

DECEMBER 1998

# BPA POWER PRODUCTS CATALOG



## Power Product Descriptions

The BPA Power Product Catalog includes descriptions of Standard Power Products, developed by the Bonneville Power Administration's (BPA) Power Business Line. This work was performed in conjunction with the Subscription WorkGroup representing a large cross-section of BPA's customers, their representatives and other interested regional representatives. Additional refinements to the products were made based on customer and interest group input. The products and services described within this catalog are expected to meet most of the needs of BPA's customers. Other needs can be addressed during bilateral discussions.

These product descriptions can be the basis for negotiations between BPA and individual customers. Custom tailoring of standard products or services will be reflected in the price.

The product catalog will be revised periodically to reflect product description updates.

*BPA Power Product Team  
Revised December 8, 1998*



*PRODUCTS*

***CORE SUBSCRIPTION PRODUCTS***

- Full Service**
- Actual Partial Service**
- Block Partial Service**
- Factoring**

***CUSTOMIZED SUBSCRIPTION PRODUCTS***

- Variable Load Factor**
- Slice of System**
- Renewable Resource**

***NON-SUBSCRIPTION PRODUCTS\****

**Bilateral Products & Services**

- Power - Firm, Secondary, Commodity (including loss compensation)*
- Capacity w/out Energy*
- Storage*
- Resource Factoring*
- Preschedule Change Rights*
- Displacement*
- Scheduling Services*

**Reserves, Resource Support**

- Supplemental AGC*
- Operating Reserves*
- Forced Outage Reserves*

**Complements to Core Products**

- Block Flexibility*
- Retail Access - Mitigation*

\* *These products are for the use of control area operators and customers in BPA's control area that require resource back-up services.*



| <i>Core Subscription Product</i> | <i>Full Service</i>   |
|----------------------------------|---|
| <b>General</b>                   | <p>The Full Service product is a core Subscription product. This product is available to purchasers who have a right to purchase power from BPA to meet their full requirements needs. This standard product will be sold under a posted rate schedule.</p> <p>This product provides all the firm power the customer needs to meet Total Retail Load (TRL).</p>   |
| <b>Availability</b>              | <p>This product is intended for customers who have a right to purchase under NW Power Act, section 5(b) from BPA. Full Service customers are those who choose to purchase all of their power needs from BPA, including those who have small non-dispatchable generating resources.</p>  |
| <b>Product Description</b>       | <p>The Full Service product provides all firm power necessary to meet a customer's actual loads in excess of the customer's small non-dispatchable generating resources.</p> <p>This service includes Heavy Load Hour (HLH) energy, Light Load Hour (LLH) energy, demand (peaking and capacity), and any shaping necessary to cover load variations in Total Retail Load due to temperature changes and load loss/growth due to increases other than retail access load gain or loss.</p> |
| <b>Billing Factor(s)</b>         | <p>Customer bills will be based on measured energy measured demand, and TRL for Load Variance. Refer to BPA Subscription Strategy and the power Rate Schedule for applicable posted rates.</p>  |
| <b>Purchase Period</b>           | <p>The purchase period is 3 to 20 years, beginning October 1, 2001 (or another term consistent with the Rate Schedules).</p>  |
| <b>Termination Notice</b>        | <p>This is described in the termination provisions of the contract.</p>   |
| <b>Pricing Construct</b>         | <p>Cost-based pricing is fixed for a period of 3 to 5 years.</p>  |



| <i>Core Subscription Product</i>                | <i>Full Service</i>   |
|---|---|
| <b>Continuing Payment Obligation</b>            | <p>BPA will accept the risk of Retail Access Load Loss for Full Service customer loads under 250 kW or with a three-year initial purchase commitment by the customer. Otherwise, a customer that experiences retail access load loss is obligated to pay BPA the amount they would have paid for the lost load at the original PF rate. The customer may purchase one of the retail access mitigation products or employ a contract mitigation measure to help alleviate or lessen this obligation.</p> <p>Measurement of Retail Access Load Loss or Load Gain is dependent on the existence of and adherence to an industry standard for scheduling.</p> |
| <b>Resources</b>                                | <p>Small non-dispatchable generating resources in the BPA control area are limited to 3 MWs each, 6 MWs total, based on the nameplate classification.</p> <p>Columbia Storage Power Exchange (CSPE), customer-owned or consumer-owned small non-dispatchable generating resources within the utility's metering boundary are treated as load fluctuations and do not require resource support services with the specified limits noted above.</p>   |
| <b>Transmission and Ancillary Services</b>      | TBL Transmission and Ancillary Services are not included in this product except as noted below.   |
| <b>Transmission Losses and Energy Imbalance</b> | Transmission losses are included in this product. Energy Imbalance for customers within the BPA control area and those served by transfer is embedded in this product.  |
| <b>General Transfer Agreements (GTA)</b>        | See the final GTA Policy in Power Subscription Strategy for specific details on TX – Control Area.  |



| <b><i>Core Subscription Product</i></b> | <b><i>Full Service</i></b>  |
|---|---|
| <b>Load Growth</b>                      | Load growth for all Full Service customers is included. Note: New Large Single Loads (NLSL) will be subject to the NR rate.   |
| <b>Load Loss</b>                        | The Full Service product covers a decrease in a Full Service customer's total retail load, such as: plant closures, demolition, or destruction of load(s) or conservation activity occurring on the customer's distribution system, including fuel switching.   |
| <b>Retail Access Load Gain</b>          | The customer may purchase additional power at the appropriate PF rate with adjustments.   |
| <b>Retail Access Load Loss</b>          | BPA will take on the risk of Retail Access Load Loss for Full Service customer loads less than 250 kW or with a three-year initial purchase commitment by any customer.<br><br>The customer may select one of the retail access mitigation measures.  |
| <b>Associated Services</b>              | Generation and Purchase Support Service (GAPPS), to ensure predictability of resources, is not required for this product up to the stated MW limit. Small non-dispatchable resources up to 3 MWs each or 6 MWs total within the customer's metering boundary will be treated as load fluctuations.<br><br>Unless otherwise indicated, customers with larger resources are assumed to be taking Partial Service. |
| <b>Interaction with other products</b>  | Since this product includes a component to meet load variations, it should not be combined with any other product that has built-in load variations.  |



| <i>Core Subscription Product</i>                | <i>Actual Partial Service</i>   |
|---|---|
| <b>General</b>                                  | <p>The Actual Partial Service product is a core Subscription product that is available to purchasers who have a right to purchase from BPA for their net requirements.</p> <p>Complete details are in the attached pages.</p>   |
| <b>Purchase Period</b>                          | The purchase period is 3 to 20 years, beginning October 1, 2001 (or another term consistent with the Rate Schedules).   |
| <b>Transmission and Ancillary Services</b>      | Transmission and Ancillary Services are not included in this product except as noted below.   |
| <b>Transmission Losses and Energy Imbalance</b> | Transmission losses are included in this product. Energy Imbalance for customers within BPA control area and those served by transfer is embedded in this product.  |
| <b>Total Retail Load (TRL)</b>                  | This product serves customer Total Retail Load to the extent such load exceeds customer declared resource amounts. Total Retail Load is as defined in the General Rate Schedule Provisions and takes into account the following: load variance, load growth, and load loss. |
| <b>Load Variance</b>                            | Load Variance is the positive and negative variability in the TRL due to changes in a consumer's use of power, due to weather-related power consumption changes and load growth or loss.  |
| <b>Load Growth</b>                              | Actual Partial Service product includes load growth. Load Growth means increases in TRL due to incremental load.  |
| <b>Load Loss</b>                                | Load Loss means decreases in TRL due to load lost due to causes other than consumer retail choice, service area boundary changes, or annexations by other parties, etc.   |

| <i>Core Subscription Product</i>     | <i>Actual Partial Service</i>  |
|--------------------------------------|--|
| <b>Retail Access</b>                 | <p><i>Retail Access Load Loss:</i> The customer assumes the risk of retail access load loss, except for a three-year initial Subscription purchase, in which case TRL will not be adjusted to deduct load lost due to retail access.</p> <p>BPA offers both product and contract methods of mitigating this risk.</p> <p><i>Retail Access Load Gain:</i> TRL will be adjusted to reflect service to loads gained due to retail access.</p>   |
| <b>Resources – Customer Owned</b>    | <p>TRL will be net of output of declared nonfirm resources owned by the customer. Declared nonfirm resources are small and nondispatchable generating resources. Generating resources equal to or less than 3 MW each, 6 MW total (based on nameplate rating) are deemed to be declared nonfirm resources. Resources that exceed these sizes may be shown to be nondispatchable and therefore able to be declared nonfirm resources.</p> <p>For resources which are not declared nonfirm, refer to the Partial Service Products (see details on Customer Resource Declaration Parameters).</p> |
| <b>Resources – Non-Utility Owned</b> | <p>Non-utility owned resources in place under pre-Subscription BPA customer power sales contracts will be treated the same as declared nonfirm resources.</p> <p>The output of non-utility owned resources added after the above date will not net against a customer’s TRL unless: (1) the resource size is less than 3 MW’s per unit and 6 MW’s per site based on nameplate rating or (2) BPA, the customer, and the resource owner mutually agree.</p>  |
| <b>Applicable Rate(s):</b>           | Refer to Power Subscription Strategy.  |
| <b>Billing Factors</b>               | Billing factors and rates for Actual Partial Service will be as specified in the applicable BPA posted rate schedule.  |





## Actual Partial Service

### General and Availability

The Actual Partial Service standard product is a core Subscription product that is available to purchasers who have a right to purchase from BPA for their requirements. This product is intended for customers who have contractual or generating resources with firm capabilities and therefore require a product other than Full Service. This product provides service to net actual load in a manner equitably comparable to the Full Service package. This standard product will be sold under a posted rate schedule.

### Timing and Duration of Purchase Commitment

To purchase this standard product at unadjusted posted rates, the purchaser must fix its declared resource amounts for all periods of the purchase commitment at the time of commitment, and in any case, not later than the end of BPA's Subscription process. The term 'periods' refers to the HLH and LLH periods of rate seasons, e.g., calendar months and years.

### Product Description:

#### Customer Resource Portfolio – Declaration Parameters

Customer resource portfolio declared amounts would be set at the time of contract signature for the duration of the commitment, consistent with the following:

- a) Customer resource portfolio amounts will be declared in HLH and LLH energy amounts and demand amounts for each month of the term of commitment.
- b) This core product is available to serve net requirements under section 5b1 of the NW Power Act. Therefore, the monthly HLH/LLH resource portfolio amounts to be declared will be the reasonably determined capabilities of the customer's firm peaking and energy resources as referred to in sections 5b1 A and B of the Act. The declarations will be consistent with the intent of the NW Power Act that such resources are dedicated to serving purchaser load throughout the life of the resource or term of the contract. Initial declarations of customer resource amounts (for at least the term of the commitment) will include monthly peak and HLH/LLH energy amounts. The declared amounts will be based on reasonable and prudent utility practices and will be consistent with resource data used by the customer for other purposes. Customer declared amounts may take into account change of conditions reasonably affecting resource capability. Prudent utility practices for establishing firm hydro resource capabilities may include criteria other than critical period planning.

- c) The 5b1A and B coordinated hydro resource capabilities may be revised annually consistent with coordinated planning processes, if the customer has chosen to declare the resource capability per PNCA criteria.
- d) If the customer acquires new renewable resources for which it wishes to declare a firm capability, such capability may be added within the term of commitment with as much advance notice to BPA as is practicable. Renewable resource firm capability would reflect the distribution among months of a year that is reasonable given it's operating characteristics.
- e) Declared resource portfolio amounts reflecting 5b1A or B generating resources and long term contracts which were declared prior to 2001, would be subject to the same principles as items a, b, and c above.
- f) Customer resource amounts which are not related to resources referred to in items c or d above, would be assumed for purposes of the standard core product to be distributed across periods in either equal amounts per period, proportionally based on distribution of the purchaser's system load across periods, or between these two shapes.
- g) Customer declared resource annual amounts may increase over the years of the commitment term.
- h) In operations, the customer may provide its declared resource portfolio amounts from available power sources, consistent with prevailing interchange and transmission scheduling practices. For purposes of this product, the sources of such power are not limited to specific 5b1A or B generation resources owned by the customer or specific contracts.
- i) The customer may declare small and nondispatchable generating resources as nonfirm output resources. The output of such resources will be treated the same as such resources under the Full Service product. Generating resources, which are not greater than 3 MW each, 6 MW total (based on nameplate rating) are deemed to be declared nonfirm resources. Resources that exceed these sizes may be shown to be nondispatchable and therefore able to be declared nonfirm resources.

### **Factoring Service and Benchmark for Customers with Dispatchable Resources**

The Actual Partial Service product provides the same degree of load-following to the customer's system load as is provided under the Full Service product. The Actual Partial Service product does not provide services to support, shape or absorb variability due to customer resource operation. Some Actual Partial Service customers will have generating or contractual resources which have a peak capability in excess of average energy capability and therefore have hour-to-hour dispatchability which the customer

may declare to serve its firm load. The terms and conditions for offering the Actual Partial Service product to customers with dispatchable resources are not final. BPA is considering implementation of the Factoring benchmark and other alternatives with the objective of creating a service package that can meet the business test of comparability to Full Service. This is being discussed in multi-party meetings that will be held through the end of January 1999. At the end of that process, the product catalog will be revised as needed.

### **Transmission Delivery and Ancillary Services**

Transmission and ancillary services are not included in this product.

BPA's PBL will acquire from TBL the Energy Imbalance ancillary services necessary to implement the requirements load-following products for Actual Partial Service (and Full Service). This service will be bundled into the product and posted rates.

With respect to Operating Reserves ancillary services (spinning and non-spinning), the BPA Transmission Business Line (TBL) is in the process of deciding whether operating reserves are to be charged to transmission users or generators. If the decision were to charge operating reserves to transmission users, operating reserves would, therefore be excluded from the basic power product (although BPA PBL can agree to acquire them on behalf of a requesting customer). If the TBL decision is that operating reserves will be charged to generators, BPA's PBL will acquire such operating reserves from TBL consistent with comparability requirements. BPA PBL's current assumption is that operating reserves would be a bundled component of Subscription core products to support the firmness of that power.

### **Transmission and Ancillary Services for Non-Federal Resources**

Customer or consumer generation is assumed to have all transmission, ancillary services and any miscellaneous shaping or support services provided by separate arrangement. The product would avoid bundling in services to generation in the customer's system for which the customer would have had to pay a provider if the resource were imported from another control area.

### **Customer Resource Operational Flexibility**

The product imposes no direct contractual constraint on customer resource management. Customer resource operation choices would affect billing in the event those choices resulted in underruns or overruns under this product. BPA and the customer may enter into separate agreements on customer resources dispatch parameters that could mitigate or eliminate the need for the Factoring benchmark.

## Scheduling Provisions and Change from Preschedule

***Change from Preschedule – customer inside BPA Control Area (CA).*** This core product is assumed not to be scheduled for customers within the CA. Customers must provide data directly to the Power Business Line for the following: (1) expected actual generation from plants with BPA control area, and (2) the net amount of all scheduled transactions which affect the customer's expected hourly net load placed on BPA or which would affect the BPA generation requirements, a.k.a. controller total. The Transmission Business Line's upcoming PTP tariff may require schedules of PF power. The terms and conditions for offering the Actual Partial Service product to customers with dispatchable resources are not final. BPA is considering implementation of the Factoring benchmark and other alternatives with the objective of creating a service package that can meet the business test of comparability to Full Service. Some options may require specific scheduling provisions.

***Change from Preschedule – customer outside BPA CA.*** For customers outside the BPA control area, the product assumes use of prevailing industry interchange scheduling practices. This product may be delivered to a customer outside the CA. The terms and conditions for offering the Actual Partial Service product to customers with dispatchable resources are not final. BPA is considering implementation of the Factoring benchmark and other alternatives with the objective of creating a service package that can meet the business test of comparability to Full Service. Some options may require specific scheduling provisions.

| <i>Core Subscription Product</i>           | <i>Block Partial Service</i>  |
|--|---|
| <b>General</b>                             | <p>The Block Partial Service standard product is a core Subscription product that is available to purchasers who have a right to purchase from BPA for their net requirements.</p> <p>Complete details are in the attached pages.</p> |
| <b>Purchase Period</b>                     | The purchase period is 3 to 20 years, beginning October 1, 2001 (or another term consistent with the Rate Schedules).   |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not included in this product.   |
| <b>Load Variance</b>                       | Not included.   |
| <b>Load Growth</b>                         | Not included.   |
| <b>Linkages</b>                            | Factoring Service may be acquired as a staple-on to this product.   |
| <b>Applicable Rates</b>                    | Refer to Power Subscription Strategy.   |
| <b>Billing Factors</b>                     | Billing factors will be contracted energy and demand amounts.   |
| <b>Transmission Losses</b>                 | Transmission Losses are not included in this product.   |



## Block Partial Service

### General and Availability

The Block Partial Service standard product is a core Subscription product that is available to purchasers who have a right to purchase from BPA for their requirements. This standard product will be sold under a posted embedded-cost rate schedule.

### Timing and Duration of Purchase Commitment

To purchase this standard product at unadjusted posted rates, the purchaser must fix its desired purchase amounts for all HLH and LLH periods of the term of commitment at the time of contract signature, and in any case, not later than the closing date for BPA's Subscription process. The term 'periods' refers to the HLH and LLH periods of rate seasons, e.g., calendar months and years.

### Product Description:

#### Maximum Purchase Amounts

1. This core product is available to serve net requirements under section 5b1 of the NW Power Act. Therefore, the monthly HLH/LLH purchase amounts that may be subscribed per customer may not exceed the reasonably estimated differences between customer load, excluding projected load growth, and the capabilities of the customer's firm peaking and energy resources, except where otherwise indicated below under "Firm Block Distribution Among Periods."
2. Customers may elect to purchase less than the maximum indicated under item 1 above. However, the standard product assumes that all maximum monthly amounts of a year would be scaled down equally to reflect such reduction, as opposed to reducing the block purchase amounts in a few months.
3. Customers wishing to purchase more than the maximum indicated under item 1 above may negotiate such additional purchase amounts with BPA, subject to availability and under the then-applicable FPS rate schedule.

#### Firm Block Distribution among Yearly and Monthly Periods

As mentioned above, the term 'periods' refers to the HLH and LLH periods of rate seasons, e.g., calendar months and years. The Firm Block standard product assumes hour-by-hour MW amounts will be the same for all LLHs or HLHs of a calendar month.

Distributions of Block purchase energy among years and months of the purchase commitment term are described below. Other distributions may be mutually agreed upon, provided that BPA will have the right to a price adjustment under the FPS rate schedule in the event such alternative distribution would have a significantly different business impact on BPA's cost to serve. Details are as follows:

1. The annual amounts of a Firm Block purchase may be distributed among years as follows:
  - a) Equally for each of the years of commitment.
  - b) Decreasing over the years of the commitment.
2. The monthly amounts of the product may be distributed:
  - a) Equally for all monthly periods of a year.
  - b) Proportionally in relation to the monthly distribution of the customer's system load or, in the case of a net requirement, proportional to the distribution of the customer's load net of 5b1A and B resources.
3. All or a portion of the customer's maximum HLH purchase amount (consistent with the provisions above on "Maximum Purchase Amounts") may be declared as Firm Block purchase for LLHs only, or with greater LLH amounts than HLH amounts.
4. Firm Block maximum declared HLH purchase amounts must be consistent with the diurnal distribution of purchaser's net requirement (see the provisions above on "Maximum Purchase Amounts").
5. Factoring service, subject to benchmarking in the same manner as applicable to a Actual Partial Service customer with dispatchable resources, may be purchased as a core product staple-on. See description of Factoring Service and Benchmark Methodology.

| <i>Core Subscription Product</i>           | <i>Factoring</i>  |
|--|---|
| <b>General</b>                             | <p>For purposes of the core Subscription products, the term “factoring” refers to the service of shaping a given quantity of MWhs among hours of a period to follow load. Factoring Service is distinct from that feature of the Full and Actual Partial Services which meets energy load variance. This service is a bundled component of Subscription Core Products for Full Service and Actual Partial Service. Factoring, subject to the benchmarking process, may be purchased as a staple-on to a Firm Block core product.</p> <p>Complete details are in the attached pages.</p> |
| <b>Purchase Period</b>                     | <p>The purchase period will be the same as the period of the underlying power purchase.</p>   |
| <b>Transmission and Ancillary Services</b> | <p>Transmission and Ancillary Services are not included in this product with the exception of Energy Imbalance.</p>   |
| <b>Linkages</b>                            | <p>Factoring Service is available in conjunction with the purchase of core Block power products. This service is a bundled component of Subscription Core Products for Full Service and Actual Partial Service.</p>   |
| <b>Basis for Payment</b>                   | <p>Complete details are in the attached pages.</p>  |





## Factoring Service and Benchmark Methodology

### General and Availability

For the purposes of the core Subscription products, the term “factoring” refers to the service of shaping a given quantity of MWhs among hours of a period to follow load. Factoring Service is distinct from that feature of the Full and Actual Partial services which meets energy load variance. This service is a component of Subscription core products for Full Service and Actual Partial Service and may be purchased as a staple-on service to a core Block product. For customers who declare dispatchable resources and wish to purchase the Actual Partial Service product, the terms and conditions for offering the Actual Partial Service product to customers with dispatchable resources are not final. BPA is considering implementation of the Factoring benchmark as described below and other alternatives with the objective of creating a service package that can meet the business test of comparability to Full Service. This is being discussed in multi-party meetings which will be held through the end of January '99. At the end of that process, the product catalog will be revised as needed.

### Timing and Duration of Purchase Commitment

This is coterminous with the underlying Block or Actual Partial Service products. A Block customer may purchase the Factoring service for less than the full term of the Block commitment period.

### Product Description

For the purposes of the core Subscription products, the term “factoring” refers to the service of shaping a given quantity of MWhs among hours of a period to follow load. (The term “periods” refers to the HLH and LLH periods of rate seasons, e.g., calendar months and years.) In this context, factoring is therefore an energy-neutral service. Factoring Service is distinct from the Load Variance component of the Full and Actual Partial Service products. Load Variance meets the plus or minus uncertainty in cumulative MWh load, such as the variance due to temperature-related power consumption, or changing electric load within a customer’s system (for reasons other than retail access choices).

When purchased as a staple-on service to a Block, the Factoring Service is a declared resource service. A Block customer with declared dispatchable resources would be subject to the same billing and excess service charges as an Actual Partial customer with dispatchable resources.

For customers with dispatchable resources or Block customers who may purchase factoring as a staple-on, a within-day factoring benchmark test is proposed to be performed in the billing process. In addition, the posted rates will include a posted demand charge adder applicable to such customers. This demand charge would reflect the added cost to BPA of following customer net load after taking into account a customer's load-following dispatch error.

### **Factoring Service within the Benchmark.**

By definition, customers without resources or customers whose resources are delivered flat will take and receive exactly the amount of Factoring Service to which they are entitled. Only when customer resources have hour-to-hour dispatchability is there a possibility of receiving Factoring Service amounts which are less or greater than the entitlement amount. Factoring Service, which is within the benchmark, is proposed to have no customer-specific excess service charge implications. It is proposed that BPA's posted power demand charge be applied to the customer's power billing demand. Subject to approval in the rates process, this would be payment for Factoring Service within the benchmark, as well as payment for energy firming service. Examples displaying how factoring works with different customer types are available on request. The Factoring Service does not provide back-up or other services for customer resource amounts that are interrupted or otherwise fail to be delivered. Note that if a flat resource fails to be delivered for an hour to a customer within the BPA control area, the service provided is "unauthorized increase" or a negotiated back-up service, not Factoring.

### **Billing Process:**

#### **Determination of Within-Day Factoring Service Actual Use – Billing Determinants for Excess Charges**

For each day of a billing month, the day's HLH and LLH TRL and actual customer resource deliveries will be used to calculate that day's amount of kWhs entitled to benchmark Factoring Service. The customer's actual use of the service will be compared to the benchmark. Actual Factoring Service used for kWhs in excess of the benchmark will be added for the month billing determinants for the excess Factoring Service charge to be posted with other rates for core products. Amounts of Factoring Service used which are less than the benchmark entitlement amount will not be taken into account.

*Regarding future development of Factoring Service product: BPA will continue technical implementation discussions with interested parties through the end of January 1999. These discussions will attempt to define and develop reasonable and practicable modifications of this Factoring benchmark approach and also alternatives to Factoring and the proposed demand adder.*

| <i>Customized Product</i>                  | <i>Variable Load Factor</i>   |
|--|---|
| <b>General</b>                             | The Variable Load Factor product provides the purchaser with a specified amount of capacity and the right to take energy within a specified load factor range.  |
| <b>Purchase Period</b>                     | The purchase period is 3 to 20 years, beginning October 1, 2001 (or another term consistent with the Rate Schedules).   |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not included in this product.   |
| <b>Amount and Shape</b>                    | This is available up to a negotiated monthly capacity amount. The customer can specify a monthly load factor range that will be reflected in the pricing. Capacity and minimum load factor are “take-or-pay.” |
| <b>Load Growth</b>                         | None; the amount is fixed.  |
| <b>Load Variations</b>                     | BPA assumes the risk of all variations in power consumption within the limits of the specified capacity and load factor.  |
| <b>Resource Fluctuations</b>               | This product is intended to follow load variations only. The customer retains the risk of resource fluctuations.  |
| <b>Linkages</b>                            | None.   |
| <b>Basis for Payment</b>                   | Payment is based on contract demand and amount of energy used (but not less than take-or-pay amount).   |

**BPA POWER PRODUCTS CATALOG**

| <i>Customized Product</i>                  | <i>Slice of System</i>   |
|--|--|
| <b>General</b>                             | <p>The Slice of System product is available to PNW Public Requirements customers. This product provides firm power, based on formula for a percentage share of the FCRPS capability, including actual energy generation (firm and secondary) and storage, to meet the purchaser's net load requirements in the PNW. This product is provided by schedule. Although BPA cannot assure this product can be provided by dynamic signal, BPA will work with customers in an effort to provide that capability.</p> <p>A more detailed description of this product is attached.</p> |
| <b>Purchase Period</b>                     | The purchase period is 10 years with no off-ramps, beginning October 1, 2001.  |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not included in this product. To the extent TBL charges Operating Reserves to generation owners, the customer is responsible for providing generation reserves to meet reliability standards.  |
| <b>Amount &amp; Shape</b>                  | At the beginning of the contract, the Purchaser would declare and fix its net load amounts for the contract term, consistent with methodologies used to determine other net requirements for other Subscription purchases. Actual power received will vary, depending on the power output of the FCRPS.  |
| <b>Load Growth</b>                         | None.  |
| <b>Load Variations</b>                     | None.  |
| <b>Resource Fluctuations</b>               | The purchaser would not be entitled to purchasing or marketing services from BPA. BPA would be relieved of its obligation to serve a net requirements Slice purchaser's loads in times of deficiencies. There is no protection against required spill.   |



## BPA POWER PRODUCTS CATALOG

| <i>Customized Product</i> | <i>Slice of System</i>   |
|---------------------------|--|
| <b>Linkages</b>           | This product cannot be purchased in combination with Full Service or Actual Partial Products. This product can be purchased with annual Firm Blocks.                     |
| <b>Basis for Payment</b>  | The cost of a Slice is based on a percentage share of a contractually determined revenue requirement, including an appropriate adjustment for risks created or accepted. |

**DRAFT**

## **BPA'S SLICE PROPOSAL**

Note: This document describes BPA's Slice proposal. Other arrangements may be possible by bilateral negotiation between BPA and a purchaser.

### **General**

- This includes the right to receive a percentage share of FCRPS capability, including actual energy generation (firm and secondary), capacity, and storage.
- This includes the right to modify the rate at which energy is produced within the day, week, month, and year, within the bounds of then-existing minimum and maximum operating constraints of the System, such as operational and non-power requirements.
- BPA may buy back Slice in excess of Requirements if and when necessary to assure service to BPA's other statutory or contractual commitments in the PNW.
- This includes an obligation to pay a corresponding percentage share of BPA revenue requirement without credit for secondary sales.
- The purchaser will assume a proportionate share of the risks of the FCRPS.
- This includes a release of any BPA obligation to serve purchaser's load that is not met by the combination of Slice, other firm purchases from BPA, and the purchaser's own resources.
- A set-up and testing period is required before 10/1/01 implementation of Slice.

### **Term**

- The term is 10 to 20 years.
- There are no off-ramps.
- Slice purchase will not affect purchaser's rights to BPA power after the Slice contract period.

### **Eligibility to Purchase**

- All Subscribers will be PNW Public Requirements customers.
- Slice is not intended to confer special rights over other Subscription products.
- The firm portion of Slice sold in Subscription would be used to serve Requirements load and be limited to net load (total retail load minus customer resources).
- Slice contracts would fix net load (Requirements) amounts for the contract term, in the same manner as the Subscription Firm Block contracts.
- Requirements rights would be mapped to FCRPS firm resource capability, yielding a Slice percentage. Firm portion of Slice would count against Requirements eligibility.
- If resources remain after early Subscription phases, those resources would not be available for additional Slice purchases.

- Slice percentages would not be adjusted for load growth (no remapping).
- Slice percentages would not be adjusted for decreases in FCRPS firm resource capability (no remapping).
- Potential Slice purchasers will be required to pay set-up costs of the Slice.

### **Product Received**

- A proportionate share of the capability of the FCRPS, including both primary and secondary energy.
- A proportionate share of the flexibilities of the FCRPS between the minimum and maximum operating requirements. Slice purchasers would be kept informed of the minimum and maximum operating requirements by BPA.
- The ability to schedule delivery of energy via traditional prescheduling procedures.
- A proportionate share of the storage and shaping rights, such as the ability to vary energy delivered during a day, or between days, weeks, or months within the minimum and maximum operating constraints.
- Daily deviations of actual take from right to actual generation would be posted to storage account.
- The Storage account would be zeroed out when FCRPS reaches physical limits (storage is non-guaranteed).
- Hour-ahead changes would be in the amount to be taken (preschedule change rights).
- Slice purchasers would not be entitled to purchasing or marketing services from BPA. In particular, BPA would be relieved of its obligation to serve a net requirements Slice purchaser's load in times of deficiencies.
- There would be no protection against required spill.

### **Linkages**

- The only core subscription product with which the Slice product can be combined is Annual Firm blocks.

### **Costs to Purchasers**

- Slice purchasers would pay a corresponding percentage of BPA's PBL costs, measured as BPA's PBL revenue requirement which has not been adjusted to take into account projected secondary sales, and which excludes:
  1. Costs of transmitting Slice power to the purchaser (purchase "at the bus-bar");
  2. Some short-term power purchases; and
  3. Resource acquisitions other than those acquired to relieve the inventory constraint from Subscription and those for public purposes.
- Responsibilities of the Slice purchasers would include their percentage share of all remaining FCRPS generation costs and PBL costs including, but not limited to:

1. Generation integration;
  2. Treasury and WPPSS bonds;
  3. Residential/small farm exchange costs if they are a continuing Federal system obligation;
  4. All personnel and overhead costs for the PBL, including marketing power, ratemaking, billing, and contract administration;
  5. General Transfer Agreement costs;
  6. Service and Exchange agreements;
  7. Costs of transmission of Canadian Entitlement return and the costs of transmission to support other Federal system obligations such as operational agreements;
  8. Low Density Discount costs;
  9. Long-term power purchases;
  10. Costs of relieving the expected FCRPS inventory constraint resulting from Subscription, including resource acquisitions and short-term purchases, if necessary, but not including future inventory constraints such as those from load growth;
  11. An appropriate share of planned net revenues for risk;
  12. Environmental investments (some conservation and renewable resource costs);
  13. Other public purposes;
  14. Stranded costs (same treatment as other Subscription purchasers);
  15. Cost shifts to or from Slice from or to other purchasers;
  16. Costs of using financial reserves as a substitute for reduced generating capability, to meet public purposes or fish mitigation;
  17. Costs of short-term power purchases, if any, that enhance the capabilities available to Slice purchasers.
- All costs of implementing Slice, including set-up costs.
  - Budget, investment, cost allocations, and marketing decisions would be done per normal BPA practice.

**Risks and Cost Shifts (Replaces “Risks Purchasers Accept”)**

- Slice purchasers assume a proportionate share of the risks of the FCRPS.
- If the Subscription rate case and evaluation of risks demonstrate cost shifts, costs of Slice will be adjusted accordingly.

**Basis for Payment**

- The cost of a Slice share is based on a percentage share of a contractually determined revenue requirement, including an appropriate adjustment for risks created or accepted.
- Slice purchasers are responsible for their proportionate share of BPA’s actual costs. There will be annual true-ups to reflect actual BPA cost overruns or underruns (including risks that have been realized in real-time), or extraordinary costs of





- generating units (“acts of God”).
- There will be no credits from BPA’s marketing revenues.

### **Resources Included/Excluded**

- Included are FCRPS hydro and thermal committed prior to the “snapshot” date (less Canadian Entitlement obligations).
- Included are long-term BPA power purchases committed prior to the “snapshot.”
- Included are public purpose resource acquisitions committed prior to the “snapshot.”
- Excluded are resources acquired for specific customers under other agreements.
- Excluded are short-term purchases.

### **Transmission**

- Transmission is not included. The purchaser obtains its own transmission for delivery of Slice to its system.

### **Generation Reserves**

- The customer is responsible for generation reserves to meet reliability standards.

### **Scheduling and Accounting**

- Use of flexibility rights is accounted for daily in a “storage account.”
- Scheduling and accounting provisions will be established by contract.
- BPA may adjust the rate of power deliveries to reflect actual operating constraints on the FCRPS.
- The proposed Slice may be available by dynamic scheduling for interested parties. BPA is open to negotiating other arrangements bilaterally with purchasers.

### **Operations/Management Influence**

- Federal agencies will make decisions on non-power requirements and operations of the FCRPS.
- The purchaser would have no authority in river management, investment, or other management decisions.

**Forecast and Data Needs**

- Forecasted Constraints and Data Supplied by BPA to the Slice Purchaser:

| <u>Item</u>  | <u>Within<br/>Day</u> | <u>Next<br/>Day</u> | <u>Next<br/>Week</u> |
|--|-----------------------|---------------------|----------------------|
| 1. Maximum rate of delivery (MW)   | next hour             | yes                 | yes                  |
| 2. Minimum rate of delivery (MW)   | next hour             | yes                 | yes                  |
| 3. Maximum HLH energy delivery for the day (for sustained peaking capability) (MWh)  | yes                   | yes                 | yes                  |
| 4. Maximum upward storage deviation (MWh)  | yes                   | yes                 | yes                  |
| 5. Maximum downward storage deviation (MWh)  | yes                   | yes                 | yes                  |
| 6. Estimated FCRPS generation from natural flows (MWh) (assuming no storage draft)   | yes                   | yes                 | yes                  |
| 7. Formal and periodic updates on characteristics of non-power constraints, similar to what BPA now provides to PNCA Parties       |                       |                     |                      |
| ▪ Items 4 and 5 are cumulative over 24 hours.  |                       |                     |                      |
| ▪ Information provided for the next week is expressed in terms of average for heavy load hours or daily averages (as appropriate). |                       |                     |                      |

- BPA will provide 50-year hydro studies for the following month through the end of the operating year for Slice purchasers to estimate the maximum and minimum storage capability of the FCRPS under varying water conditions.
- BPA will provide to each purchaser its after-the-fact storage account balances.
- Forecasted Data Supplied by the Slice purchaser to BPA: Best estimate of purchaser's expected hourly Slice take will be provided to BPA for the next day.

**Dispute Resolution**

- Criteria and process to be determined.



| <i>Customized Product</i>                  | <i>Renewable and Environmentally Superior Resources</i>   |
|--|---|
| <b>General</b>                             | The Renewable and Environmentally Superior Resources product recognizes the environmental characteristics of some resources and attempts to stimulate markets for renewable resources.  |
| <b>New Renewable Resources</b>             | BPA may provide renewable resources which meet the following standard: <ul style="list-style-type: none"> <li>• Power generated by new or existing facilities driven by wind, solar, geothermal, or qualifying biomass.</li> </ul>  |
| <b>Environmentally Superior Resources</b>  | BPA may offer Environmentally Superior power products (ESP) which are consistent with criteria established by others, including state legislatures. Examples include: <ul style="list-style-type: none"> <li>• Power produced by hydropower facilities with nameplate rating under 30 MW.</li> <li>• Hydropower facilities where specific projects and/or system operations are guaranteed to be available and are designated to support an ESP sale and which have been endorsed by NW public interest groups as environmentally superior power resources.</li> <li>• Operations of hydropower facilities due to seasonal flows mandated in accordance with the Endangered Species Act or other required flow management directives.</li> <li>• Operations of hydropower facilities during off-peak hours during the months of April, May, June, or July of any year.</li> </ul> |
| <b>Purchase Period</b>                     | New Renewable Resources: 1-20 years, beginning October 1, 2001 (if available). Environmentally Superior Products: At least one month.   |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not included in this product.   |
| <b>Amount/Shape</b>                        | This includes flat blocks of power: 100% load factor.   |



| <i>Customized Product</i> | <i>Renewable and Environmentally Superior Resources</i>   |
|---------------------------|---|
| <b>Scheduling</b>         | BPA will guarantee the availability of the resource during the term of the sale. BPA will schedule the energy-equivalent of the resource output plus backup power to the customer on an hourly basis. |
| <b>Disclosure</b>         | BPA will provide the purchaser with periodic reports documenting the project source and power delivery schedules associated with this sale.   |
| <b>Backup</b>             | BPA will back up the output of this resource with one of the following: renewable resources, system power, or nuclear-free system power (if available), as specified by the customer.                 |
| <b>Linkages</b>           | To the extent a customer is purchasing a Full Service or Partial Service product, load served by this product will be netted against the Full or Partial load.  |
| <b>Payment</b>            | Payment will be take-or-pay, with payment based on monthly contract amounts.  |



**BPA POWER PRODUCTS CATALOG**

| <i>Bilateral Products</i>  | <i>Power – Firm, Secondary, Commodity</i>   |
|----------------------------|---|
| <b>General</b>             | Non-Subscription power is a commodity product normally sold from BPA’s Trading Floor.   |
| <b>Term</b>                | Monthly amounts from 1-18 months, or annual blocks of power.  |
| <b>Transmission</b>        | Transmission and ancillary services are not included in this product.   |
| <b>Amount &amp; Shape</b>  | As negotiated, but this product is commonly sold as monthly flat blocks of power: 100% load factor on LLH only, on HLH only, or on all hours. |
| <b>Interruption Rights</b> | Rights to interrupt schedules may be negotiated.  |
| <b>Basis for Payment</b>   | Payment is based on amount of power scheduled.  |



| <i>Bilateral Products</i>                  | <i>Capacity</i>   |
|--|---|
| <b>General</b>                             | <p>Capacity is a customer’s right to purchase and a supplier’s obligation to stand-ready to provide. The need addressed in the past by capacity-without-energy can be met partly by buys and sells from the commodity market rather than with a separate capacity product.</p> <p>The term “capacity without energy” (e.g., “naked capacity”) has been used to describe a common power product in which a supplier stands ready to supply a specified MW/hr level of power, generally in specified HLH only, and the receiver returns the energy in other hours.</p> <p>Additional product features might include cash-out in lieu of energy replacement, ability to defer acceptance of replacement energy, and flexibilities around notice or pre-schedule terms.</p> |
| <b>Purchase Period</b>                     | The purchase period of this product is negotiable.  |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not included in this product.   |
| <b>Amount and Shape</b>                    | <p>The customer can specify the amount and shape including:</p> <ul style="list-style-type: none"> <li>• Maximum number of hours per period during which the customer is able to schedule the capacity;</li> <li>• Maximum MW/hr to be scheduled; and</li> <li>• Hours of the day or week the service is required.</li> </ul>   |

## BPA POWER PRODUCTS CATALOG

| <i>Bilateral Products</i> | <i>Capacity</i>   |
|---------------------------|---|
| <b>Energy Returns</b>     | <p>Replacement energy must be returned during a specified time period (as negotiated), commonly within either 24 hours or 168 hours.</p> <p>The hourly maximum rate of return will be negotiated; a standard return rate could be 100 percent of the capacity amount.</p> |
| <b>Linkages</b>           | None.   |
| <b>Basis for Payment</b>  | Payment is based on the amount of capacity specified in the contract.   |

| <i>Bilateral Products</i>                  | <i>Storage</i>  |
|--|---|
| <b>General</b>                             | <p>Storage generally has been used to refer to actual use of hydro reservoir space and therefore was constrained by reservoir specifics. It sometimes was attached literally to the water stored but more commonly was measured in energy equivalents.</p> <p>This product generally involves the delivery and return of equal amounts of energy in specified time periods. It is designed for customers that want to deliver energy to BPA at a certain time and have it returned at another time.</p> <p>The product can be designed to include any of the following, but the seasonal shaping of water described in listed item 2 is the traditional use: (1) energy accepted from the customer in LLH and delivered to the customer in HLH, (2) energy accepted from the customer in the spring and returned to the customer in the winter, or (3) energy delivered to the customer in advance of energy being provided to BPA.</p> |
| <b>Purchase Period</b>                     | The purchase period of this product is negotiable.  |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not included in this product.   |
| <b>Amount and Shape</b>                    | Amounts of BPA's storage capability vary daily. BPA will assess system conditions and provide storage capability within system limitations. Amounts and timing of storage may be negotiated on a preschedule basis.   |
| <b>Notification</b>                        | Storage deliveries and returns will be conducted on a preschedule basis.  |
| <b>Spill Guarantee</b>                     | This standard product is not guaranteed against spill.  |
| <b>Limitations</b>                         | BPA may limit return of storage to a specified group of peak hours each day.  |



## BPA POWER PRODUCTS CATALOG

| <i>Bilateral Products</i> | <i>Storage</i>   |
|---------------------------|--|
| <b>Reservoirs</b>         | This storage is considered system storage and is not tied to a specific reservoir. |
| <b>Accounting</b>         | BPA's normal storage accounting practices will be used.                            |
| <b>Linkages</b>           | None.  |
| <b>Basis for Payment</b>  | Payment is based on amounts and periods when energy is stored and returned.        |

| <i>Bilateral Products</i>                  | <i>Resource Factoring</i>   |
|--|---|
| <b>General</b>                             | <p>The Resource Factoring product generally involves the delivery and return of equal amounts of energy in specified time periods. It is designed for customers that want to deliver energy to BPA at a certain time and have it returned at another time. It can be used for within day shaping of a resource.</p> <p>The product can be designed to include: (1) energy accepted from the customer in LLH and delivered to the customer in HLH, (2) energy accepted from the customer in the spring and returned to the customer in the winter, or (3) energy delivered to the customer in advance of energy being provided to BPA.</p> |
| <b>Purchase Period</b>                     | The purchase period of this product is negotiable.  |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not included in this product.   |
| <b>Amount and Shape</b>                    | BPA will negotiate with the customer on a case-by-case basis for providing the services necessary to meet the customer's needs.   |
| <b>Firmness</b>                            | This service may be firm or non-firm based on price and system conditions.  |
| <b>Limitations</b>                         | BPA may limit delivery of this product to a specified group of peak hours each day.   |
| <b>Linkages</b>                            | None.   |
| <b>Basis for Payment</b>                   | Payment is based on the number of MW required to support the service and/or MWh accepted and/or returned.   |

| <i>Bilateral Products</i>                  | <i>Preschedule Change Rights</i>   |
|--|--|
| <b>General</b>                             | The Prescheduled Change Rights product provides the customer with the right to make changes to scheduled amounts previously set in the preschedule process, i.e., the workday prior to the day of delivery. It is assumed to be attached to an umbrella agreement or power sales contract specifying the limitations on preschedule change rights. |
| <b>Purchase Period</b>                     | The purchase period is up to the term of the underlying agreement.   |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not included in this product.  |
| <b>Amount and Frequency</b>                | The maximum MW/hr magnitude of the schedule change and the number of changes per hour will be specified in the underlying agreement.   |
| <b>Deadline</b>                            | Changes from preschedules for the “hour ahead” would be accepted until a specified time prior to the beginning of that clock hour.   |
| <b>Linkages</b>                            | This product is offered in conjunction with an underlying BPA purchase agreement.  |
| <b>Basis for Payment</b>                   | Payment is based on rights: the amount (in MW) and frequency (in hours/month).   |

| <i>Bilateral Products</i>                  | <i>Displacement</i>   |
|--|---|
| <b>General</b>                             | The Displacement product is designed to allow the customer to purchase less power from BPA than their commitment to purchase, for any reason. The customer can use this product in addition to the Block Flexibility product to supplement the ability to reduce BPA purchases. This product enables the customer to exercise economic choice in large amounts for limited periods. |
| <b>Purchase Period</b>                     | The purchase period is in one-calendar-month increments, not to exceed the term of the underlying agreement.  |
| <b>Transmission and Ancillary Services</b> | Transmission and Ancillary Services are not necessary.  |
| <b>Amount and Shape</b>                    | The product provides for displacement up to 100 percent of the BPA purchase.  |
| <b>Linkages</b>                            | This product is offered in conjunction with a BPA power sale to the customer. The Displacement product does not relieve the purchaser from a demand charge in the underlying purchase.  |
| <b>Basis for Payment</b>                   | Payment is based on amount of displacement right and amount of use.   |



| <i>Complements to Core Products</i> | <i>Scheduling Services</i>  |
|-------------------------------------|---|
| <b>General</b>                      | BPA can provide scheduling services for customers that purchase non-Federal power. (Scheduling fees will not be charged for power purchased by the customer from BPA.)  |
| <b>Purchase Period</b>              | The purchase period is up to the term of the purchase.  |
| <b>Types of Scheduling Services</b> | <p>Scheduling services are customized, tailored to the type of agreement or resource, and to the specifications of individual customers.</p> <p>BPA can provide the following Scheduling services, if requested:</p> <ul style="list-style-type: none"> <li>• <i>Daily prescheduling</i> Daily prescheduling of transactions between utilities within the Western Systems Power Pool (WSPP).</li> <li>• <i>Real-time Activities:</i> Verification and coordination of the necessary interchange schedules with all parties involved, and coordination of all real-time changes in preschedules with all affected parties.</li> <li>• <i>After-the-Fact Activities:</i> After-the-fact verification and reconciliation of transactions. BPA will provide records of hourly schedules each day and cumulative total schedules at the end of each calendar month.</li> </ul> |
| <b>Conditions</b>                   | <p>The customer will submit preschedule information (including hourly schedules, transmission arrangements, and control area contacts) by a specified time, each preschedule day.</p> <p>The customer will provide the name of the utility providing load regulation and reserves, for each schedule.</p> <p>BPA is not responsible for reserves or mitigating losses if no reasonable alternatives are provided.</p>   |
| <b>Linkages</b>                     | This product is tied to a non-Federal purchase.   |
| <b>Basis for Payment</b>            | Payment is based on fee for services and the actual number of preschedules and real-time changes.   |

| <i>Reserves, Resource Support</i> | <i>Supplemental AGC</i>   |
|-----------------------------------|---|
| <b>General</b>                    | <p>This product is intended for control area operators.</p> <p>This product makes capacity available to either deliver or receive energy as needed on an instantaneous basis to cover a utility's load and resource variations.</p> |
| <b>Purchase Period</b>            | The purchase period is up to 5 years, beginning October 1, 2001.  |
| <b>Transmission</b>               | Transmission is not included in this product.   |
| <b>Amount &amp; Shape</b>         | Hourly capacity is pre-determined by the customer. The net amount of energy provided by BPA on any hour is determined by integrating the signal between BPA and the customer each hour.   |
| <b>Firmness</b>                   | This standard product is sold on a firm basis.  |
| <b>Direction</b>                  | The standard product is bi-directional.   |
| <b>Accounting</b>                 | Amounts of energy will be integrated on an hourly basis.  |
| <b>Equipment</b>                  | The customer is responsible for acquiring and purchasing the telemetry and communications channel that are required between the customer's control center and the BPA control center.   |
| <b>Linkages</b>                   | None.   |
| <b>Basis for Payment</b>          | Payment is based on amount of capacity available on an instantaneous basis and amount of hourly or monthly net energy delivered or received.  |

| <i>Reserves, Resource Support</i> | <i>Operating Reserves</i>  |
|-----------------------------------|--|
| <b>General</b>                    | <p>This product is intended for control area operators.</p> <p>This product can be used to meet the customer's NWPP, WSCC, NERC or other reserve obligations within an hour. BPA offers Spinning and Non-spinning reserves that can be called upon in the event of a resource failure. Spinning reserves are provided from on-line generation that is responsive to changes in system frequency and are available within 10 minutes upon notification of a resource failure. Non-spinning reserves are provided from generation that can be on-line within 10 minutes or load that can be interrupted within 10 minutes.</p> |
| <b>Purchase Period</b>            | The purchase period is up to 5 years, beginning October 1, 2001.   |
| <b>Transmission</b>               | Transmission is not included in this product.  |
| <b>Amount</b>                     | This can be up to the contracted amounts within 10 minutes of notification.  |
| <b>Energy Delivery</b>            | BPA will provide energy for up to 60 minutes.  |
| <b>Linkages</b>                   | None.  |
| <b>Basis for Payment</b>          | Payment is based on amount of Operating Reserve capacity provided by BPA and amount of energy delivered.   |

| <i>Reserves, Resource Support</i>  | <i>Forced Outage Reserves</i>   |
|------------------------------------|---|
| <b>General</b>                     | Forced Outage Reserves provides reserves that can be called upon at the start of an hour in the event of a resource or transmission line failure. |
| <b>Purchase Period</b>             | The purchase period is up to 5 years, beginning October 1, 2001.  |
| <b>Transmission</b>                | Transmission is not included in this product.   |
| <b>Amount</b>                      | The amount is based on the size of resource or transmission line (MW), specified by customer, to be backed for the duration specified             |
| <b>Resource being supported</b>    | Back-up is provided for forced outages on specific resources or transmission lines identified by the customer.                                    |
| <b>Duration of Energy Delivery</b> | BPA will provide energy for the duration specified by the customer.   |
| <b>Linkages</b>                    | This service can be packaged with Operating Reserves and be available immediately upon notice of a resource or transmission line failure.         |
| <b>Basis for Payment</b>           | Payment is based on amount of Forced Outage Reserves (MW) held by BPA and amount of energy provided.  |



| <i>Complements to Core Products</i>        | <i>Block Flexibility</i>  |
|--|---|
| <b>General</b>                             | Block Flexibility will meet variations in a customer’s purchase(s) from BPA, regardless of the reason for the variations. The reasons will be identified at the time of negotiation and will be factored into the price of the product. This product is associated with a separate take-or-pay power purchase.  |
| <b>Purchase Period</b>                     | The purchase period will be the same as the term of the underlying power purchase.  |
| <b>Transmission and Ancillary Services</b> | Transmission and ancillary services are not included in this product.   |
| <b>Amount and Shape</b>                    | The customer will specify the hourly amount of flexibility above and below the take-or-pay amount. These variance limits do not have to be symmetrical around the take-or-pay amount.   |
| <b>Load Variations</b>                     | All variations in load (e.g., load growth, economic or retail access load loss) can be covered in this product, up to the variance limits.  |
| <b>Resource Fluctuations</b>               | All fluctuations in resources (e.g., purchases or generating resource output) can be covered in this product, up to the variance limits.  |
| <b>Linkages</b>                            | This product is offered in conjunction with a take-or-pay purchase from BPA.  |
| <b>Basis for Payment</b>                   | Payment is based on amount of variance.<br><br>There is no energy delivery associated with this product. For net energy deliveries, within the variance limits, in excess of the underlying power purchase(s), the basis for payment will be the same as for the underlying power sale. There will be no charge for energy not taken, within the variance limits. |



| <i>Complements to Core Products</i>        | <i>Retail Access - Insurance</i>  |
|--|---|
| <b>General</b>                             | This product allows the customer to reduce its purchases from BPA if load is lost because retail customers gain access to other suppliers of electricity. It relieves the customer of the market risk associated with BPA remarketing customer's take-or-pay power associated with retail access load loss. |
| <b>Purchase Period</b>                     | The purchase period is 3 to 20 years, beginning October 1, 2001 (or another term consistent with the Rate Schedules).   |
| <b>Transmission and Ancillary Services</b> | Transmission and ancillary services are not included.   |
| <b>Amount &amp; Shape</b>                  | BPA will assume the retail access load loss risk up to a specified amount of the customer's load in a shape consistent with the type of load lost.  |
| <b>Retail Access Load Loss</b>             | For loads lost by the customer due to retail access, BPA will adjust take-or-pay amounts under the customer's power sale.   |
| <b>Linkages</b>                            | This product is offered in conjunction with a BPA power sale to the customer. It would not protect the customer from load loss beyond the amount of protection being purchased from BPA.  |
| <b>Basis for Payment</b>                   | Payment is based on amount of retail load insured.  |

| <i>Complements to Core Products</i> | <i>Retail Access - Remarketing</i>   |
|-------------------------------------|--|
| <b>General</b>                      | Retail Access Remarketing is designed to mitigate take-or-pay purchase obligations, and continuing payment obligations resulting from retail load(s) lost by the customer due to retail competition or deregulation. The customer's power bill will be credited for the sale amount, minus any fees. |
| <b>Purchase Period</b>              | The purchase period is limited to the term of the underlying purchase agreement.   |
| <b>Transmission</b>                 | Transmission and ancillary services are not included.  |
| <b>Amount and Shape</b>             | The amount of excess firm energy to be remarketed will be identified in advance and be limited to the customer's load loss. The shape of the power to be returned to BPA for remarketing will match the shape of the lost load.  |
| <b>Limitations</b>                  | Under certain market or system conditions, BPA may have a limited ability to remarket.   |
| <b>Load Variations</b>              | None; the amount is fixed. BPA and the customer must agree on the amount to be remarketed.   |
| <b>Linkages</b>                     | This product is offered in conjunction with a BPA sale to the customer. It would not protect the customer from a take-or-pay obligation associated with load loss beyond the amount being remarketed by BPA.   |
| <b>Basis for Payment</b>            | The basis for payment is take-or-pay, with the payment based on the monthly contract amount.<br><br>Fees will be charged, as necessary, to offset the cost of providing this service.  |

