hourly Network Load. Transmission, Ancillary and Control Area Service Rate
12 Schedules, BP-14-E-BPA-10, GRSPs, section II.A.

13 *Q. Is the proposed Utility Delivery Charge billing factor different from the one used in*
14 *current rates?*

15 A. Yes. The Utility Delivery Charge billing factor for the FY 2012-2013 rate period is the
16 customer's total load at the points of delivery specified as Utility Delivery facilities on
17 the hour of the BPA transmission system's monthly peak. We are proposing a change to
18 the Utility Delivery billing factor so that it remains consistent with the billing factor
19 being proposed for NT service. We agree with PNGC's, WPAG's, and NRU's rate case
20 workshop comments that using two different hours for the NT service and Utility
21 Delivery billing factors would make load correction, billing corrections, and storage of
22 data "administratively burdensome on BPA and utilities, without any commensurate
23 benefits."¹

¹ *NRU, PNGC, and WPAG Comments on BPA's Proposed Billing Determinant*, (September 19, 2012), available at <http://www.bpa.gov/Finance/RateCases/BP-14RateAdjustmentProceeding/Pages/Customer-Comments.aspx>.

1 Q. *Does the proposed Utility Delivery Charge fully recover the costs of the Utility Delivery*
2 *segment?*

3 A. No. BPA has settled all recent transmission rate cases. The Utility Delivery Charge set
4 through these rate case settlements created a gap between the amount of revenue required
5 to cover all the Utility Delivery segment's costs and the amount of revenue actually
6 raised by the Utility Delivery Charge. As a result, the FY 2012-2013 Utility Delivery
7 Charge recovers about 54 percent of the Utility Delivery segment's revenue requirement.

8 Q. *What increase in the Utility Delivery Charge are you proposing?*

9 A. We are proposing to increase the Utility Delivery rate itself by 6.9 percent. Study
10 section 7.4.1. In addition, as explained above, we propose to change the Utility Delivery
11 billing factor. Changing the billing factor results in increased Utility Delivery revenue
12 because the proposed billing factor is based on the hour of the customer's highest load.
13 This measure of load is generally higher than under the current billing factor, which is
14 based on the customer's load on BPA's transmission system peak. The 6.9 percent rate
15 increase, applied to the proposed billing factor, results in the equivalent of a 25 percent
16 increase in the Utility Delivery Charge for the average Utility Delivery customer. *Id.*
17 Nevertheless, the proposed Utility Delivery rate will under-recover the segment's costs
18 by an average of \$2.56 million per year. *Id.* We propose to allocate these costs to the
19 Network segment. *Id.* This allocation raises the IR, FPT, PTP, and NT rates by
20 0.40 percent.

21 Q. *Why are you proposing a Utility Delivery rate that does not fully recover the costs of the*
22 *Utility Delivery segment?*

23 A. We believe that increasing Utility Delivery revenues by the amount necessary to fully
24 recover the Utility Delivery segment's revenue requirement would cause significant rate
25 shock, a precipitous increase in any given rate. An important utility industry ratemaking

1 principle is to avoid significant rate shock. Avoiding rate shock is also consistent with
2 James C. Bonbright's *Principles of Public Utility Rates*, which is widely used throughout
3 the utility industry. One of Bonbright's ratemaking principles is the stability of rates
4 with minimum of unexpected changes seriously adverse to existing customers.
5 Especially in a difficult economy such as this one, very large rate increases can be
6 difficult for customers either to absorb or to pass on.

7 *Q. Why are you proposing to increase the amount of revenue recovered via the Utility*
8 *Delivery Charge by 25 percent?*

9 *A.* We are proposing this increase for two reasons. First, the equivalent of a 25 percent
10 increase in the Utility Delivery rate strikes a balance between avoiding rate shock and
11 setting rates based on cost causation. On the one hand, 25 percent is a significant
12 increase, more than the rate increases we are proposing in any other transmission rates
13 and more than a typical transmission rate increase. On the other hand, it is not so high as
14 to cause significant rate shock, at least as compared to increasing Utility Delivery
15 revenue to a level that covers the costs of the entire segment. We drew a balance
16 between the degree to which any individual rate could reasonably be increased in one rate
17 period (avoiding rate shock), and assigning that rate its appropriate costs (following cost
18 causation principles). To balance these two ratemaking principles, we are proposing to
19 increase the Utility Delivery rate by the equivalent of 25 percent. In the next rate case,
20 we will strongly consider proposing to raise the Utility Delivery rate at least 25 percent to
21 further reduce the Utility Delivery costs that are allocated to the Network segment.

22 Second, we are proposing a 25 percent rate increase to give customers additional
23 incentive to purchase the Utility Delivery facilities that are serving them. BPA's
24 longstanding policy goal is to sell as many Utility Delivery facilities as possible. About
25 80 percent of the Utility Delivery facilities that existed in 1996 have been sold. In recent

1 years, however, the sale of these facilities has slowed considerably. BPA believes that
2 the lack of a Utility Delivery rate increase since October 2006 has provided a
3 disincentive for Utility Delivery customers to buy the facilities that serve them. Raising
4 the Utility Delivery rate by a significant amount should provide a substantial incentive
5 for the remaining Utility Delivery customers to buy the facilities and avoid the Utility
6 Delivery Charge entirely.

7 *Q. Does this conclude your testimony?*

8 *A. Yes.*