INDEX

REBUTTAL TESTIMONY OF

BYRON G. KEEP, ORVILLE J. BLUMHARDT, GERARD C. BOLDEN,

MAUREEN R. FLYNN, MARILYN K. HOLLAND, AND TIMOTHY D. MCCOY

Witnesses for Bonneville Power Administration

SUBJECT: **Rebuttal Testimony for Demand Charge, Load Variance Charge, Stepped-Up Multiyear Block Charge, Unauthorized Increase Charge, Excess Factoring Charge, Definition of Stable Rates, and Transmission Losses**

Attachment

BPA Letter to Customers and Interested Parties, Enclosure 2: Summary of Product Catalog
           Changes

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6   **SUBJECT: REBUTTAL TESTIMONY FOR DEMAND CHARGE, LOAD VARIANCE**

7   **CHARGE, STEPPED-UP MULTIYEAR BLOCK CHARGE,**

8   **UNAUTHORIZED INCREASE CHARGE, EXCESS FACTORING**

9   **CHARGE, DEFINITION OF STABLE RATES, AND TRANSMISSION**

10   **LOSSES**

11   **Section 1.   Introduction and Purpose of Testimony**

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

13   A.   My name is Byron G. Keep. My qualifications are contained in WP-02-Q-BPA-34.

14   A.   My name is Orville J. Blumhardt. My qualifications are contained in WP-02-Q-BPA-05.

15   A.   My name is Gerard C. Bolden. My qualifications are contained in WP-02-Q-BPA-06.

16   A.   My name is Maureen R. Flynn. My qualifications are contained in WP-02-Q-BPA-23.

17   A.   My name is Marilyn K. Holland. My qualifications are contained in WP-02-Q-BPA-29.

18   A.   My name is Timothy D. McCoy. My qualifications are contained in WP-02-Q-BPA-46.

19   *Q.   Have you previously filed testimony in this proceeding?*

20   A.   Yes. We previously sponsored direct testimony on the Demand Charge, Load Variance

21   Charge, Development of Energy Rates, Unauthorized Increase and Excess Factoring

22   Charges, and Rate for Pre-Subscription Contracts. *See* Keep, *et al.,* WP-02-E-BPA-17.

23   *Q.   What is the purpose of your rebuttal testimony?*

24   A.   The purpose of this testimony is to rebut issues raised by the parties' direct testimony.

25   *Q.   How is your testimony organized?*

26

1	A.	This testimony is organized in eight sections. Section 1 outlines the purpose of our
2		testimony. Section 2 discusses the Demand Charge. Section 3 discusses the Load
3		Variance Charge. Section 4 discusses the Stepped-Up Multiyear Block Charge.
4		Section 5 discusses the Unauthorized Increase Charge. Section 6 discusses the
5		Excess Factoring Charge. Section 7 discusses the Definition of Stable Rates. Section 8
6		discusses transmission losses.

7 **Section 2.   Demand Charge**

8 *Q.   Was there customer support of BPA's method of computing the Demand Charge by using*

9   *the positive hourly differences above an annual average?*

10 A.   The High Load Factor Group (HLFG) agrees with the overall concept. *See* Koehler,

11   *et al.,* WP-02-E-HL-01, at 7.

12 *Q.   The HLFG argues that California Power Exchange (California PX) hourly prices*

13   *provide a reasonable reflection of market volatility compared to AURORA model*

14   *volatility and the California PX market prices should be used to determine the Demand*

15   *Charge. Koehler, et al., WP-02-E-HL-01, at 8-9. Do you agree?*

16 A.   No. The California PX is a very new market with very little historic data to compare.

17   Using one year historical California PX hourly prices in our view is not a sufficient

18   sample of data to rely on for long-term ratemaking purposes. The California PX reflects

19   hourly prices only in the California hourly market. The AURORA model reflects hourly

20   prices for all of the Western Systems Coordinating Council (WSCC) area and provides

21   hourly prices for the Northwest. For a further discussion, *see* the testimony of Anderson,

22   *et al.,* WP-02-E-BPA-42.

23 *Q.   Did the testimony of the parties challenge the appropriateness of Bonneville Power*

24   *Administration's (BPA) single Demand Charge in the common table of rates?*

25 A.   Yes, the HLFG disagreed with the common table of rates approach to the Demand

26   Charge. They recommended that BPA separately value firming, peaking, and factoring,

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1		and allocate the costs of each service among its products, referring to BPA's full and
2		partial requirements products versus block products. (Koehler, *et al.,* WP-02-E-HL-01,
3		at 21-29.)
4	*Q.*	*What is BPA's response?*
5	A.	First, BPA's proposed common table of rates results in different effective rates depending
6		on the product choices made by customers and the characteristics of their loads. BPA
7		agrees with HLFG that block and full and partial requirements products have different
8		costs of service. The effective rates for full and partial requirements purchases which
9		result from the common table of rates are higher than the effective rates for block
10		purchases and therefore reflect the additional cost to serve such products. This impact on
11		the effective rate is a result of the different billing factors for Demand, Energy, and Load
12		Variance as described in BPA's Power Product Catalog. BPA reviewed preliminary
13		estimates of the proposed rate impacts on typical customers. These estimates show that
14		the effective rates paid, assuming purchase of a full service or actual partial service
15		product, range from 1 percent to 28 percent higher than the effective rate for a flat block.
16		In addition, block purchasers can lower their effective rate by choosing to purchase more
17		energy in light load hours (LLH) (unless they are also purchasing the Slice product), thus
18		avoiding all or some exposure to the Demand Charge.
19		Second, BPA disagrees with HLFG that a cost allocation approach to unbundled
20		Subscription product components is necessary to achieve a cost-based rate filing. BPA's
21		power rate proposal is a cost-based rate filing. It is established so as to meet the Power
22		Business Line (PBL) overall revenue requirement. *See* Burns, *et al*., WP-02-E-BPA-37.
23		BPA has allocated certain costs to certain rate pools. For example, the costs of low
24		density discount (LDD) and Rate Impact Mitigation products are allocated to the Priority
25		Firm (PF) rate pool. However, BPA has not allocated or functionalized specific costs to
26		be collected by the specific billing factors of Load Variance, Demand, and Energy. As

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1		explained in our direct testimony (Keep, *et al.,* WP-02-E-BPA-17, at 3-9), BPA's
2		calculations of the Demand Charge and Load Variance charge are based on market-priced
3		proxies. The purpose for using the proxy prices is to provide appropriate price signals
4		and distributions of payment responsibility. They are not allocations of costs to specific
5		billing factors.
6		Third, HLFG stated that BPA is " . . . planning to meet two types of load"
7		(Koehler, *et al.,* WP-02-E-HL-01, at 28), referring to full and actual partial products as
8		opposed to blocks. The HLFG testimony implies that Subscription blocks would or
9		should be served with the least expensive portion of BPA's generation and purchase
10		portfolio. BPA's Subscription product line, however, cannot be divided in to "two types
11		of load." The Subscription Product catalog includes six core products and the Slice
12		product, each of which present different implications for inventory maintenance.
13		Customers purchasing blocks do not have priority rights to the less expensive parts of the
14		Federal Base System (FBS). Customer product choices will not necessarily be known
15		until after the rates have been finalized. The rates are not based on assumed sales of
16		specific quantities of any product.
17	Q.	*HLFG argues that the price risks for firming service for a block purchase can be laid off*
18		*in the wholesale market. Koehler, et al., WP-02-E-HL-01, at 26. Do you agree*?
19	A.	BPA disagrees that it will be feasible to earmark future purchases or use of price risk
20		management tools to certain firm products. The Subscription process is likely to result in
21		a mix of purchases of different products. BPA's obligation to provide firm service does
22		not distinguish certain products, such as blocks, as having first access to cost-minimizing
23		actions, such as laying off price risk using market tools. Firm service as offered with
24		Subscription products requires BPA to stand ready with its generating resources and/or to
25		purchase energy from the market if Federal or contract resources fail. This firming
26		service applies to all products for requirements service, including purchase of blocks and

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1	load-following service. In addition, BPA's projected purchases to serve total
2	Subscription load for all products are expected to be as block amounts, not hour-by-hour
3	purchases to follow load shape as suggested by HLFG.
4	*Q. HLFG argues that the cost of providing peaking service is greater for a requirements*
5	*product than for the flat block. Koehler, et al., WP-02-E-HL-01, at 27. Please respond.*
6	A. First of all, the flat block Subscription product is requirements service. Providing shaped
7	requirements service, *i.e.,* full and partial requirements service, does cost more to serve
8	than a flat block. Nonetheless, the combination of the Demand Charge and the product
9	specific billing determinant equitably recovers the costs for the service. A flat block and
10	a shaped load pay different effective rates that reflect the different costs to serve.
11	*Q. HLFG argues that factoring for block purchases is more predictable and less costly than*
12	*factoring for requirements products. Koehler, et al., WP-02-E-HL-01, at 27. Do you*
13	*agree?*
14	A. Again, the block product is requirements service. We do agree that factoring for block
15	purchases is more predictable and less costly than factoring for other requirements
16	products. The combination of the Demand Charge and the product-specific billing
17	determinants equitably recover the costs of factoring from block and load following
18	purchases. A shaped load that contributes to and reinforces BPA's overall system peak
19	will pay more than the flat block load. A one average megawatt (aMW) shaped load
20	generally will pay more than a one aMW flat load because of the different billing
21	determinants.
22	*Q. HLFG argues that the services labeled firming, peaking, and factoring are essentially the*
23	*option value of meeting demand on any particular hour. Koehler, et al.,*
24	*WP-02-E-HL-01, at 27. Please respond.*
25	A. We believe there is a distinction. As proposed, BPA's Demand Charge captures the
26	value associated with the services that BPA provides to guarantee firm service. In

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1	contrast, an option is a financial tool used to transfer price risk. Therefore, unlike options
2	which are only a method of guaranteeing price, BPA's Demand Charge is guaranteeing
3	firm service.
4	*Q. HLFG argues that BPA should calculate the option values using a dynamic resource to*
5	*meet a static load and calculate the option values using a dynamic resource to meet a*
6	*dynamic load, and the difference between these two option values can be used to*
7	*unbundle the demand charge. Koehler, et al., WP-02-E-HL-01, at 28. Please respond.*
8	A. BPA sent HLFG a data request asking HLFG to describe the formulas used in the
9	proposed method. In response HLFG suggested, in spite of the fact that they had not
10	performed calculations of specific option value of using the dynamic resource to meet a
11	dynamic or static load, that option values should be estimated on an hourly basis. Since
12	there is no analysis proffered by the HLFG to support its position, nor is there a defined
13	market for hourly options, this method is not one that we believe we should pursue. And
14	as stated above, we do not believe demand is the hourly option value.
15	*Q. Western Public Agencies Group (WPAG) argues that the services of firming, factoring,*
16	*and peaking are only needed in the heavy load hour (HLH) period during heaviest usage*
17	*and that during a LLH period, these services have no discernible market capacity price.*
18	*Cross, et al., WP-02-E-WA-01, at 40. Please respond.*
19	A. BPA's proposed rate design sufficiently reflects a price signal regarding the HLH/LLH
20	distribution of firming, factoring, and peaking costs in that the Subscription product
21	billing factors for Demand are set in HLH only. This tends to result in increased
22	effective rates for purchasers whose need for firming, factoring, and peaking services are
23	more costly to serve. For example, with the Block product, LLH-only service can be
24	purchased without Demand Charge. Also, Block purchasers can choose a lower HLH
25	Block level relative to the LLH Block level that would greatly decrease the contribution
26	of the Demand Charge to the customer's effective rate.

1   Firming and factoring are clearly used and needed in all hours where a variable

2   generation resource must be managed and backed up to be delivered to a firm load.

3   WPAG's assertion that these services are typically only needed in HLH is incorrect.

4   Factoring FBS generation among LLH, in view of the differences between hourly LLH

5   market prices, incurs cost. Open energy markets clearly display the hourly differentials

6   among LLH so firming and factoring for LLH obligations must reflect that hourly cost

7   differential.

8   Viable commodity markets have not yet developed for unbundled stand-ready

9   power products such as firming or factoring, as BPA uses those terms for Subscription

10   products. This is not because such products are not applicable outside of HLH or because

11   they have no value. Rather, the reason for this is because such products tend to arise in

12   connection with requirements service, such as provided by BPA, which are not usually

13   represented among of the array of commodity products that open markets tend to trade.

14 *Q.   WPAG argues that by including LLH prices in the annual average energy prices rather*

15 *than just the HLH prices, BPA overstates the value of these services. Cross, et al.,*

16 *WP-02-E-WA-01, at 40. Do you agree?*

17 A.   No. We believe that including LLH prices in the annual average energy prices rather

18   than just the HLH prices does not overstate the value of firming, factoring, and peaking.

19   As we will explain, the demand method we chose necessitates using LLH pricing to

20   capture these services by accounting for the difference in prices of all hourly energy

21   prices across the year.

22   In some months the AURORA LLH prices are above the annual average energy

23   prices while in some other months the AURORA HLH prices are below the annual

24   average energy prices. We use the annual average energy price to account for the shape

25   of energy prices within-days and across months. Demand cost is inherent in all hourly

26   prices and not just in the HLH prices. There is some demand cost reflected in the

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1	difference between HLH and LLH prices. The cost of this demand component would not
2	get captured in our Demand Charge if LLH prices were not included in the annual
3	average energy price.
4	*Q. WPAG argues that peaking units are typically used to provide firming, factoring, and*
5	*peaking services. Since peaking units typically are dispatched during periods of high*
6	*demand, they can only be expected to generate revenues during this period and,*
7	*therefore, LLH energy prices should not be used in the annual average energy price.*
8	*Cross, et al., WP-02-E-WA-01, at 41. Do you agree?*
9	A. No we do not agree that the LLH energy prices should be excluded from the annual
10	average energy price. If we take the average of only the HLH prices, we will not capture
11	the value of capacity that is embedded in the price differential between HLH and LLH.
12	Therefore, not including LLH prices in the average energy price would also contribute to
13	under-valuing the demand component.
14	*Q. WPAG argues that the positive difference between the average of the HLH prices and the*
15	*highest prices should be used to calculate the demand value. Cross, et al.,*
16	*WP-02-E-WA-01, at 42. Do you agree?*
17	A. No, we do not agree with the suggested method of only using average HLH prices. The
18	average price needs to include LLH, otherwise the full value of demand cannot be
19	captured as is pointed out above.
20	*Q. WPAG argues that the demand charge according to WPAG's calculation is more*
21	*reflective of the market value of the service being provided. Cross, et al.,*
22	*WP-02-E-WA-01, at 42. Do you agree?*
23	A. No, we do not believe that WPAG's method better reflects the market value of the
24	service. We believe that WPAG's method under-values demand. WPAG's calculations
25	fail to capture the value for demand that is reflected by including the LLH in the average
26	annual price and thus would under-collect costs. Our method was built from the premise

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1	that if a load were flat and BPA were to charge a single rate, then the annual average
2	price would collect all costs. This works for a flat load, but not necessarily for a shaped
3	load. Therefore, to allocate costs equitably for a shaped and flat load, BPA's rate
4	proposal includes a monthly demand charge and monthly HLH and LLH energy charges.
5	These monthly charges would result in the flat load paying the same charge as it would
6	pay under a single annual average charge. The shaped load would pay more or less than
7	the average annual charge depending on whether the load was shaped into HLH or LLH
8	or shaped into more or less costly months. Therefore, we still believe that the LLH must
9	be included in the annual average price.
10	Q.	*WPAG argues that the true market value of this service is only apparent at the times of*
11		*heaviest usage. Cross, et al., WP-02-E-WA-01, at 43. Do you agree?*
12	A.	No. We believe that factoring, peaking, and firming services are of value in all hours.
13		The customer's load will be met on an hour-by-hour basis regardless of the magnitude
14		and regardless of whether it is in HLH or LLH.
15	Q.	*Did the testimony of the parties challenge BPA's Demand Adjuster billing factor for*
16		*Demand?*
17	A.	Yes. WPAG argued that the Demand Adjuster should be calculated differently.
18		(*See* Cross, *et al.,* WP-02-E-WA-01, at 39-48.) They recommended changes to the

numerator and denominator as follows:

$$\frac{\text{Customer TRL on GSP hour less customer resource contribution at BPA GSP hour}}{\text{Customer TRL on CSP hour less customer resource contribution at BPA GSP hour}}$$

An example was given:

$$\frac{\text{8 MW TRL on GSP hour less 1 MW resource declaration}}{\text{10 MW TRL on CSP less 1 MW resource declaration}} = 0.778 \text{ adjuster} * 9\text{MW take}$$

BPA's Demand Adjuster calculation would be:

$$\frac{\text{Customer TRL on GSP hour}}{\text{Customer TRL on CSP hour}} \quad \text{or:} \quad \frac{8 \text{ MW}}{10 \text{ MW}} = 0.8 \text{ adjuster} * 9 \text{ MW take}$$

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1	WPAG argues that the application of BPA's method results in recovering more than the
2	"true cost" of meeting this customer's peak load.
3	Q. *What is BPA's response?*
4	A. BPA's Demand Adjuster methodology is specified in the Power Products Catalog,
5	Appendix A, Product Billing Factors. The product intent was to create demand billing
6	parity for partial product purchasers in comparison to full service purchasers. This was
7	done in light of the BPA proposal to bill full service purchasers for demand on the BPA
8	Generation System Peak (GSP) hour. BPA's overall price signal to customers is intended
9	to be that their mills/kilowatthour (kWh) effective rate should increase as the load factor
10	placed on BPA decreases, *i.e.,* becomes more 'peaky.' The Demand Adjuster was not
11	intended to change that. This effective rate difference results in a price signal and also a
12	proportionate distribution of the responsibility for paying a portion of BPA's revenue
13	requirement.
14	WPAG's suggested method would result in a lower Demand Charge as the GSP
15	delivery amount decreased whether or not the customer was helping to reduce the
16	factoring service placed on BPA. Under the WPAG method, a customer who supplied a
17	flat diversification resource to its load would have chosen to place a peakier load factor
18	on BPA than a customer who supplied an equal megawatt (MW) amount on the GSP
19	hour, but attempted to follow a portion of their own load shape. This would weaken the
20	price signal regarding choices that increase peaky load placed on BPA. It also would
21	counteract BPA's intention to distribute proportionate responsibility for payment of the
22	revenue requirement to customers consistent with the obligation they place on BPA.
23	**Section 3. Load Variance Charge**
24	Q. *The Direct Service Industries (DSI) argue that there appears to be ambiguity in how the*
25	*Load Variance Charge will be applied. DSIs argue that in some circumstances certain*
26	*loads would be exempt from the Load Variation Charge, e.g., walled-off loads. The rate*

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1		*schedules fail to define these circumstances. Schoenbeck, et al., WP-02-E-DS-03, at 7.*
2		*They further argue that the Load Variance Charge be applied only to customers whose*
3		*loads impose variance on BPA when they vary. Do you agree?*
4	A.	While we may agree that the definition of "Total Retail Load" does not address those
5		loads that are exempt from the Load Variance Charge, the "Total Retail Load" definition
6		will not be changed. However, adjustments to Total Retail Load for applying the Load
7		Variance Charge may be determined in the power sales contract and will exclude that
8		portion of the Total Retail Load and its associated load variation that BPA is not
9		obligated to serve.
10	Q.	*DSIs provide examples of loads they believe should be excluded from the Load Variance*
11		*Charge. One example is a walled-off load. In Data Response PP-BPA-028, BPA stated*
12		*that a walled-off load and its associated variation would not be subject to a Load*
13		*Variance Charge. Another example the DSIs give is the Columbia Falls Aluminum*
14		*Company load served by Flathead Electric Cooperative. Schoenbeck, et al.,*
15		*WP-02-E-DS-03, at 8. Do you agree?*
16	A.	Due to a change in BPA's retail access mitigation policy and the take-or-pay aspect of the
17		power sales contracts, the walled-off load concept is no longer applicable. See attached
18		BPA letter to Customers and Interested Parties (December 2, 1999), specifically,
19		Enclosure 2: Summary of Product Catalog Changes. Since a walled-off load product
20		will no longer be offered by BPA, an example of a load qualifying for an adjustment to
21		Total Retail Load for purposes of the Load Variance Charge billing determinant would be
22		one that BPA has no obligation to serve. Such load must be separately hourly metered,
23		its power supply must be hourly scheduled, and schedules and metered data must be
24		provided to BPA. Also, meeting the load's variation must be an obligation of a party
25		other than BPA. While this type of load may be exempt from the Load Variance Charge,
26		

1		it may be subject to energy imbalance and unauthorized charges. The customer-specific
2		power sales contract will determine adjustments to Total Retail Load.
3	Q.	*The HLFG argues that certain generation capacity is reserved for load following service*
4		*which is used only by those products that include load variance. HLFG argues that BPA*
5		*has mistakenly omitted approximately $8 million annually in load following costs from*
6		*the Load Variance Charge. The cost of that generating capacity should be allocated to*
7		*the Load Variance Charge. Koehler, et al., WP-02-E-HL-01, at 10. Do you agree?*
8	A.	No. As explained in BPA's Power Product Catalog, the Load Variance Charge is
9		applicable to products that provide the service of standing ready to meet variable monthly
10		energy load. The generation capacity referred to is for the service of matching Federal
11		resources to hour-to-hour load shape and is a component of factoring which corresponds
12		to the Demand Charge, not the Load Variance Charge. We refer back to our direct
13		testimony (Keep, *et al.,* WP-02-E-BPA-17) that we are not allocating or functionalizing
14		specific costs to any individual product or billing factor. We have used some proxy
15		pricing approaches to develop "price-signal" rates for certain billing factors such as
16		demand and load variance. That should not be confused with saying that those are our
17		plans of service or that we will actually incur costs in such an earmarked way. BPA will
18		actually be planning and operating to match generation plus other inventory to all load
19		BPA is obligated to serve under existing and Subscription contracts.
20	Q.	*HLFG argues that there is a correspondence between products that use load variance*
21		*and load following and they should pay for the 101 MW of reserves. They also argue that*
22		*the block products do not use the load following service that is attributed to the 101 MW*
23		*of reserves and therefore should not pay for it. Koehler, et al., WP-02-E-HL-01, at 12.*
24		*Do you agree?*
25	A.	No. As stated above, generation reserves for load following are a component of factoring
26		service, which in turn is a component of demand. And as stated in Section 2 of this

1		testimony, the combination of the Demand Charge and the product-specific billing
2		determinants equitably recover the costs of factoring from block and load following
3		service. We are not allocating or functionalizing specific costs to any individual product
4		or billing factor.
5	Q.	*The Public Generating Pool (PGP) argues that BPA's testimony concluding that Total*
6		*Retail Load is a good proxy for the types of load variations covered by the Load Variance*
7		*services contradicts itself and is inconclusive. PGP argues that in BPA's example*
8		*(Keep, et al., WP-02-E-BPA-17, at 8) the 10 aMW overrun is actually independent of the*
9		*size of Total Retail Load. Knitter, et al., WP-02-E-PG-01, at 4. Do you agree?*
10	A.	No, we do not. In the example given in our testimony, Keep, *et al.,* WP-02-E-BPA-17,
11		at 8, Utility A and Utility B have exactly equivalent loads of an expected 100 aMW for a
12		month. The example assumes cold weather affects both utilities equally and causes each
13		an unexpected increase in load of 10 aMW. This increase in energy load for the month is
14		identical for each utility regardless of the amount of resource dedicated to serve their
15		respective loads. The example assumes Utility A has zero (0) resources and Utility B has
16		a 50 MW resource dedicated to serve its load. Utility A is a Full Service customer with
17		an expected load on BPA of 100 aMW. The actual resulting load was 110 aMW with an
18		unexpected increase of 10 aMW. Utility B is an Actual Partial Service customer with an
19		expected load on BPA of 50 aMW. The actual resulting load was 60 aMW with an
20		unexpected increase of 10 aMW. The example concludes that each utility's load will
21		increase 10 aMW. Therefore, the overrun is dependent on the Total Retail Load. Thus,
22		Total Retail Load is the appropriate billing factor for Load Variance service.
23	Q.	*PGP argues that BPA's testimony appears to be based on and driven by historical*
24		*contractual relationships, such as the 1981 power sales contracts, when BPA assumed*
25		*that it was not possible to predict accurately the service from the customers' dedicated*
26		

1		*non-Federal resources to meet loads on a give hour. Knitter, et al., WP-02-E-PG-01,*
2		*at 4. Do you agree?*
3	A.	No. We did not consider historic contracts in developing the Load Variance Charge.
4		Predicting dedication of non-Federal resources to loads is irrelevant as the Load Variance
5		product provides service for the difference between a load forecast and actual load, not
6		the difference between a resource forecast and actual generation.
7	Q.	*PGP argues that the Load Variance service costs are a function of the size of the*
8		*potential changes in load, not the absolute size of the load. Knitter, et al.,*
9		*WP-02-E-PG-01, at 4. Do you agree?*
10	A.	We agree that Load Variance service costs are a function of the size of the potential
11		change in load, but we believe that the size of the potential changes in load are a function
12		of the absolute size of the total load. Therefore, Total Retail Load is an appropriate
13		billing factor because the potential changes in load are a function in Total Retail Load.
14	Q.	*PGP argues a variation of 10 MW up or down in a given hour will cost BPA the same*
15		*amount whether the purchaser is purchasing 100 megawatthour (MWh) on the hour or*
16		*1,000 MWh on the hour. Knitter, et al., WP-02-E-PG-01, at 4. Do you agree?*
17	A.	We agree that a variation of 10 MW up or down will cost the same regardless of the size
18		of the underlying purchase or load. PGP's example, however, fails to recognize the
19		proportional effects of load variations due to, for instance, weather impact. Weather
20		impact on a 100 MW load that caused an increase of 10 MW would cause an increase of
21		100 MW on a 1,000 MW load. The Load Variance Charge was based on observed
22		deviations from forecast. The cost of those deviations was spread over Total Retail Load.
23		Therefore, the correct billing determinant is Total Retail Load.
24	Q.	*PGP states that the inputs to the Black-Scholes model are the potential fluctuations in*
25		*load, not the absolute size of the loads. Knitter, et al., WP-02-E-PG-01, at 5. Do you*
26		*agree?*

1	A.	No. The Black-Scholes model used to develop the Load Variation Charge does not use
2		loads as an input. The inputs to the Black-Scholes model are the expected market price
3		of the commodity, the strike price of the commodity, the risk free interest rate, the
4		volatility of the commodity price, and the time until expiration of the option. The output
5		from the Black-Scholes model is the option price. The output of Black-Scholes is
6		multiplied by potential fluctuations in load resulting in variation costs.
7	Q.	*PGP argues that BPA is spreading the total cost of Load Variance service across the*
8		*largest possible base of billing determinant, rather than charging those loads that*
9		*fluctuate the appropriate incremental cost. Knitter, et al., WP-02-E-PG-01, at 5. Please*
10		*respond.*
11	A.	BPA does charge those loads that fluctuate, but based on an average across all public
12		generating and non-generating loads. This is consistent with the overall rate design of
13		billing on a common table of rates. A customer whose load does not vary has the option
14		of purchasing a block product that does not incur the Load Variance Charge. If a
15		customer's load does vary they could still purchase a block product and cover load
16		variation from the market or through a negotiated Firm Power Products and Services
17		(FPS) product from BPA.
18	Q.	*PGP argues potential suppliers of load variance service would charge according to the*
19		*size of variation and that BPA has insufficient appreciation of unbundling services and*
20		*prices. Knitter, et al., WP-02-E-PG-01, at 5. Please respond.*
21	A.	We believe that BPA has a great appreciation of unbundling services, as demonstrated in
22		the various products and services being offered for this rate period. Simply because BPA
23		set a single table of rates and chose to recover costs based on measured total energy does
24		not mean that BPA has inappropriately unbundled this service and price.
25	Q.	*PGP argues that the billing factor for Load Variance should exclude block purchases*
26		*from Total Retail Load since such purchases cannot vary from contractually agreed*

1		*amounts and, thus, pose no risk of load fluctuations on BPA. The block service shifts*
2		*many risks to the BPA customer. Knitter, et al., WP-02-E-PG-01, at 5. Do you agree?*
3	A.	No. While the amount of power in a block purchase will not vary, the underlying load is
4		not affected and will still vary proportionately due to weather, economy, and load growth.
5		Block service combined with a load following service such as Actual Partial service, does
6		not shift the load variation risk to the BPA customer. The Actual Partial service would
7		still cover the total fluctuations that occur in the Total Retail Load above block service.
8		Therefore, we believe that the correct billing determinant with this combination is Total
9		Retail Load.
10	Q.	*PGP argues that BPA should offer to negotiate in good faith with any customer a limited*
11		*amount of Load Variance service, which would replace the "Total Retail Load Less*
12		*Block" billing factor. Knitter, et al., WP-02-E-PG-01, at 6. Please respond.*
13	A.	BPA has offered to negotiate various products under the FPS 96 Rate Schedule and could
14		negotiate a service similar to load variance. The FPS product would have defined limits
15		based on the customer's specific purchase amounts whereas the Load Variance Charge
16		built against Total Retail Load has no limits. An FPS product providing this type of load
17		variance service could be billed in such a way to replace the Total Retail Load billing
18		factor.
19	Q.	*PGP argues that the difference between the peak and the number of billing hours in the*
20		*month and the customer's average energy load for the month is a reasonable proxy for*
21		*the load subject to fluctuation. PGP suggests that this be the billing factor for the Load*
22		*Variance Charge. Knitter, et al., WP-02-E-PG-01, at 6. Please respond.*
23	A.	BPA's Load Variance Charge is based on historic data and a load growth forecast. In
24		contrast, PGP provides no reasoning or evidence that its suggested billing factor is a
25		measure of load variation. The Load Variance Charge, in part, covers the costs for the
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1		difference between expected loads versus actual loads. The measure of peak versus
2		average has nothing to do with expected loads versus actual loads.
3	*Q.*	*PGP argues that BPA should charge for service by means of billing factors that more*
4		*accurately reflect the services provided. Knitter, et al., WP-02-E-PG-01, at 6. Do you*
5		*agree?*
6	A.	We believe our billing factors cover the costs of service provided by the Load Variance
7		Charge as explained throughout this rebuttal testimony.
8	*Q.*	*WPAG proposes to restrict the allocation of forecasted Load Variance Charge revenues*
9		*to PF and New Resource Firm Power rates and to remove load growth from this charge,*
10		*and to remove the calculation bias from the computation of the charge. Cross, et al.,*
11		*WP-02-E-WA-01, at 52. Please respond.*
12	A.	We are not allocating costs directly to specific billing determinants. Instead we estimate
13		what it might cost if we decided to separately cover monthly energy uncertainty with an
14		option. We then use that estimate to come up with a price-signal rate for load variance.
15		We are not necessarily going to buy such options to cover a specific subset of BPA's
16		loads. BPA will actually be covering total Subscription inventory and load uncertainty
17		simultaneously through a portfolio of long- and short-range approaches.
18	*Q.*	*WPAG argues that the risks accounted for in the Load Variance Charge are also*
19		*accounted for in BPA's Planned Net Revenues for Risk (PNRR) and are, therefore, being*
20		*double-counted by BPA for customers who are assessed the Load Variance Charge.*
21		*Further, WPAG argues that BPA should remove the cost components related to risk*
22		*variations in load due to weather and load growth. Cross, et al., WP-02-E-WA-01, at 53.*
23		*Do you agree?*
24	A.	No. PNRR includes a cost for risk associated with the published rate for the Load
25		Variance Charge. The risk is based on the possibility that any and all Subscription sales,
26		

1		including the Load Variance service, may not recover revenue requirement; therefore, no
2		customers will be double charged by applying the Load Variance Charge. Likewise, we
3		do not believe BPA should remove the cost components related to weather and load
4		growth variations from the Load Variance Charge.
5	Q.	*WPAG argues that the load growth cost component should be eliminated because BPA*
6		*can forecast load within a few percentage points of the actual load including load*
7		*growth. Cross, et al., WP-02-E-WA-01, at 54. Do you agree?*
8	A.	While we agree that BPA can forecast load growth within a few percentage points of
9		actual load, we do not agree that this negates the need to charge for load growth. BPA's
10		forecast does not show that it will have surplus firm power available on an annual basis to
11		meet load growth during the rate period. Charging for load growth provides BPA cost
12		coverage for the cost associated with increasing the FBS to serve customers' load growth
13		at PF rates.
14	Q.	*WPAG argues that since BPA is predicting a "variation" in load due to load growth, it is*
15		*incorrect to include load growth in the risk calculation as if it were "unforeseen."*
16		*Cross, et al., WP-02-E-WA-01, at 55. Do you agree?*
17	A.	No. As stated above, even if there is a predictable variation in load due to load growth,
18		there remains the risk that the Load Variance Charge may not recover the costs associated
19		with serving load growth. The cost of the load growth component is the option fee
20		associated with a forecast market price and the guarantee that the load growth or loss will
21		be served at the PF rate. It is the estimated cost of serving additional load or loss of load
22		at a guaranteed fixed PF rate.
23	Q.	*WPAG argues that including load growth in the calculation of the Load Variance Charge*
24		*artificially inflates the cost of this service and charges the customer twice for the same*
25		*load growth, once through the allocation of costs in its cost of service study and again*
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1		*through the Load Variance Charge. Cross, et al., WP-02-E-WA-01, at 55. Do you*
2		*agree?*
3	A.	No. We do not believe that the charge artificially inflates the cost of this service, nor do
4		we believe that the customer is charged twice for the service. The estimated revenues
5		from the Load Variance Charge reduce the revenue requirement that the PF energy rates
6		must recover. The costs associated with load variance are first calculated, then capped,
7		and then removed from the revenue requirement.
8	*Q.*	*WPAG argues that calculation of the percentage variation should have been performed*
9		*in a different order. Since the load deviations apply to both the generating and*
10		*non-generating publics concurrently, the diversity between the two groups will mitigate a*
11		*portion of the load deviation in any given month. Cross, et al., WP-02-E-WA-01, at 56.*
12		*Do you agree?*
13	A.	Yes. We agree with the change in the order as proposed by WPAG. Results from our
14		calculation are consistent with those of WPAG, *i.e.,* 3.7 percent positive and 0.4 percent
15		negative deviation from the 1991 forecast. The result of this change is a .02 mill/kWh
16		reduction in the total calculated cost for the Load Variation Charge.
17	*Q.*	*WPAG argues that assuming a random distribution of loads about the forecast, future*
18		*loads should be expected above the forecast just as often as they are below.*
19		*Cross, et al., WP-02-E-WA-01, at 56. Please respond.*
20	A.	On examination of the data, the distribution of actual load around the forecast is
21		approximately equal in magnitude when looking at the maximum deviation above and
22		below the forecast. However, more occurrences of loads above forecast are observed
23		than below forecast. Therefore, the average error above the forecast is greater than the
24		average error below the forecast.
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| 1 | **Section 4.** | **Stepped-Up Multiyear (SUMY) Block Charge** |

1   **Section 4.   Stepped-Up Multiyear (SUMY) Block Charge**

2   *Q.   WPAG and the Public Power Council (PPC) argue that the SUMY Block Charge should*

3   *be eliminated. Cross, et al., WP-02-E-WA-01, at 69. Opatrny, et al.,*

4   *WP-02-E-PP-02, at 18. Do you agree?*

5   A.   No, we do not. Eliminating the SUMY Block Charge will lead to an underrecovery of

6   BPA's costs associated with the cost of increasing the FBS. Under the SUMY Block

7   Charge we are estimating the cost of increasing the FBS to be the cost of purchasing

8   power at the market prices forecast by AURORA. Therefore, we believe BPA needs the

9   SUMY Block Charge to ensure its ability to capture all costs associated with serving load

10 placed on BPA by its customers.

11 *Q.   WPAG argues that customers that purchase under the SUMY charge will actually be*

12 *providing BPA with power that it can sell on the market to generate additional revenues*

13 *until it is made available to serve the net requirements loads of the preference customers.*

14 *Cross, et al., WP-02-E-WA-0, at 71. WPAG further argues that imposition of the SUMY*

15 *charge will result in preference customers foregoing the opportunity to step up their BPA*

16 *purchases over time. Do you agree?*

17 A.   No. WPAG argues that a customer's purchase of a multiyear stepped-up block would

18 result in a surplus firm power condition in some years; and BPA will be marketing such

19 surplus firm power in the market. To the contrary, even if some preference customers

20 purchase stepped blocks over time, the firm power not purchased by such customers will

21 not result in surplus firm power. For those preference customers that purchase the

22 stepped-up block, BPA will serve the increase in such customers' net requirements;

23 however, as stated BPA is not forecasting that it will have sufficient surplus firm power

24 to meet such increases on an annual basis. BPA's forecast of its loads and resources

25 shows that it will be necessary for BPA to purchase in the market to serve such increases

26 in load, including increases in the amount of power sold under the block product. The

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1		purpose for the SUMY Block Charge is to recover costs BPA incurs when BPA
2		purchases in the market to meet the increased amount of power sold under the block.
3		We also do not agree that imposition of the SUMY Block Charge will result in
4		preference customers having to forego the opportunity to step up the amount of power
5		they can purchase under a block contract over time. For further discussion *see* Burns and
6		Elizalde, WP-02-E-BPA-37. As we stated previously, BPA will meet increases in the net
7		requirements of its preference customers and we believe the SUMY Block Charge
8		provides BPA with the flexibility to accommodate such increases under the block
9		product. It does so by providing BPA with the assurance that the costs associated with
10		serving the stepped up amounts can be recovered.
11	*Q.*	*WPAG argues that it appears that BPA is using market pricing to restrict access by*
12		*preference customers to FBS power to which they are entitled. Cross, et al.,*
13		*WP-02-E-WA-01, at 72. Do you agree?*
14	A.	No. As stated previously, BPA anticipates the need to purchase power from the market
15		to expand the FBS to meet increased PF power purchases under the SUMY Block
16		product. The SUMY Block Charge provides an equivalent service that is provided to
17		purchasers of Full and Partial requirements service through the Load Variance Charge.
18		Without such a charge, BPA would underrecover its cost to serve these customers.
19		Because BPA expects that it will rely upon the market at times to meet the needs of its
20		preference customers, BPA is proposing some components of preference service to
21		include market costs. Full and Partial requirements customers pay for the service under
22		the Load Variation Charge. A block purchaser with SUMY Block service pays for this
23		service under the SUMY Block Charge.
24	*Q.*	*WPAG argues that BPA should acknowledge that the output of the FBS, including the*
25		*FBS replacements forecast to be purchased during this rate period, must first be used to*
26		*serve the requirements loads of preference customers. Both WPAG and PPC argue that*

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1		*the SUMY Block Charge is unnecessary to apply to increases to preference customer*
2		*requirements loads that will be known and determinable during the Subscription period.*
3		*Cross, et al., WA-02-E-WA-01, at 72. Opatrny, et al., WP-02-E-PP-02, at 16. Please*
4		*respond.*
5	A.	BPA acknowledges it has an obligation to meet the net requirements of its preference
6		customers with the FBS and replacements thereto. And when it does so, BPA must
7		recover its costs. BPA Counsel advises that even if increases in the net requirements of
8		preference customers are known in advance and determinable; *i.e.,* in the form of
9		increasing amounts of block power purchased over time, BPA may apply the SUMY
10		Block Charge in order to recover the costs of the additional power needed to meet such
11		increases. The charge provides BPA cost recovery for the cost to increase the FBS to
12		serve such increases in load. The cost of increasing the FBS will be passed on to the
13		SUMY Block purchaser.
14	Q.	*PPC argues that BPA is not consistent in its cost allocation for load growth.*
15		*Opatrny, et al., WP-02-E-PP-02, at 16. Please respond.*
16	A.	The Load Variance Charge covers the load growth costs associated with Full and Actual
17		Partial Service. Load growth for customers purchasing Full and Actual Partial Service is
18		estimated and costs to serve are unknown. As a result we will use option pricing which
19		includes a risk premium to estimate the cost of load growth service. In comparison, the
20		SUMY Block purchaser pays for its increase in net requirements through the SUMY
21		Block Charge. The increase in the stepped-up amount of the block power purchaser may
22		be due to any increase in net requirements. Unlike Full and Partial Requirements service,
23		the amount of increase in the SUMY Block will be known in advance. Because of this,
24		the cost associated with serving the increased amount can be estimated using the
25		AURORA market forecast. Since there is no risk in increase to net requirements load,
26		option pricing is not needed to develop the SUMY Block Charge and no option pricing

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1		risk premium is incurred. BPA believes this is the most consistent method for recovering
2		costs for increases to net requirements load under the SUMY Block.
3	Q.	*PPC disagrees with BPA's proposal to discount energy values in calculating the*
4		*"custom charge" because "it simply raises the charge for no apparent reason."*
5		*Opatrny, et al., WP-02-E-PP-02, at 18. Please respond.*
6	A.	The reason for discounting the energy values in this calculation is to arrive at a levelized
7		per-unit cost. This is necessary because BPA must recover the cost associated with the
8		market value. In the data response example referred to by PPC, "Response to Data
9		Request PP-BPA-029," the net present value (NPV) of the total dollars of that increase in
10		the cost of the FBS must equal the NPV of the total SUMY Block Charges. The rate of
11		2.23 mills/kWh, which is calculated using the discounted load, yields the same NPV as
12		the cost to increase the FBS when applied to the total block purchases including the
13		SUMY amounts. The rate of 1.82 mills/kWh, which does not discount load, does not
14		yield the same NPV as the market.
15	Q.	*PPC does not understand why BPA applies this charge to the entire block purchase and*
16		*not just the incremental purchase. Opatrny, et al., WP-02-E-PP-02, at 18. Please*
17		*respond.*
18	A.	BPA proposes to apply this charge to the entire block purchase because it is the most
19		efficient and simple method to bill the purchaser. The result is BPA will only need to
20		track the total kWh sold rather than distinguish between the first year block and the
21		increasing amounts. This is consistent with BPA's proposal to bill all load at the posted
22		rate. Therefore, in order to provide the block energy at a posted PF rate, the added costs
23		of the increased block purchases must be recovered through another rate or charge.
24		BPA's rate design choice was to recover the cost through a mills/kWh charge over all
25		kWh of the block purchase including the SUMY Block amounts.
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1 | **Section 5.   Unauthorized Increase Charge**

2 | *Q.   What is the purpose of this section of your testimony?*

3 | A.   The purpose of this section of our testimony is to address the issues raised by PPC,

4 | Springfield Utility Board (SUB), and PGP regarding the proposed methodology for

5 | deriving Unauthorized Increase Charges for demand and energy.

6 | *Q.   Briefly describe the proposed Unauthorized Increase Charges.*

7 | A.   The Unauthorized Increase Charges are applied in the event that a customer places

8 | demand or an energy load on BPA's system in excess of that customer's contractual

9 | entitlement. The minimum proposed Unauthorized Increase Charge for demand for a

10 | given month will be three times the applicable standard Demand Charge for that month.

11 | The applicable charge will be greater of the minimum charge or the sum of the hourly

12 | Independent System Operator (ISO) Spinning Reserve Capacity prices during all HLH

13 | during the month.

14 | The minimum Unauthorized Increase Charges for energy will be 100 mills/kWh.

15 | This minimum will be compared to the highest Dow Jones Mid-C Index price for firm

16 | energy and the highest hourly ISO Supplemental Energy prices. The effective

17 | Unauthorized Increase Charge for energy will be the greatest of 100 mills/kWh, or the

18 | highest Dow Jones Mid-C Index price during the month, or the highest hourly ISO

19 | Supplemental Energy price during the month.

20 | *Q.   What is your understanding of PPC's proposal for Unauthorized Increase Charges?*

21 | A.   PPC's testimony does not present any specific proposal for Unauthorized Increase

22 | Charges for demand. PPC proposes that BPA's Unauthorized Increase Charge for energy

23 | "be tied to the Mid-C market price for the day when the unauthorized increase occurs

24 | plus a reasonable scheduling fee." Also, PPC argues that BPA should eliminate the

25 | 100 mills per kWh floor. Opatrny, *et al.,* WP-02-E-PP-02, at 23.

26 | *Q.   What is PPC's basis for its proposed Unauthorized Increase Charges for energy?*

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1	A.	PPC asserts that BPA should use the Dow Jones Mid-C price indexes for its
2		Unauthorized Increase Charges for energy since BPA uses the Dow Jones Mid-C indexes
3		for its cost classification and seasonal and diurnal differentiation. PPC cites a data
4		response (response to Data Request PP-BPA-082) from witnesses sponsoring BPA's
5		Marginal Cost Analysis, which states "the Mid-C trading hub was selected because of the
6		available hubs in this analysis, Mid-C is the most representative of the relevant power
7		prices in the Northwest." Opatrny, *et al.,* WP-02-E-PP-02, at 22-23.
8		Further, PPC argues that BPA should eliminate the floor for the energy charges
9		because "BPA should collect only the costs that it incurs." PPC states that "BPA should
10		not realize a windfall" if a customer places an unauthorized increase on BPA's system
11		during periods characterized by low market prices. Opatrny, *et al.,* WP-02-E-PP-02,
12		at 23.
13	*Q.*	*Does BPA's reliance on Dow Jones Mid-C indexes for cost classification and seasonal*
14		*and diurnal differentiation constitute an inconsistency with BPA's proposed use of*
15		*California ISO indexes for the Unauthorized Increase Charges?*
16	A.	No, it does not. BPA's use of Dow Jones Mid-C indexes is, in fact, appropriate for its
17		cost classification and design of rates for its core products and services. In spite of that,
18		service to unauthorized increases exposes BPA to costs that, at times, are best defined by
19		activity in the California markets. There may be times when unauthorized increases
20		placed on BPA's system prevent or reduce BPA sales into the ISO markets, thus creating
21		a lost opportunity cost associated with serving an unauthorized increase. Further, it is not
22		inconceivable that during periods of low water and high demand BPA could be forced to
23		purchase energy or ancillary services from the California markets on a real-time or
24		hour-ahead basis to serve an unauthorized increase. Finally, during certain periods, the
25		California price indexes may be necessary to define the Unauthorized Increase Charges at
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1		a level sufficient to constitute a deterrent against customers exceeding their contractual
2		entitlement to place load on BPA's system.
3	Q.	*PPC argues that the proposed Unauthorized Increase Charges are not cost-based.*
4		*Opatrny, et al. WP-02-E-PP-02, at 18-23. Do you take issue with that argument?*
5	A.	No, we agree with the statement. We disagree with the implication. The argument that
6		the Unauthorized Increase Charge should be cost-based is similar to arguments made by
7		some parties in the 1993 and 1996 rate cases. In both these rate cases, the Administrator
8		rejected those arguments. *See* Administrator's Record of Decision (ROD), WP-93-A-02,
9		at 166-171, and Administrator's ROD, WP-96-A-02, at 321-322. Cost is only one
10		consideration in setting the level of the Unauthorized Increase Charges. The intent of the
11		Unauthorized Increase Charges is to deter customers from using BPA power in excess of
12		their contractual entitlements and to impose a penalty when they do place an
13		unauthorized increase on BPA's system. PPC's testimony acknowledges the intent to
14		discourage unauthorized increases. Opatrny, *et al.,* WP-02-E-PP-02, at 18.
15	Q.	*What is your understanding of SUB's proposal regarding the Unauthorized Increase*
16		*Charges?*
17	A.	SUB proposes that the Unauthorized Increase Charge for demand be three times the
18		applicable demand charge for the billing month. SUB further proposes that the
19		Unauthorized Increase Charge for energy be indexed to the Dow Jones Mid-C price
20		indexes for the applicable hour in which the unauthorized increase occurred, and that a
21		$100/MWh Unauthorized Increase Charge be applied only in the event that the
22		Dow Jones Mid-C indexes no longer exists. Finally, SUB proposes that Unauthorized
23		Increase Charges only be levied if FBS resources, to include firm and nonfirm resources,
24		are insufficient to meet a customer's load during a demand or energy overrun. SUB
25		argues for a "pass-through" cost basis for unauthorized increases that would result only in
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1		standard demand and energy charges when sufficient FBS resources exist to serve an
2		unauthorized increase. Nelson, WP-02-E-SP-01, at 5-8.
3	*Q.*	*In arguing that BPA's Unauthorized Increase Charges rely on a "pass-through" cost*
4		*basis tied to the value of energy during the period of the unauthorized increase, PPC*
5		*cites precedents in the gas industry as well as similar overrun penalties charged by*
6		*Western Area Power Administration (WAPA) and Southwestern Power Administration.*
7		*Opatrny, et al., WP-02-E-PP-02, at 18-19. SUB supports this argument, and cites the*
8		*penalty charges for energy overruns under the WAPA-78 rate order. Nelson,*
9		*WP-02-E-SP-01, at 7-8. SUB also cites the Southwest Power Administration's*
10		*P-98B rate schedule that provides for fixed charges for unauthorized increases in*
11		*demand. Nelson, WP-02-E-SP-01, at 6. Do these examples warrant a change in BPA's*
12		*proposed Unauthorized Increase Methodology?*
13	A.	No, they do not. Other Federal power marketing agencies and gas utilities have their own
14		reasons for setting charges, and those reasons may have little applicability to BPA's
15		situation. Unlike the two named power marketing administrations, BPA is obligated to
16		meet the full net firm requirements of its wholesale utility customers. In contrast, neither
17		WAPA nor Southwest Power Administration are similarly obligated. Instead, they
18		allocate Federal power from a finite pool of resources can only partially meet the firm
19		requirements of their wholesale utility customers.
20		BPA's exposure to providing costly service beyond the contracted amount of a
21		customer's purchase obligation demonstrates the need for a penalty component in BPA's
22		Unauthorized Increase Charges. Due to the nature of its obligation to provide
23		requirements service, BPA is always standing ready to provide emergency supply service
24		on an instantaneous basis. As the wholesale power market has become more competitive
25		it is BPA's experience that a simple pass-through does not deter customers from taking
26		Federal power in excess of their contracted amounts. Moreover, market prices, at any

1		point in time, may not even be an adequate indicator of BPA's own costs. This is
2		particularly acute when BPA is not in the market, or if BPA must run water to generate in
3		order to serve unauthorized increases during a cheap period and which results in BPA
4		without adequate water to generate at a later time when market prices are higher.
5		Subscription allows customers to pick which products and services they want to
6		purchase. As such, the Unauthorized Increase Charges should be set at a level that
7		provides the customers an incentive to select the individual products they want to
8		purchase instead of using Unauthorized Increase Charges as an alternative to buying one
9		of the available unbundled products. If the price for unauthorized increases is reduced to
10		the level that the charge would encourage customers not to take certain products and
11		instead rely on unauthorized increases to receive the same service, then the Unauthorized
12		Increase Charge fails to perform its function. For instance if the Unauthorized Increase
13		Charge is reduced to the local spot market price for power, customers could have an
14		economic incentive to use unauthorized increases to meet fluctuations in load from the
15		amount forecasted instead of purchasing the load variance product. BPA's customers are
16		in the best position to know their own power needs, and the Unauthorized Increase
17		Charges for energy and demand serve as an incentive to the customer to select the
18		product(s) it needs.
19	*Q.*	*What problems do you see with SUB's argument that only standard charges should apply*
20		*if BPA has sufficient resources during an unauthorized increase occurrence? Nelson,*
21		*WP-02-E-SP-01, at 8.*
22	A.	There are several problems that undermine SUB's argument. First, except for simple
23		partial customers with fixed resources, there is the problem of identifying during which
24		hour or day an unauthorized increase in energy occurred when the determination involves
25		a customer's total energy take during an entire billing month. Second, even where an
26		unauthorized increase (such as an unauthorized increase in demand) can be identified

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1		with a given hour, the cost implications are not necessarily confined to that particular
2		hour if system resources are expended and not available during a subsequent higher cost
3		period. Third, SUB's proposal would alter the design of BPA's Unauthorized Increase
4		Charges in a way that would make energy and demand overruns on BPA's service an
5		economic alternative. Simply put, in conjunction with other components of SUB's
6		proposal, a customer would know *a priori* that the most it would pay for an unauthorized
7		increase would be a measurement of market value based on Dow Jones Mid-C prices on a
8		given date, and, in many cases, the customer would only face standard charges. This
9		would not only send an economic signal to customers encouraging placement of
10		unauthorized increases on BPA's system, but would also undermine customer incentives
11		to purchase complementary products that would add customer protections against energy
12		and demand overruns. In fact, given BPA's projections of its loads and resources, a price
13		signal to discourage unauthorized increases as an economic alternative to purchasing
14		other products is more important than ever.
15	*Q.*	*PPC and SUB propose that the Unauthorized Increase Charges for energy should be*
16		*reflective of the market value "at the time of the unauthorized increase."*
17		*Opatrny, et al., WP-02-E-PP-02, at 18-23; Nelson, WP-02-E-SP-01, at 7. Do you agree?*
18	A.	No. The application of charges tied to "market value" at the time of an unauthorized
19		increase would undermine the deterrent nature of the charges and, in fact, may
20		underrecover BPA's cost of serving the unauthorized increase. BPA should not be placed
21		in an uneconomic position when it provides emergency service for an unauthorized
22		increase. As previously stated, there are cost impacts to BPA, even when not in the
23		market, when BPA serves unauthorized increases. For example, this can occur when
24		BPA must run water to generate in order to serve unauthorized increases during a cheap
25		period and which results in BPA without adequate water to generate at a later time when
26		market prices are higher. Moreover, PPC's and SUB's proposal is not administratively

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1	feasible since, as noted above, unauthorized increases in energy are defined in terms of
2	monthly overruns rather than unauthorized increases in a given hour or on a given date.
3	BPA believes that, as proposed by PPC and SUB, application of the Unauthorized
4	Increase Charge for energy reflecting the market value "at the time of the unauthorized
5	increase" could entail an arbitrary assignment of an unauthorized increase in energy to a
6	particular hour or date in order to determine the applicable charge.
7	Q. *PPC and SUB oppose the use of the California ISO hourly Spinning Reserve Capacity*
8	*prices for deriving the Unauthorized Increase Charges for demand. Opatrny, et al., WP-*
9	*02-E-PP-02, at 19-22; and Nelson, WP-02-E-SP-01, at 4-7. Please summarize their*
10	*arguments.*
11	A. PPC states that the California markets suffer from serious deficiencies, and SUB concurs.
12	PPC and SUB each cite recent ISO reports in arguing that market power issues and other
13	current flaws in the ISO markets to support their opposition to use of the ISO indexes in
14	BPA's Unauthorized Increase Charges for demand. PPC further argues that the "[u]se of
15	any California price as a market proxy for prevailing conditions in the Northwest is going
16	to be inevitably flawed."
17	Q. *Do the arguments by PPC and SUB warrant the exclusion of the California price indexes*
18	*from the determination of Unauthorized Increase Charges for demand?*
19	A. No, they do not because BPA and the Northwest are part of the larger west coast market.
20	As we will explain, there are periods when the California markets are, in fact, entirely
21	relevant to BPA and its customers. For instance, during the late summer months, ISO
22	Spinning Capacity Reserve prices tend to be at their highest. If a customer places an
23	unauthorized increase in demand on BPA during such a high cost period, the ISO
24	Spinning Capacity Reserve prices are a reasonable proxy for BPA's opportunity cost
25	associated with serving the unauthorized increase. It is also not inconceivable that, in a
26	period of low water, BPA would be in a position in which it must purchase capacity from

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1		the ISO. Irrespective of whether BPA is active in the market or not, there is a need to
2		recognize the value associated with the capacity that BPA must provide in serving an
3		unauthorized increase in demand. BPA's proposed minimum Unauthorized Increase
4		Charges for demand would, under certain conditions, understate the true costs of serving
5		demand overruns and would not constitute a sufficient deterrent against unauthorized
6		increases.
7		While BPA acknowledges current market imperfections at the ISO, these
8		imperfections do not undermine the California market's relevance to BPA's cost
9		exposure. The specific forces that drive ISO price levels during any specific period are
10		less relevant than the price levels themselves; it is the price levels, irrespective of their
11		underlying determinants, that define BPA's cost exposure to unauthorized increases in
12		demand.
13	Q.	*Would the elimination of the ISO indexes affect any other elements of BPA's proposed*
14		*rate provisions?*
15	A.	Yes, the charges for Excess Factoring rely, in part, on the ISO Supplemental Energy price
16		indexes. Further, the derivation of index driven charges for Within-Day Excess Factoring
17		which are to be compared to a defined minimum charge are, by definition, reliant on
18		some hourly index. There is no Pacific Northwest hourly price index currently available
19		for performing these derivations.
20		BPA's rebuttal to parties' comments on the proposed Excess Factoring Charge is
21		addressed in section 6 of this testimony.
22	Q.	*SUB contends that BPA's testimony that Unauthorized Increase Charges and Excess*
23		*Factoring can happen simultaneously demonstrates redundant product constraints.*
24		*Nelson, WP-02-E-SP-01, at 14-15. Do you agree?*
25		
26		

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1	A.	No. The Unauthorized Increase Charges deal with quantities taken from BPA, while the
2		factoring related charges deal with the shape of the energy taken from BPA. In addition,
3		BPA has provided for a reduction in Excess Within-Month Factoring quantities if they
4		occur in the same diurnal period as Unauthorized Increase Energy charges.
5		(*See* WP-02-E-BPA-07, at 92-94).
6	*Q.*	*Please summarize PGP's testimony regarding Unauthorized Increase Charges.*
7	A.	PGP, while agreeing with BPA's use of market rates in its Unauthorized Increase Charge
8		derivation, identifies some concerns about definitions in the General Rate Schedule
9		Provisions (GRSPs). PGP proposes an alternate definition for the Dow Jones Mid-C
10		Indexes and proposes that the definition for the Mid-Columbia Bus be eliminated.
11		*Knitter and Peters, WP-02-E-PG-01, at 6-7.*
12	*Q.*	*Do you agree with PGP's proposed changes?*
13	A.	We agree in part. BPA believes that the definition for the Mid-Columbia Bus can be
14		eliminated and that the first sentence of PGP's proposed definition is sufficient for
15		defining the Dow Jones Mid-C Indexes. BPA intends to incorporate these changes into
16		its final GRSPs.
17		However, BPA does not agree with the final sentence in PGP's proposed
18		definition. PGP proposes that, in the event that the Dow Jones Mid-C Indexes are no
19		longer available, another subsequent index should be substituted only by agreement by
20		BPA and the Customer. In spite of PGP's suggestion, BPA believes it is far more
21		practical and equitable to rely on current language in its GRSPs for selecting successor
22		indexes, specifically, those provisions that identify the California PX price indexes or
23		"any applicable new hourly or diurnal energy index at a hub at which Northwest parties
24		can trade…" (*See* GRSPs, WP-02-E-BPA-07, at 109.) We do not agree that selection of
25		a successor index should be based on negotiations with customers. Such a scenario could
26		delay billing for Unauthorized Increase Charges or other affected charges (such as those

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1		for Excess Factoring) until such time as negotiations with customers are complete.
2		Further, PGP's proposal presents some potential scenarios in which negotiations, if
3		completed individually with each customer, yield agreements around differing successor
4		indexes. This would result in an inconsistent set of effective penalty charges affecting
5		BPA's customers.
6	*Q.*	*Please summarize this portion of your testimony.*
7	A.	BPA's proposed Unauthorized Increase Charge methodology is appropriate given its
8		potential cost exposure and the need for a deterrent against customers placing
9		unauthorized increases on BPA's system. PPC's and SUB's proposals ignore the
10		appropriate penalty nature of the Unauthorized Increase Charges, and their proposals
11		under some circumstances could result in unauthorized increases becoming an economic
12		choice for customers.
13		The inclusion of California ISO price indexes in BPA's Unauthorized Increase
14		Charge methodology is appropriate because, although not based in the Northwest, they
15		are an indicator of BPA's cost exposure because of the very nature of the west coast
16		markets. Similarly, the minimum charges for unauthorized increases in demand and
17		energy ensure the deterrent nature of the Unauthorized Increase Charges during periods
18		when index-driven charges may not constitute the necessary deterrent. Further, BPA
19		believes it is necessary to keep the Unauthorized Increase Charges at levels sufficient to
20		encourage customers to purchase or negotiate complementary products that protect
21		against inadvertent energy and demand overruns, and to operate their systems in a
22		manner that minimizes their Unauthorized Increase Charges exposure.
23		Finally, BPA agrees, in part, with PGP's proposals for modifying the Dow Jones
24		Mid-C Index definitions in the GRSPs. However, BPA maintains that the proposed
25		GRSPs provisions for selecting successor indexes for its Dow Jones Mid-C or
26		California ISO indexes are appropriate, and that reliance upon customer negotiations for

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1		selection of any successor indexes would be impractical and could jeopardize timely
2		billing of penalty charges.
3	**Section 6.**	**Excess Factoring Charge**
4	*Q.*	*Did the testimony of the parties address BPA's excess factoring charge?*
5	A.	Yes. WPAG and PPC (Cross, *et al.*, WP-02-E-WA-01, and Hansen, *et al.*,
6		WP-02-E-PP-02) indicate that they do not agree that the Excess Factoring Charge is a
7		cost-based charge, and WPAG also proposed a method for making it cost-based. SUB
8		(Nelson, WP-02-E-SP-01, at 8-15) recommended that the Excess Factoring Charge be
9		minimal, and that it only be applied after a grace margin of 20 percent, or a grace margin
10		equivalent to the maximum forecast error for any individual full service customer. SUB
11		also argues that forecast error (inability to forecast hourly or monthly load shape) could
12		cause excess factoring charges to be incurred.
13	*Q.*	*Both the PPC and WPAG argue that the charge for Excess Factoring service should*
14		*recover the cost of providing the service. Is this the intent of the Excess Factoring*
15		*Charge?*
16	A.	No. The Excess Factoring Charge operates similar to the Unauthorized Increase Charge,
17		and is intended to be a penalty rather than a cost recovery mechanism. It is a charge for
18		use of more of a service than allowed in the product being purchased.
19	*Q.*	*Does the method for making the Excess Factoring Charge a cost based charge as*
20		*proposed by PPC (Hansen, et al., WP-02-E-PP-02) have merit?*
21	A.	It would have merit for pricing non-core Subscription products which are outside the
22		scope of this rate case. In the Subscription products forum, BPA expressed willingness to
23		offer a limited amount of excess factoring service through a resource variability product
24		priced under the FPS rate schedule to customers purchasing the complex partial product.
25		PPC's proposal is a good starting point for establishing such a charge for that service.
26		However, this is a product and contract issue rather than a rate case issue.

1	*Q.*	*Do you agree that BPA should offer a 20 percent grace margin or a grace margin*
2		*equivalent to the maximum forecast error for any individual full service customer as*
3		*proposed by SUB (Nelson, WP-02-E-SP-01, at 8-15)?*
4	A	No. To offer such a margin as proposed by SUB would be impractical. First, there is no
5		one-size-fits-all grace margin that is appropriate. Second, forecast error is not an
6		accurate reflection of the need for excess factoring.
7	*Q.*	*Do you agree that forecast error could lead to Excess Factoring Charges?*
8	A.	Because BPA will be unable to distinguish whether excess factoring was due to forecast
9		error versus operational or commercial choices made by the utility, it is possible that
10		forecast error could incur Excess Factoring Charges. Since BPA will not be able to
11		separate excess factoring that was due to circumstances outside the customer's control
12		from those within the customer's control, all are treated as excess factoring in the basic
13		product. Different customer load-resource situations could greatly influence the
14		significance of load forecast error, but these cannot be addressed generically. Case-
15		specific FPS priced resource variability products could be negotiated to replace excess
16		factoring charges for forecast error.
17	*Q.*	*SUB and PPC argue that the ISO Supplemental Energy price indexes are not appropriate*
18		*for determining the excess factoring charges. Nelson, WP-02-E-SP-01, at 13-15;*
19		*Opatrny, et al., WP-02-E-PP-02, at 23-24. Please respond.*
20	A.	The arguments by SUB and PPC are similar to their respective arguments against use of
21		ISO price indexes for the Unauthorized Increase Charges. PPC cites BPA's Response to
22		Data Request PP-BPA-082 in which BPA explained that the use of Dow Jones Mid-C
23		indexes for cost classification and rate design was appropriate because these indexes are
24		the "most representative of the relevant power prices in the Northwest." Opatrny, *et al.,*
25		WP-02-E-PP-02, at 24. While we agree that Dow Jones Mid-C indexes are appropriate
26		for development of rates for requirements service, we do not agree that the availability of

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1	such indexes limit BPA's application of the ISO indexes for determining the Excess
2	Factoring Charge. BPA's inclusion of ISO indexes in its Excess Factoring Charge
3	recognizes that the markets drive its cost exposure, and there are times when this market
4	driven cost exposure is more closely tied to the California markets. (*See* discussion in the
5	Unauthorized Increase Charge section of this testimony.) Also, since the Excess
6	Factoring Charge is intended to be a penalty charge that discourages excess use of
7	factoring, it should be calculated at a minimum to offset any financial gains that the
8	customer could achieve. BPA does not want to price an excess use charge such that
9	customers use it to make a profit elsewhere.
10	SUB cites market imperfections at the ISO to support its argument against the use
11	of ISO Supplemental Energy price indexes for developing excess factoring charges.
12	However, as stated in the Unauthorized Increase Charge section of this testimony, the
13	ISO prices facing BPA at any juncture are more relevant to BPA's potential cost
14	exposure than the determinants underlying those prices.

Section 7.   **Definition of Stable Rates**

Q.   *PPC and NRU argue that BPA's comparison between PF-96 and PF-02 rates is*
misleading. Opatrny, et al., WP-02-E-PP-02, at 6. Saven, WP-02-E-NI-04, at 3. They
argue that BPA kept its rate pledge of avoiding rate increases by shifting money from the
PBL to the Transmission Business Line (TBL).

A.   As explained in the rebuttal testimony of Burns and Elizalde, WP-02-E-BPA-37, BPA
believes that the current separation of costs between the business lines correctly reflects
the functions that are performed in each business line and conforms with industry and
FERC practices and precedents.

Section 8.   **Transmission Losses**

Q.   *Were any other issues raised regarding the relationship between BPA's Subscription*
products and power ratemaking?

1 A. Yes. In WP-02-E-IN-01, Industrial Customers of Northwest Utilities (ICNU) took issue

2   with BPA's proposal to bundle network losses into the Subscription products and,

3   therefore, to include the cost of network losses in the power revenue requirement. ICNU

4   suggested that BPA should remove transmission losses from the costs of augmenting the

5   system, require customers to arrange for losses from TBL, and for PBL to account for the

6   cost of losses through a revenue credit from TBL.

7   BPA disagrees with ICNU's assertion that inclusion of network losses in

8   Subscription power products, and therefore in the power revenue requirement, is the

9   result of confusion regarding the respective responsibilities of the power and transmission

10   business lines. Losses were initially listed by the Federal Energy Regulatory

11   Commission (FERC) among the ancillary services identified but have since been dropped

12   from that category. FERC originally proposed to include losses as an ancillary service in

13   its Wholesale Competition Notice of Proposed Rulemaking, FERC Statutes and

14   Regulations ¶ 32,514 at p. 33,086 (1995). FERC then reversed its position in Order No.

15   888, FERC Statutes and Regulations ¶ 31,036 at p. 31,709 (1996). FERC reaffirmed that

16   losses should not be an ancillary service in Order No. 888-A, FERC Statutes and

17   Regulations ¶ 31,048 at p. 30,237 (1997).

18   Therefore, BPA PBL has the discretion to bundle network losses into its power

19   products consistent with statutory guidance and business principles. For Subscription

20   power products that are intended for requirements service, BPA's product design includes

21   network losses as a bundled component. This is consistent with BPA's interpretation of

22   requirements service and with the product package desired by most requirements

23   customers.

24   ICNU stated that BPA's bundling-in of losses with power products would result

25   in customers being exposed to double-charging for losses, once through power rates and

1		again through TBL's calculation of transmission losses. BPA PBL believes that TBL's
2		loss calculation practices can be established to avoid double-charging.
3		ICNU further stated that BPA's bundling-in of losses with power products would
4		not allow a customer to provide for its own losses through its own TBL arrangements.
5		BPA PBL believes that customer choice for alternative supply can be provided by
6		tailor-made arrangements in which the customer makes an alternative source of losses
7		energy available to its own account in return for credit or payment against its power bill.
8		ICNU also raised a concern that BPA PBL's losses treatment would result in TBL
9		not providing comparable transmission service to the PBL and non-Federal transmission
10		users. As explained above, transmission loss supply is not now considered an ancillary
11		service. BPA PBL's treatment of losses is based on customer entitlement to requirements
12		service and would not be applicable to non-Federal power using the BPA transmission
13		system.
14	*Q.*	*Does this conclude your testimony?*
15	A.	Yes.