

Definitions from section 2 of the body of the November 10, 2008 Slice/Block Agreement

*NOTE: For the definitions highlighted in grey are unchanged from the
Slice/Block template*

- 2.54 “Diurnal Flattening Service” or “DFS” (09/08/08 Version) means a service that makes a resource that is variable or intermittent, or that portion of such resource that is variable or intermittent, equivalent to a resource that is flat within each of the 24 HLH and LLH periods of a year.
- 2.73 “Forced Outage Reserve Service” or “FORS” (09/08/08 Version) means a service that provides an agreed-to amount of capacity and energy to load during the forced outages of a qualifying resource.
- 2.132 “Resource Support Services” or “RSS” (09/08/08 Version) means the Diurnal Flattening Service and Forced Outage Reserve Service BPA provides to support resources that are renewable resources and are Specified Resources used to serve Total Retail Load after September 30, 2006, and may in the future include other related services that are priced in the applicable 7(i) Process consistent with the TRM.

Exhibit D

ADDITIONAL PRODUCTS AND SPECIAL PROVISIONS

*NOTE: The grey highlighted text below is the same language as distributed
by Nita Burbank on April 6, 2009 with all changes accepted.*

2. RESOURCE SUPPORT SERVICES

*[The following introductory paragraph is included ONLY in the Slice/Block
template.]*

RSS is only available to «Customer Name» to support renewable resources that are Specified Resources used to serve Total Retail Load that are added after September 30, 2006. «Customer Name»’s purchase of RSS shall include those support services necessary and consistent with customer’s Slice/Block purchase to convert the actual scheduled output from the resource being supported into a flat annual block.

- 2.1 BPA shall develop the RSS products to support applicable Specified Resources listed in section 2 of Exhibit A for the FY 2012-2014 Purchase Period and offer such as a revision to this exhibit by August 1, 2009 and by August 1 prior to each Notice Deadline thereafter. Prior to that date, BPA shall provide «Customer Name» a reasonable opportunity to provide input into the development of the products and the related contract provisions. By the November 1, 2009 Notice Deadline and each Notice Deadline thereafter, «Customer Name» shall notify BPA of any RSS products it elects to buy from BPA under the terms of this Agreement and shall identify the applicable resource(s), for which it shall purchase the RSS product(s) for the upcoming purchase period. Such election shall be a binding commitment of both

Parties. If «Customer Name» makes such election, the Parties shall revise this exhibit so that it incorporates the agreed changes to applicable provisions, including the applicable resource amounts, if known, by March 31, 2010 or by March 31 of the year following the Notice Deadline for future years. . By September 30 of the last Rate Case Year prior to the first Rate Period when service begins, and by each applicable September 30 thereafter in accordance with the applicable incorporated contract language, BPA shall update the relevant tables included in the incorporated contract language with the applicable charges and any necessary updates to resource amounts.

- 2.2 If «Customer Name» adds a new Specified Resource within a Purchase Period to meet its obligations to serve Above-RHWM Load with Dedicated Resources, consistent with section 3.5.1 of the body of this Agreement, «Customer Name» may purchase Diurnal Flattening Service (DFS) or Forced Outage Reserve Services (FORS) to support such resource. «Customer Name» shall request a copy of the then-current DFS or FORS standard contract provisions from BPA and shall notify BPA in writing by October 31 of a Rate Case Year that it elects to purchase DFS or FORS for the new Specified Resource under the terms stated in the then-current contract provisions and the terms of this section 2.2. Such election shall be a binding commitment of both Parties. The elected DFS or FORS will be effective at the start of the upcoming Rate Period. The duration of such purchase shall be for the remainder of the Purchase Period and for the following Purchase Period. If «Customer Name» makes such election, the Parties shall revise this exhibit by March 31 of the calendar year after «Customer Name» has given notice of its election. Such revision shall incorporate the agreed changes to applicable provisions, including the applicable resource amounts, if known. By September 30 of the last Rate Case Year prior to the first Rate Period when service begins, and by each applicable September 30 thereafter in accordance with the applicable incorporated contract language, BPA shall update the relevant tables included in the incorporated contract language with the applicable charges and any necessary updates to resource amounts.

NOTE: For the remainder of this template all language highlighted in grey is the same as the April 13, 2009 Load Following language. Sections not highlighted in grey contain changes as noted by Word's Track Changes function based upon the April 13, 2009 Load Following template.

Include for SLICE/BLOCK if customer purchases RSS:

Option 1: Include the following version if customer purchases DFS.

2.3 **Diurnal Flattening Service (DFS)**

From October 1, 20«XX» through September 30, 20«XX», BPA shall support «Customer Name»'s intermittent renewable Specified Resources listed in section 2.3.5.1 below with DFS in accordance with section 2.3.2 below. «Customer Name» shall apply such resources and provide BPA with any

necessary information concerning such resources in accordance with section 2.3.3 below. BPA shall calculate the charges for DFS in accordance with section 2.3.4 below and shall update the tables in section 2.3.5 below.

Diurnal Flattening Service is not available for months where the megawatt capacity amounts of «Customer Name»'s Specified Resources listed in section 2.3.5.1 below are greater than «Customer Name»'s corresponding month average Tier 1 Block Amount as stated in section 1.3 of Exhibit A.
Drafter's Note: BPA recognizes that DFS not being available in all months does not deliver DFS as a flat annual block and is willing to discuss with customers options to address this issue.

2.3.1 Definitions

2.3.1.1 "Balancing Authority" or "BA" means the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports interconnection frequency in real time.

2.3.1.2 "Balancing Authority Area" means the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.
Reviewer's Note: The BA and BA Area definitions are from NERC's "Glossary of Terms Used in Reliability Standards".

2.3.1.3 "Operating Minimum" means the lowest level of power generation a resource can sustain over a defined period without damaging generating or other electrical equipment while maintaining electrical system stability. Such levels are determined by BPA using resource specific information including equipment specifications, fuel type, fuel availability, resource location, and age of equipment.

2.3.2 BPA's Obligations

On an hourly basis BPA shall provide power to serve «Customer Name»'s Total Retail Load to meet variations between the amounts generated by the Specified Resources that BPA lists in section 2.3.5.1 below and the planned amounts listed in section 2.3.5.2 below. Generated amounts are the amounts measured by the meters on the resources listed in section 2.3.5.1 below in accordance with section 2.3.3.3 below, unless a resource listed in 2.3.5.1 below is scheduled to «Customer Name»'s Total Retail Load, in which case such generated amounts are the amounts scheduled pursuant to Exhibit F.

2.3.3 «Customer Name»'s Obligations

2.3.3.1 Operational Requirements

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«Customer Name» shall apply the output from the Specified Resources listed in section 2.3.5.1 below, as such output is generated, to serve «Customer Name»'s Total Retail Load. Every hour «Customer Name» shall provide at least the amount of power in the Operating Minimums table in section 2.3.5.2 below for the applicable hour from the resources listed in section 2.3.5.1 below to serve «Customer Name»'s Total Retail Load. If «Customer Name» can not provide at least the Operating Minimum amounts to serve «Customer Name»'s Total Retail Load from the resources listed below in section 2.3.5.1, then «Customer Name» shall provide power from another source to serve its Total Retail Load. Such replacement power shall equal the planned amounts of power listed in section 2.3.5.2 below for the applicable resource and hour. If «Customer Name» does not meet the conditions above, then «Customer Name» shall pay a UAI charge to BPA in accordance with BPA's Wholesale Power Rate Schedules and GRSPs.

Option 1: Include the following language if customer is NOT served by Transfer Service:

2.3.3.2 **Delivery Requirements**

If any of the Specified Resources listed in section 2.3.5.1 are biogas, biomass, geothermal, small hydro (nameplate capability less than or equal to ten megawatts), landfill gas, ocean, solar, or wind resources, and if they are located outside of BPA's Balancing Authority Area; then «Customer Name» shall schedule such resources to «Customer Name»'s Total Retail Load on non-firm or firm transmission. Other Specified Resources listed in section 2.3.5.1 that are located outside of BPA's Balancing Authority Area shall be scheduled to «Customer Name»'s Total Retail Load on firm transmission. BPA shall have no obligation for any costs or related services attributable to «Customer Name»'s acquisition of such firm or non-firm transmission.

End of Option 1

Option 2: Include the following language if customer is served by Transfer Service:

2.3.3.2 **Delivery Requirements**

Drafter's Note: This section will be revised to reflect language from the Load Following template and to address the issue that power must be delivered to the customers TRL through special transmission or transfer arrangements.

If any of the Specified Resources listed in section 2.3.5.1 are located outside of BPA's Balancing Authority Area; then «Customer Name» shall schedule such resources to BPA's

Balancing Authority Area on firm transmission. BPA shall have no obligation for any costs or related services attributable to «Customer Name»'s acquisition of such firm transmission. On a resource by resource basis, BPA and «Customer Name» may agree to alternative delivery arrangements for the Specified Resources listed below in section 2.3.5.1 that are located outside of BPA's Balancing Authority Area.

End of Option 2

2.3.3.3 **Information and Scheduling Requirements**

«Customer Name» shall provide BPA with hourly meter data from the Specified Resources listed in section 2.3.5.1 below in accordance with section 17.3 of the body of this Agreement. If «Customer Name» installs or upgrades a meter to meet such requirement, then «Customer Name» shall pay for any costs or related services attributable to the new or upgraded meters.

For every hour, «Customer Name» shall schedule the output of the Specified Resources listed in section 2.3.5.1 below and the hourly DFS-adjusted scheduled Tier 1 Block Amount deliveries such that the total hourly amount equals the planned amount of DFS plus the hourly planned Tier 1 Block Amounts in accordance with section 6 of Exhibit F.

«Customer Name» shall ~~also~~ provide BPA with any resource information, including historical and forecast resource data, BPA determines is necessary to provide DFS.

2.3.4 **DFS Rates and Charges**

BPA shall charge «Customer Name» for DFS, based upon their specific resource and load characteristics, consistent with TRM methodology. ~~on~~ «Customer Name»'s monthly bill will be prepared sent in accordance with section 16 of this Agreement, as follows:

2.3.4.1 **Resource Shaping Charge**

For the Specified Resources listed in section 2.3.5.1 below, BPA shall credit or charge «Customer Name» for the difference between the planned monthly average megawatt amounts listed below in section 2.3.5.2 and the sum of the annual average megawatt amounts listed in the Specified Resource Amounts tables in section 2 of Exhibit A for the applicable year. BPA shall calculate «Customer Name»'s Resource Shaping Charge by multiplying such monthly differences (converted to megawatt-hours) for all months of the upcoming Rate Period by the applicable Resource Shaping Rate, as established in BPA's Wholesale Power Rate Schedules and GRSPs. BPA shall then divide the sum of the

dollar amounts calculated above by 24 to calculate the fixed monthly Resource Shaping Charge, which shall be listed in section 2.3.5.3 below.

2.3.4.2 Resource Shaping Charge Adjustment

Each month BPA shall credit or charge «Customer Name» for any over- or under-generation using the Resource Shaping Charge Adjustment, as established in BPA's Wholesale Power Rate Schedules and GRSPs. BPA shall calculate «Customer Name»'s monthly Resource Shaping Charge Adjustment by multiplying the Resource Shaping Rate, as established in BPA's Wholesale Power Rate Schedules and GRSPs, by the Resource Shaping Charge Adjustment billing determinant.

Reviewer's Note: BPA plans on calculating the Resources Shaping Adjustment Billing Determinant as follows: BPA shall calculate the Resource Shaping Charge Adjustment billing determinant by subtracting (i) either the amounts measured by the meters, as listed in Exhibit E, for the resources listed in section 2.3.5.1 below, or if such resources are scheduled then, the scheduled amounts, as provided to BPA in accordance with section 2.3.3.2 above, for the resources listed in section 2.3.5.1 below, from (ii) the applicable planned amounts listed in section 2.3.5.2 below.

2.3.4.3 DFS Capacity Charge

Each month «Customer Name» shall be charged for the federal capacity associated with DFS. BPA shall establish such monthly charge using data from each of the resources listed in section 2.3.5.1 below, BPA's Demand Rate as established in BPA's Wholesale Power Rate Schedules and GRSPs, and the associated methodology established in the 7(i) Process. Such monthly fixed Capacity Charge shall be listed in section 2.3.5.3 below.

2.3.4.4 DFS Energy Rate

Each month «Customer Name» shall be charged for the federal energy associated with DFS. BPA shall calculate such monthly charge by multiplying (i) either the amounts measured by the meters, as listed in Exhibit E, for the resources listed in section 2.3.5.1 below, or if such resources are scheduled then, the scheduled amounts, as provided to BPA in accordance with section 2.3.3.2 above, for the resources listed in section 2.3.5.1 below, by (ii) the DFS Energy Rate listed in section 2.3.5.3 below. BPA shall use data from each of the resources listed in section 2.3.5.1 below and the associated methodology for the DFS Energy Rate that is established in the 7(i) Process.

2.3.4.4 DFS UAI Charge

A UAI Charge shall be applied when «Customer Name»'s hourly DFS adjusted scheduled Tier 1 Block Amount deliveries plus the scheduled DFS amounts for the Specified Resources listed in 2.3.5.1 is greater than the hourly Tier 1 Block Amount planned deliveries plus the DFS planned amounts for the Specified Resources listed in 2.3.5.1.

2.3.5 Applicable Resources, Amounts, and Charges

2.3.5.1 List of Specified Resources

***Drafter's Note:** For each specified resource below BPA will require monthly Minimum Operating Amount, capacity amounts, and planned amounts. Also required for each specified resource will be a table defining the maximum and minimum amount of DFS per month.*

«Resource Name»

«Resource Name»

2.3.5.2 Monthly Operating Minimum and Planned Amounts

BPA shall determine the monthly ~~and Diurnal capacity~~ Operating Minimum and planned amounts for the resources listed above in section 2.3.5.1. By September 30 of each Rate Case Year, BPA shall put the sum of such resource amounts in the tables below.

CAPACITY AMOUNTS													
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
<u>Rate Period Year 1</u>													
<u>Total MW</u>	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>Rate Period Year 2</u>													
<u>Total MW</u>	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>Note: The amounts in the table above shall be rounded to whole megawatts.</u>													

OPERATING MINIMUMS													
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
<u>Rate Period Year 1</u>													
<u>HH Total MW</u>													
<u>LLH MW</u>	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>Rate Period Year 2</u>													
<u>HH Total MW</u>													
<u>LLH MW</u>	-	-	-	-	-	-	-	-	-	-	-	-	-
<u>Note: The amounts in the table above shall be rounded to whole megawatts.</u>													

PLANNING AMOUNTS													
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Rate Period Year 1													
HLH aMW	-	-	-	-	-	-	-	-	-	-	-	-	-
LLH aMW	-	-	-	-	-	-	-	-	-	-	-	-	-
Total aMW													
Rate Period Year 2													
HLH aMW	-	-	-	-	-	-	-	-	-	-	-	-	-
LLH aMW	-	-	-	-	-	-	-	-	-	-	-	-	-
Total aMW													

Note: The amounts in the table above shall be rounded to whole average megawatts

2.3.5.3 DFS Charges

By September 30 of each Rate Case Year, BPA shall update the table below with the monthly DFS Charges, as established in each rate case, for the upcoming Rate Period.

MONTHLY RESOURCE CHARGE	
Rate Period	\$
2012 – 2013	
2014 – 2015	
2016 – 2017	
2018 – 2019	
2020 – 2021	
2022 – 2023	
2024 – 2025	
2026 – 2027	
2028	

MONTHLY CAPACITY CHARGE	
Rate Period	\$
2012 – 2013	
2014 – 2015	
2016 – 2017	
2018 – 2019	
2020 – 2021	
2022 – 2023	
2024 – 2025	
2026 – 2027	
2028	

MONTHLY ENERGY RATE	
Rate Period	\$/MWh
2012 – 2013	
2014 – 2015	
2016 – 2017	
2018 – 2019	
2020 – 2021	
2022 – 2023	
2024 – 2025	
2026 – 2027	
2028	

End Option 1 – (i.e. Customer does purchase DFS).

Option 2: Include the following version if customer does NOT purchase DFS but DOES purchase FORS, RRS, or SCS.

2.3 **«Customer Name» Has Chosen Not To Purchase DFS**

Option 1: Include the following version if customer purchases FORS.

2.4 **Forced Outage Reserve Service (FORS)**

From October 1, 20«XX» through September 30, 20«XX», BPA shall provide power to serve «Customer Name»'s Total Retail Load during a Forced Outage of «Customer Name»'s renewable Specified Resources, that BPA lists in section 2.4.5.1 below, in accordance with section 2.4.2 below. «Customer Name» shall pay BPA for FORS in accordance with section 2.4.3. «Customer Name»'s request for FORS shall meet the conditions in section 2.4.4.

2.4.1 **Definitions**

2.4.1.1 “Forced Outage” means loss of generation as a result of: (i) unit tripping, due to a failure to start or unplanned tripping; (ii) loss of transmission path between generator and the network point of interconnection; or (iii) internal plant equipment problems.

Reviewer’s Note: The Forced Outage definition above is from the Northwest Power Pool reserve sharing group agreement. Individual resources may have further refinements to their definitions.

2.4.2 Limits of Power Provided Under FORS

2.4.2.1 Hourly Limits

Subject to the limits in section 2.4.2.2, BPA shall provide power to «Customer Name»’s Total Retail Load during a Forced Outage of a Specified Resource listed below in section 2.4.5.1 equal to the lesser of (i) the megawatt amounts «Customer Name» requests from BPA in accordance with section 2.4.4 below, or (ii) the average of the megawatt-hour amounts listed in section 2 of Exhibit A for the applicable resource and the applicable hour.

2.4.2.2 Annual and Purchase Period Limits

During any Fiscal Year, «Customer Name» shall be limited to a maximum of the megawatt-hour amounts of FORS listed in section 2.4.5.2 below for the applicable resource and Fiscal Year. During any Purchase Period, «Customer Name» shall be limited to the megawatt-hour amounts of FORS listed in section 2.4.5.2 for the applicable resource and Purchase Period.

2.4.2.3 Increasing Annual and Purchase Period Limits

«Customer Name» may request that BPA increase the amount of megawatt-hours of FORS provided during any given Fiscal Year or Purchase Period. BPA shall evaluate «Customer Name»’s request but BPA is not obligated to increase the amount. If BPA accepts «Customer Name»’s request, BPA shall make adjustments to the megawatt-hour limits in section 2.4.5.2 within 15 business days of «Customer Name»’s request; provided, however, BPA shall have the right to also evaluate and adjust the fees in section 2.4.5.3 accordingly.

2.4.3 FORS Charges

«Customer Name» shall pay a charge each month to BPA for FORS in accordance with the charge established in BPA’s Wholesale Power Rate Schedules and GRSPs for each Rate Period for such service. By September 30 of each Rate Case Year, BPA shall update the table in section 2.4.5.3 below with such monthly charge. «Customer Name»

shall also pay for any energy provided under FORS in accordance with BPA's Wholesale Power Rate Schedules and GRSPs.

Reviewer's Note: BPA plans on pricing the energy provided under FORS as follows: Except for the first 24 hours of energy provided during a Forced Outage, energy provided by BPA shall be charged at the applicable Diurnal Dow Jones Mid-C Prices. Energy provided during the first 24 hours of a Forced Outage shall be charged at the greater of (i) the hourly prices as seen on BPA's Trading Floor, as determined by BPA; or (ii) the Daily Dow Jones Mid-C Prices. BPA shall bill «Customer Name» for the charges described above on «Customer Name»'s monthly bill issued pursuant to section 16 of this Agreement.

2.4.4 Additional «Customer Name» Obligations

For Slice/Slice/Block and Block Option Only use section 2.4.4.1 below:

2.4.4.1 Requesting FORS

To request FORS «Customer Name» shall:

- (i) call the PS duty scheduler at 503-230-3341 (or other applicable, pre-arranged number) to notify the scheduler of «Customer Name»'s request to take FORS, the amounts of FORS «Customer Name» is requesting, and the expected duration of the Forced Outage, prior to ~~30-15~~ minutes past the hour ~~before for delivery at~~ the start of the following hour of delivery;
- (ii) call the PS duty scheduler at 503-230-3341 (or other applicable, pre-arranged number) to notify the scheduler of any changes to the information provided to the PS duty scheduler pursuant to section 2.4.4.1 prior to ~~30-15~~ minutes past the hour ~~before for delivery at~~ the start of the following hour of delivery; and
- (iii) notify and report the following information to BPA within four Business Days after the close of the month in which «Customer Name» requested FORS for one or more Forced Outages: the monthly amounts of FORS taken; the duration of each Forced Outage; and the cause of each Forced Outage.

2.4.4.2 Information and Scheduling Requirements

«Customer Name» shall provide BPA with hourly meter data from the Specified Resources listed in section 2.4.5.1 below in accordance with section 17.3 of the body of this Agreement. If «Customer Name» installs or upgrades a meter to meet such requirement, then «Customer Name» shall pay for any costs

or related services attributable to the new or upgraded meters.

If any of the Specified Resources listed below in section 2.4.5.1 are scheduled to «Customer Name»'s Total Retail Load, then «Customer Name» shall provide hourly generation forecast data and schedule data to BPA for such resources in accordance with Exhibit F.

«Customer Name» shall schedule FORS in accordance with the provisions of section 2.4.4.1 of Exhibit D above and section 6 of Exhibit F.

«Customer Name» shall ~~also~~ provide BPA with any resource information, including historical and forecast resource data, BPA determines is necessary to provide FORS.

2.4.5 Applicable Resources, Limits, and Charges

2.4.5.1 List of Resources

«Resource Name»

«Resource Name»

2.4.5.2 Annual and Purchase Period Limits by Resource

By September 30 of each Rate Case Year, BPA shall update tables below with the annual limits for each resource listed above in section 2.4.5.1 for the upcoming Rate Period. By September 30 prior to the beginning of a Rate Period, BPA shall update the tables below with the Purchase Period limits for each resources listed above in section 2.4.5.1 for the upcoming Purchase Period.

Drafter's Note: Include the tables below for each resource listed in section 2.4.5.1 above.

«RESOURCE NAME»'s ANNUAL MWH LIMITS			
FY	MWh	FY	MWh
2012		2021	
2013		2022	
2014		2023	
2015		2024	
2016		2025	
2017		2026	
2018		2027	
2019		2028	
2020			

Note: The amounts in the table above should be rounded to whole megawatt-hours.

«RESOURCE NAME»'s PURCHASE PERIOD MWH LIMITS	
Purchase Period	MWh
FY 2012 - FY 2014	
FY 2015 - FY 2019	
FY 2020 - FY 2024	
FY 2025 - FY 2028	

Note: The amounts in the table above should be rounded to whole megawatt-hours.

2.4.5.3 FORS Charge

BPA shall update the table below pursuant to section 2.4.3 above.

MONTHLY FORS CHARGE	
Rate Period	\$
2012 – 2013	
2014 – 2015	
2016 – 2017	
2018 – 2019	
2020 – 2021	
2022 – 2023	
2024 – 2025	
2026 – 2027	
2028	

End Option 1 (i.e-Customer does purchase FORS).

Option 2: *For Slice/Block and Block include the following version if customer does NOT purchase FORS.*

2.4 **«Customer Name» Has Chosen Not To Purchase FORS**