

Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps— Updated February 11, 2010

Assumptions.

BPA Power Products

- All Resource Support Service (RSS) products are available for Load Following contract holders' Specified Resources. Secondary Crediting Service (SCS), however, is only available for customers' "existing" hydro resources that are already dedicated to load.
- Diurnal Flattening Service (DFS), in combination with the Resource Shaping Charge, converts the resource output to a flat annual block.
- Forced Outage Reserve Service (FORS) can be combined with DFS if a resource has a non-zero minimum operating level in order to have coverage when a forced outage occurs, causing the resource to operate below its operating minimum.
- Output of Specified Resources must be applied to the customer's Total Retail Load.
- BPA provides all transmission scheduling services via TSS for Load Following customers if DFS, SCS, or service at BPA's Tier 2 rate(s) is elected.

Customer Details

- Power PUD is a LF PSC holder and an NT contract holder. It is also a directly-connected customer.
- Power PUD is interested in a non-federal resource: a wood waste resource named Woody Biomass Project (producing 7.796 annual aMW) and located in Power PUD's service territory

THWM: ~80 aMW (actually 79.968 aMW)

Above-RHWM (ARHWM) load for FY 2012 = 7.000 aMW

ARHWM load for FY 2013 = 7.796 aMW

Forecast ARHWM load for FY 2014 = 8.264 aMW

DFS Planning Process.

Step 1

By November 1, 2009, Power PUD sends BPA a letter electing to serve its FY 2012, 13 & 14 ARHWM load themselves, meaning no Tier 2 purchase from BPA for the 3-year period. In this letter, Power PUD also a) requests to add Woody Biomass Project, a new Specified Resource, to its LF contract to meet its ARHWM load beginning in FY 2013; b) requests DFS and FORS for Woody; and c) elects to meet any ARHWM load not met by Woody with Unspecified Resource Amounts. Power PUD does not wish to provide those resource amounts in a shape other than the Flat Annual Shape and Flat Within-Month Shape, so no additional election is necessary in that regard. Finally, Power PUD

Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—

Updated February 11, 2010

voluntarily elects to take the Transmission Scheduling service a year before it is required to take it to help with the scheduling of it unspecified resource amounts.

Transmission Steps

- Power PUD should notify BPA Transmission (BPAT) of its intent to serve Network Load from Woody Biomass by first updating its 10-year Load and Resource Forecast.

Since Woody Biomass Project is a behind-the-meter resource, the use of Woody will not require an ATC evaluation.

Step 2

By March 31, 2010, Power PUD’s contract is updated added to reflect the elections made in the letter referenced in Step 1.

- In section 2 of Exhibit A
 - (1) **Woody Biomass Project**
 - (A) **Special Provisions**
[blank]
 - (B) **Resource Profile**

Fuel Type	Date Resource Dedicated to Load	Date of Resource Removal	Percent of Resource Used to Serve Load	Nameplate Capability (MW)
Wood Waste	October 1, 2012		100	9

Statutory Status		Resource Status		DFS or SCS?		Dispatchable?		PNCA?		If PNCA, PNCA Updates?	
5b1A	5b1B	Existing	New	Yes	No	Yes	No	Yes	No	Yes	No
	X		X	X			X		X		

Note: Fill in the table above with “X”s.

(C) Specified Resource Amounts

Specified Resource Amounts													
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	annual aMW
Fiscal Year 2013													
Total (MWh)	6267	3059	4437	6375	5925	6424	6348	4206	6414	6424	6097	6317	7.796
HLH (MWh)	3517	1774	2381	3615	3409	3698	3530	2351	3694	3425	3646	3345	7.837
LLH (MWh)	2750	1285	2056	2760	2516	2726	2818	1855	2720	2999	2451	2972	7.758
Peak (MW)	9	9	9	9	9	9	9	9	9	9	9	9	

Repeat for all applicable years.

**Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—
Updated February 11, 2010**

3.1.2 Unspecified Resource Amounts

Power PUD’s Unspecified Resource Amounts are listed in the table below.

Unspecified Resource Amounts													
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	annual aMW
Fiscal Year 2012													
Total (MWh)	5215	5040	5208	5208	4704	5201	5040	5208	5040	5208	5208	5040	7.000
HLH (MWh)	2912	2800	2800	2912	2688	3024	2800	2912	2912	2800	3024	2688	7.000
LLH (MWh)	2303	2240	2408	2296	2016	2177	2240	2296	2128	2408	2184	2352	7.000
Fiscal Year 2013													
Total (MWh)	0	0	0	0	0	0	0	0	0	0	0	0	0
HLH (MWh)	0	0	0	0	0	0	0	0	0	0	0	0	0
LLH (MWh)	0	0	0	0	0	0	0	0	0	0	0	0	0
Note: Fill in the table above with megawatt-hours rounded to whole megawatt-hours and with annual Average Megawatts rounded to three decimal places.													

FYI: The above will be replaced with a new table for FY 2014 and FY 2015 after the **RHWM Process** for WP-14 has concluded to reflect the Unspecified Resource Amounts Power PUD has to apply to load for those years. Power PUD does not have any ARHWM load in FY 2013 that must be met with Unspecified Resource Amounts because its new non-federal resource covers its ARHWM load in FY 2013.

**Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—
Updated February 11, 2010**

- Section 2.1 of Exhibit C

Zero Tier 2	Purchase Period
X	FY 2012 - FY 2014
	FY 2015 - FY 2019
	FY 2020 - FY 2024
	FY 2025 - FY 2028

- Exhibit D: DFS and FORS language is added. Certain specific sections are shown below:

2.3.6.1 List of Specified Resources

Resource Name	Resource Location	Resource Transmission
Woody Biomass Project	BPA BAA	N/A

2.3.6.2 Monthly Operating Minimums and Planned Amounts

«Woody Biomass Project»’S OPERATING MINIMUMS													
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
Rate Period Year 1													
HLH MW													
LLH MW													
Annual													
Rate Period Year 2													
HLH MW	8	4	5	8	8	8	8	8	8	8	8	8	
LLH MW	8	4	5	8	8	8	8	8	8	8	7	8	
Annual													7.048
Note: The amounts in the table above shall be rounded down to the nearest whole megawatts.													

**Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—
Updated February 11, 2010**

«Woody Biomass Project»’S PLANNED AMOUNTS

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual aMW
Rate Period Year 1													
HLH aMW													
LLH aMW													
Total aMW													
Rate Period Year 2													
HLH aMW	8.454	4.435	5.953	8.690	8.878	8.560	8.825	5.651	8.880	8.563	8.440	8.711	7.837
LLH aMW	8.359	4.016	5.977	8.415	8.736	8.765	8.806	5.655	8.947	8.718	7.856	8.845	7.758
Total aMW	8.412	4.249	5.965	8.569	8.817	8.646	8.817	5.653	8.908	8.634	8.195	8.774	7.796

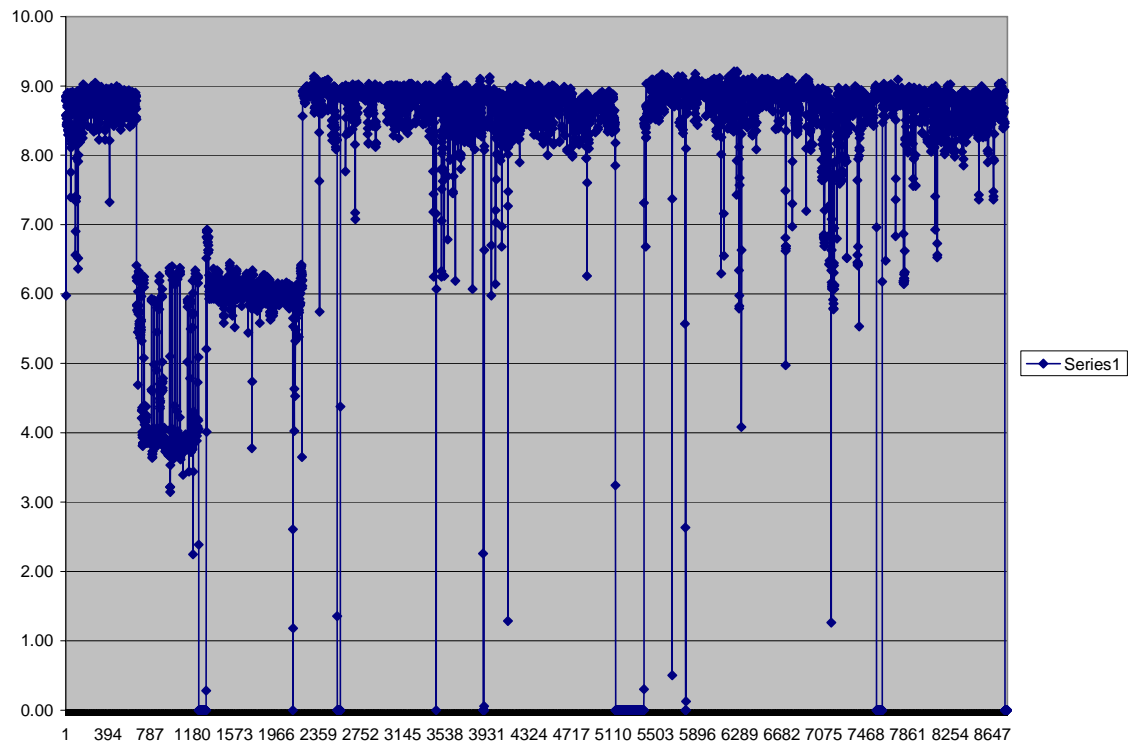
Note: The amounts in the table above shall be rounded to the nearest three decimal places

The charts on the next page graph the hourly generation data used to develop the values in the tables above. The charts are particularly instructive for seeing that there is a partial month planned outage in May. This is why the average planned generation amount in May is lower than the other months that do not have planned outages. In this instance, Power PUD requested to have their planned outage reflected in the planned generation levels. The split month operating minimums and planned amounts are shown in the following table:

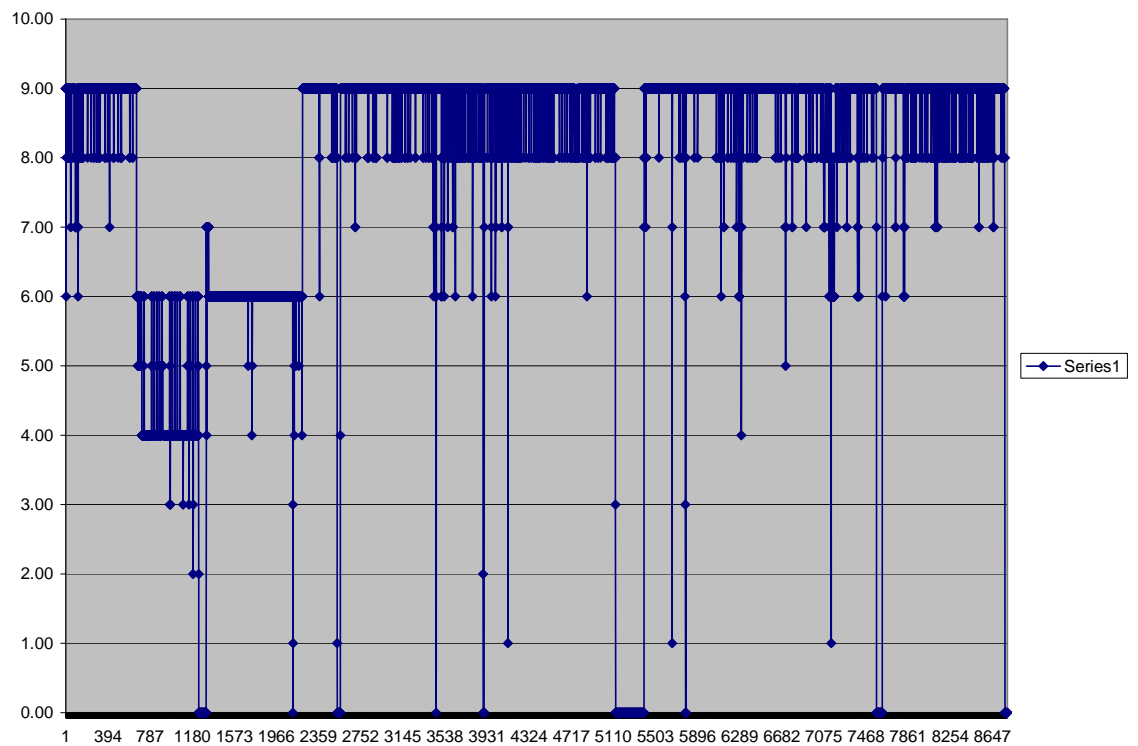
		May 1-15	May 16-31
Operating Minimums	HLH MW	0	8
	LLH MW	0	8
Planned Amounts	HLH aMW	0	8.879
	LLH aMW	0	8.774

We will assume for this example that the other zero amounts were from forced outages.

Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps— Updated February 11, 2010



The chart below reflects the hourly amounts rounded to what would be scheduled if this was a scheduled resource.



**Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—
Updated February 11, 2010**

2.4.5 Applicable Resources, Limits, and Charges

2.4.5.1 List of Specified Resources

«Woody Biomass Project»

Step 3

Prior to October 31 of the Rate Case Year for WP-12, Power PUD provides any updates to the resource information used to develop the resource amounts in Exhibit D listed above.

Step 4

Prior to September 30 of the Rate Case Year (Sep 2011) for the FY 2012/13 Rate Period BPA updates section 2.3.5.2 if necessary and fills in the section 2.3.6.3, 2.4.5.2, and 2.4.5.3 of Exhibit D:

DFS:

2.3.6.3 DFS Charges and Rates

DFS CAPACITY CHARGE	
Rate Period	\$/month
2012 – 2013	6,597
2014 – 2015	
2016 – 2017	
2018 – 2019	
2020 – 2021	
2022 – 2023	
2024 – 2025	
2026 – 2027	
2028	
DFS ENERGY RATE	
Rate Period	\$/MWh
2012 – 2013	0.68
2014 – 2015	
2016 – 2017	
2018 – 2019	
2020 – 2021	
2022 – 2023	
2024 – 2025	
2026 – 2027	
2028	

**Illustrative Example for DFS + FORS for a “Behind the
Meter Resource” and Transmission Steps—
Updated February 11, 2010**

Calculating the DFS Capacity Charge.

Recall, the planned approach for calculating the DFS Capacity Charge is as follows (subject to each 7(i) Process): BPA shall calculate the DFS Capacity Charge by looking at the monthly (or annual) capacity needs of each resource. The monthly (or annual) look involves multiplying the monthly Demand Rates by the calculated difference between planned average HLH energy amounts listed in section 2.3.6.2 above for each month (or annually) and the HLH Operating Minimum amounts in section 2.3.6.2 above of the resource(s) for that particular month (or for the year, depending on the methodology adopted in a future 7(i) Process).

In this example, we applied the annual approach and assumed a Demand Rate of \$8.82/kW-month. So the monthly charge is derived from the following equation:

$$(7.796-7.048) * 8.82 * 1000 = \$6,597$$

Calculating the DFS Energy Rate.

Recall, the planned approach for calculating the DFS Energy Charge as follows (subject to each 7(i) Process): BPA will calculate the DFS Energy Charge by first calculating a DFS Energy Rate (either as a separate rate for each year of the rate period or a single rate for the rate period). BPA does so by first summing the MWhs of the historical hourly resource generation (historical data from the resource or similar resource hourly data if no history exists) that is above the planned average diurnal energy amounts listed in section 2.3.6.2 above. This would be calculated separately for each Monthly/Diurnal period of the year. Second, BPA would multiply these MWh amounts by 25 percent and then again by the applicable Resource Shaping Rates. Third, BPA would sum the Monthly/Diurnal dollar amounts resulting from the calculation done in step two and divide it by the sum of the monthly total planned aMW energy amounts (converted to MWhs by multiplying by the number of hours in the year) listed in section 2.3.6.2 above.

**Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—
Updated February 11, 2010**

	Market HLH (\$/MWh)	Market LLH (\$/MWh)	Sum HLH Above average	Sum LLH above Average	Cost at 25% Losses HLH	Cost at 25% Losses LLH
Oct	52.49	42.59	177	157	\$ 2,320	\$ 1,673
Nov	52.00	45.17	234	167	\$ 3,042	\$ 1,883
Dec	53.24	46.32	19	8	\$ 248	\$ 91
Jan	58.61	47.68	118	170	\$ 1,722	\$ 2,030
Feb	57.50	46.76	40	66	\$ 574	\$ 768
Mar	55.11	45.11	149	59	\$ 2,048	\$ 664
Apr	50.83	41.29	58	50	\$ 738	\$ 516
May	50.85	33.60	852	679	\$ 10,831	\$ 5,701
Jun	49.27	34.36	46	15	\$ 568	\$ 130
Jul	52.40	43.72	126	75	\$ 1,651	\$ 820
Aug	58.49	50.57	207	283	\$ 3,031	\$ 3,572
Sep	57.32	50.89	81	44	\$ 1,160	\$ 565
Average	\$ 54.01	\$ 44.01			\$ 27,933	\$ 18,414

\$ 46,347
\$ 0.68 per MWh cost

The quotient of the calculation done in step three would be the dollar per MWh rate that is applied each month to either the amounts measured by the meters, as listed in Exhibit E, for the resources listed in section 2.3.6.1 above, or if such resources are scheduled then, the scheduled amounts, as provided to BPA in accordance with section 2.3.4.2 above to arrive at the monthly DFS Energy Charge. This is a rate because it is applied to actual scheduled or metered generation to determine the charge. An example of how this is done can be found on the bill at the end of this paper.

FORS:

2.4.5.2 Annual and Purchase Period Limits by Resource

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

Drafter’s Note: Include the Annual MWh Limit and Purchase Period Limit tables below for each resource listed in section 2.4.5.1 above.

**Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—
Updated February 11, 2010**

«Woody Biomass Project»’S ANNUAL MWH LIMITS			
FY	MWh	FY	MWh
2012	0	2021	
2013	12,348	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.

«Woody Biomass Project»’S PURCHASE PERIOD MWH LIMITS	
Purchase Period	MWh
FY 2012 - FY 2014	18,522
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 Capacity Charge

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

FORS CAPACITY CHARGE	
Rate Period	\$/month
2012 – 2013	6,216
2014 – 2015	
2016 – 2017	
2018 – 2019	
2020 – 2021	
2022 – 2023	
2024 – 2025	
2026 – 2027	
2028	

**Illustrative Example for DFS + FORS for a “Behind the
Meter Resource” and Transmission Steps—
Updated February 11, 2010**

The annual purchase period limit was calculated using the following equation (assuming an annual capacity calculation, as opposed to a monthly capacity calculation):

Forced outage rating for a wood waste resource * annual operating minimum *
number of hours in the year * lifetime outage allowance factor; or

$$0.10 * 7.048 \text{ MW} * 8760 \text{ hours} * 2 = 12,348 \text{ MWh}$$

The purchase period limit (for a three-year long purchase period) was calculated using the following equation (assuming an annual capacity calculation, as opposed to a monthly capacity calculation):

Forced outage rating for a wood waste resource * annual operating minimum *
number of hours in the year * the number of years in the purchase period; or

$$0.10 * 7.048 \text{ MW} * 8760 * 3 = 18,522 \text{ MWh}$$

The FORS Capacity Charge (assuming an annual capacity calculation, as opposed to a monthly capacity calculation) was calculated using the following equation:

Forced outage rating a wood waste resource * annual operating minimum in MW
* 1000 * demand rate in \$/kW-mo; or

$$0.10 * 7.048 * 1000 * 8.82 = \$6,216.$$

Power PUD was not granted a small resource exception for Woody’s DFS service. Therefore, the forced outage rating for a wood waste resource of 10% is *not* raised to reflect the inclusion of possible planned outages in association with the small resource exception.

Step 5

Prior to September 30, 2011, BPA updates Exhibit F with the Transmission Scheduling Service (TSS) provisions because Power PUD voluntarily elected to take it a year earlier than it is required to, as TSS is required to be taken when a customer elects DFS. Woody does not currently need to be scheduled since it is located within Power PUD’s service territory and is only serving Power PUD’s load. All other resource amounts used to meet Power PUD’s Unspecified Resource Amount obligation will need to be scheduled to Power’s load, and TSS will enable this to occur.

**Illustrative Example for DFS + FORS for a “Behind the
Meter Resource” and Transmission Steps—
Updated February 11, 2010**

Hourly Scheduling & Delivery.

Power PUD provides its upspecified resource amounts to BPA through a computer-based customer portal in accordance with Exhibit F. Subsections of that exhibit follow:

4.1 Prescheduling

Power PUD shall submit a delivery schedule to Power Services for its Dedicated Resources for delivery to its Total Retail Load which shall include information such as the source, the point of receipt, any OASIS reservation reference numbers needed for the delivery of non-federal power, the daily megawatt profile and all purchasing selling entities in the path. This delivery schedule shall be submitted to Power Services before the earliest of:

- (1) 0800 hours Pacific Prevailing Time (PPT) on preschedule day,
or
- (2) one hour prior to the earliest of the transmission prescheduling deadlines associated with **Power PUD**'s transmission agreement(s) delivery of power to **Power PUD**'s Total Retail Load.

4.2 Real-Time Scheduling

Power Services shall accept megawatt adjustments to **Power PUD**'s Dedicated Resource schedule(s) up to the earliest of 45 minutes prior to the hour of delivery or 25 minutes prior to the earliest of the transmission real-time scheduling deadlines associated with delivery of power to **Power PUD**'s Total Retail Load.

Power PUD shall submit all required real-time scheduling information in a format specified by Power Services.

Transmission Considerations

- Neither BPA or Power PUD will need to schedule Woody Biomass Project since it is a behind-the-meter resource.

Rates and Billing.

The associated RSS charges for the provision of DFS and FORS in this example will include a variable DFS Energy Charge, Resource Shaping Charge Adjustment, and FORS Energy Charge based on actual power generation or outage. They will also include the DFS Capacity Charge, Resource Shaping Charge, and FORS Capacity Charge based on the planned generation and needed capacity reserves.

Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—

Updated February 11, 2010

The DFS, RSC, and FORS rates in \$/MWh for this customer’s resource in FY 2013 are:

DFS, RSC, and FORS Expected Cost per MWh for Woody	\$/MWh
DFS Capacity Rate	1.16
DFS Energy Rate	0.68
Resource Shaping Rate	-0.21
FORS Capacity Rate	1.09
Total Price (\$/MWh)	2.72

The **Expected DFS Capacity Cost per MWh** of \$1.16/MWh is the result of the following equation: (Monthly DFS Capacity Charge * 12 months)/total annual MWh of planned generation, or $(\$6,597 * 12) / 68,293 = \$1.16/\text{MWh}$.

The **DFS Energy Rate** is the same as was calculated above and included in Exhibit D.

BPA plans on calculating the Resource Shaping Charge as follows (subject to each 7(i) Process): For the Specified Resources listed in section 2.3.6.1 above, BPA will credit or charge the customer for the difference between the planned monthly diurnal average megawatt amounts listed below in section 2.3.6.2 and the annual average megawatt amounts listed in the Specified Resource Amounts table in section 2 of Exhibit A for the applicable year. BPA will calculate the customer’s Resource Shaping Charge by first 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 will then divide the sum of the dollar amounts calculated above by 12 to calculate the fixed monthly Resource Shaping Charge.

Flat Block Amount	Month	HLH Average MW	LLH Average MW	HLH Delta to Flat Amount	LLH Delta to Flat Amount	RS Rate HLH (\$/MWh)	RS Rate LLH (\$/MWh)	HLH RSC	LLH RSC
7.796	Oct	8.454	8.359	-0.658	-0.563	\$ 52.49	\$ 42.59	\$ (14,375)	\$ (7,884)
	Nov	4.435	4.016	3.361	3.780	\$ 52.00	\$ 45.17	\$ 69,909	\$ 54,643
	Dec	5.953	5.977	1.844	1.819	\$ 53.24	\$ 46.32	\$ 39,259	\$ 28,988
	Jan	8.690	8.415	-0.894	-0.619	\$ 58.61	\$ 47.68	\$ (21,795)	\$ (9,675)
	Feb	8.878	8.736	-1.082	-0.940	\$ 57.50	\$ 46.76	\$ (23,882)	\$ (12,660)
	Mar	8.560	8.765	-0.764	-0.969	\$ 55.11	\$ 45.11	\$ (18,193)	\$ (13,598)
	Apr	8.825	8.806	-1.029	-1.010	\$ 50.83	\$ 41.29	\$ (20,922)	\$ (13,348)
	May	5.651	5.655	2.145	2.141	\$ 50.85	\$ 33.60	\$ 45,365	\$ 23,590
	Jun	8.880	8.947	-1.084	-1.151	\$ 49.27	\$ 34.36	\$ (22,214)	\$ (12,027)
	Jul	8.563	8.718	-0.766	-0.922	\$ 52.40	\$ 43.72	\$ (16,066)	\$ (13,867)
	Aug	8.440	7.856	-0.644	-0.060	\$ 58.49	\$ 50.57	\$ (16,268)	\$ (943)
	Sep	8.711	8.845	-0.915	-1.049	\$ 57.32	\$ 50.89	\$ (20,138)	\$ (17,941)
Total								\$ (14,040) per year	
								(1,170) per month	
								\$ (0.21) per MWh	

**Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps—
Updated February 11, 2010**

The **Expected Resource Shaping Charge Cost per MWh**, shown above, is the result of dividing the annual total Resource Shaping Charge (-\$14, 040) by the total annual MWh of planned generation (68,293 MWh), or -\$0.21/MWh.

The **Expected FORS Capacity Cost per MWh**, of \$0.55/MWh is the result of the following equation: (Monthly FORS Capacity Charge * 12 months)/total annual MWh of planned generation, or $(\$6,217 * 12) / 68,293 = \$1.09/\text{MWh}$.

The customer’s resource charges above were based on the planned generation in **FY 2013**. The resource actually performed differently and is captured below in total monthly/diurnal kWh amounts:

	Planned		Actual		Delta	
	HLH kWh	LLH kWh	HLH kWh	LLH kWh	HLH kWh	LLH kWh
Oct	3,517,000	2,750,000	3,549,000	2,710,000	(32,000)	40,000
Nov	1,774,000	1,285,000	1,666,000	1,194,000	108,000	91,000
Dec	2,381,000	2,056,000	2,245,000	2,002,000	136,000	54,000
Jan	3,615,000	2,760,000	3,756,000	2,756,000	(141,000)	4,000
Feb	3,409,000	2,516,000	3,465,000	2,462,000	(56,000)	54,000
Mar	3,698,000	2,726,000	3,568,000	2,546,000	130,000	180,000
Apr	3,530,000	2,818,000	3,645,000	2,756,000	(115,000)	62,000
May	2,351,000	1,855,000	2,154,000	1,798,000	197,000	57,000
Jun	3,694,000	2,720,000	3,774,000	2,784,000	(80,000)	(64,000)
Jul	3,425,000	2,999,000	3,500,000	2,465,000	(75,000)	534,000
Aug	3,646,000	2,451,000	3,654,000	2,356,000	(8,000)	95,000
Sep	3,345,000	2,972,000	3,245,000	2,999,000	100,000	(27,000)
Total	38,385,000	29,908,000	38,221,000	28,828,000		
	Total kWh	68,293,000	Total kWh	67,049,000		

The DFS Energy Rate for this resource will be applied to its *actual* total monthly generation (see shaded amounts above). The RSC Adjustment reflects the cost difference between the planned and actual average monthly HLH and LLH resource generation amount (see shaded amounts above).

In the month of April, FY 2013, Power PUD had to call upon FORS for 24 hours because Woody had a forced outage and was completely offline. BPA provided replacement power up to the planned amount for those 24 hours, and the “actuals” above include the replacement power provided by FORS during that period for purposes of calculating the Resource Shaping Charge Adjustment. It is not included in the amount of actual generation used to calculate the DFS Energy Charge, however. The amount of power that was delivered through FORS Energy in kWh is equal to the following equation: monthly average planned amount * number of hours called upon * 1000, or $8.817 * 24 * 1000 = 211,608 \text{ kWh}$.

**Illustrative Example for DFS + FORS for a “Behind the
Meter Resource” and Transmission Steps—**

Updated February 11, 2010

The example bill that follows is for the month of **April**.

Illustrative Example for DFS + FORS for a “Behind the Meter Resource” and Transmission Steps— Updated February 11, 2010

metered	April
CSP kW	121,444
Proxy GSP kW	109,300
HLH kWh	31,814,906
LLH kWh	19,218,112
Proxy CDQ kW	34,036

Purchaser -	xxxxxxx
Example Load Following Bill with RSS	
Hours	416
	Net Req (aMW) = 87.764
304	Min(NR,RHWM) (aMW) = 79.968
	above RHWM (aMW) = 7.796
	ΣRHWM aMW = 7,327,232
	TOCA = 1.09138%

April Tiered Rate Bill

Sched	Service Descriptor	Quantity	Unit	Rate	Amount
Tier 1	Composite Charge	1.09138	1% @	1,792,247	\$1,956,023
Tier 1	Non-Slice Charge	1.09138	1% @	-463,209	(\$505,537)
Tier 1 + Non Fed	Energy HLH	31,814,906			
Non-Fed	Energy HLH	-3,243,136			
Tier 1	Energy HLH	28,571,770			
Tier 1	HLH SSL	28,195,560			
Tier 1	HLH Load Shaping	376,210	kWh @	0.04716	\$17,742
Tier 1 + Non Fed	Energy LLH	19,218,112			
Non-Fed	Energy LLH	-2,369,984			
Tier 1	Energy LLH	16,848,128			
Tier 1	LLH SSL	20,445,274			
Tier 1	LLH Load Shaping	-3,597,146	kWh @	0.04056	(\$145,900)
Tier 1 + Non Fed	Demand CSP	121,444			
Non-Fed	Flat Block (per hour)	-7,796			
Tier 1	aHLH	-68,682			
Tier 1	CDQ	-34,036			
Tier 1	Demand Charge	10,930	kW @	7.41	\$80,990
RSS	DFS Energy Actual HLH + LLH	6,189,392	kWh @	0.00068	\$4,209
RSS	DFS Capacity		1 Mo @	6,597	\$ 6,597
RSS	RSC		1 Mo @	-1,170	\$ (1,170)
RSS	RC Forecast Non-Fed HLH	3,530,000			
RSS	Actual Non-Fed HLH	3,645,000			
RSS	HLH RSC Adjustment	-115,000	kWh @	0.04716	(\$5,423)
RSS	RC Forecast Non-Fed LLH	2,818,000			
RSS	Actual Non-Fed LLH	2,756,000			
RSS	LLH RSC Adjustment	62,000	kWh @	0.04056	\$2,515
RSS	FORS Energy	211,608	kWh @	0.0464	\$9,819
RSS	FORS Capacity		1 Mo @	6,216	\$ 6,216
Total					\$1,426,080

For Regional Dialogue Discussion Purposes Only - Pre-Decisional

TRM April Rate Schedule	
Composite (\$ per 1%)	1,792,247
Non-Slice (\$ per 1%)	-463,209
T1SR HLH Gen (kWh)	2,583,477,791
LS HLH (mills/kWh)	47.16
System Shaped Load (SSL) is calculated by multiplying a customer's TOCA by the posted output of the Tier 1 System Resources (T1SR) for the corresponding monthly/diurnal period.	
T1SR LLH Gen (kWh)	1,873,341,468
LS LLH (mills/kWh)	40.56
Load Shaping (LS) billing determinant is calculated by subtracting SSL from Tier 1 energy.	
Contract Demand Quantity is found in contract.	
Demand (\$/kW-mo)	7.41
Variable DFS Energy (mills/kWh)	0.68
Fixed DFS Capacity (\$/month)	\$ 6,597
Fixed RSC (\$/month)	\$ (1,170)
RSS charges are resource specific. This example was created from a wood waste resource.	
RSC HLH (mills/kWh)	47.16
Resource Shaping Adj (RS) billing determinant is calculated by subtracting Actual generation from Forecast generation.	
RSC LLH (mills/kWh)	40.56
FORS Energy (mills/kWh)	46.40
FORS assumed energy rate for the 1st 24 hrs of an outage is the daily Dow Jones Mid-C Price	
Fixed FORS Capacity (\$/month)	\$ 6,216