

The following description and analysis is the conclusion to discussions that began last summer regarding a proposed mid-year hydro surcharge mechanism. BPA committed to work with customers to develop rate impacts of a surcharge mechanism based on secondary revenues. This analysis is for informal use only and is not a change in BPA's proposed risk mitigation package presented in the WP-07 Initial Proposal. The following analysis includes the use of liquidity tools that are currently under development but not yet available.

How BPA Approximated the Customer Proposal (Mid-Year Hydro Surcharge)

[The Customer Proposal is not summarized here.]

The Customer-proposed mid-year surcharge presented several challenging complexities that had never been completely worked out. BPA tried to develop an approximation that was true to the spirit of the proposal and that could be quantified without prohibitively extensive modifications to BPA's models.

TPP

The TPP for all analyses was 92.6%.

First Calculation, for April – September rates

For the first calculation of a surcharge, to be in effect April 1 – September 30, BPA used the net secondary revenues from RiskMod for the previous October – March. This assumed that a calculation could be made in March of the actual results for October – February with a fairly accurate forecast of the March results. The actual statistic we used was the balancing sales minus the balancing purchases minus an estimate of the water-year specific transmission expenses for balancing sales (average = \$55 - \$58M/year). The deviation (Deviation 1) between the 3,000-game average and the results for a specific game was calculated for each game. The 3,000 games of market prices and hydro volumes from BPA's Initial Proposal were used for this estimation.

What limits to use?

BPA decided that since the winter is the time when the exposure to high power purchase costs is the highest, the maximum that could be billed for that half-year would be \$300M. The first-half surcharge did not kick in unless the 'deviation' was at least \$75M. In the second-half calculation, the original limits (threshold = \$150M; maximum = \$400M) were imposed. If Deviation 1 was less than \$75M, there was no surcharge for the first half. If Deviation 1 was equal to or greater than \$75M, then there was a surcharge (Surcharge 1), not to exceed \$300M. It was assumed that this would be assessed against the HLH and LLH energy rates of all of the CRACcable loads, including the IOU benefits. For this analysis, a simple approximation of the impact on IOU benefits was used (a "right" calculation was too complex for the time available for this first cut).

Second Calculation, for October – March rates (of next fiscal year)

The second calculation was assumed to take place around September, using actual results for October – August and a forecast for the September results. This calculation took the total balancing sales for the fiscal year, and subtracted the balancing purchases and transmission expenses supporting balancing sales for the fiscal year. This result was subtracted from the

3,000-game average, resulting in Deviation 2. If Deviation 2 was less than \$150M, there was no net surcharge (and this resulted in a negative surcharge to refund money if Surcharge 1 was non-zero). If Deviation 2 was greater than \$150M but less than Deviation 1, there was a negative surcharge to refund money. If Deviation 2 was greater than \$150M and also greater than Deviation 1, there was a positive Surcharge 2. Surcharge 2 was capped so that Surcharge 1 + Surcharge 2 \leq \$400M.

IOU Benefit Impact Estimation

BPA assumed that the mid-year hydro surcharge should affect the IOU benefits much the way the CRAC in BPA's Initial Proposal would – a surcharge would be calculated that collects the 'right' amount of money, and if that surcharge increased the adjusted PF rate enough that the IOU benefits would be reduced, then some of the surcharge collection would occur through reduction of the IOU benefits. But if the IOU benefits were at the floor, or far above the cap, none of the surcharge would be collected through reduction of the IOU benefits. BPA did not have time to figure out how this would be done on a semi-annual basis, so the following approximation was used.

The statistics from BPA's Initial Proposal indicate that 100% of the expected value of CRAC collection for FY 2007 came from PF loads, and about 90% of the expected value of CRAC collection for FY 2008 and FY 2009 came from PF loads, with about 10% of the collection coming from the IOU benefits in FY 2008 and FY 2009. Therefore, BPA estimated that reduction of the IOU benefits would account for 0% of the surcharge collection for the surcharge based on FY 2007 secondary results, and 10% for the surcharge based on FY 2008 and FY 2009 results.

Rate Estimation

The rate impacts of the mid-year surcharge could not be estimated using logic in the ToolKit. Instead, the rates were estimated by starting with the same base rates in BPA's Initial Proposal, calculated by the Rates Analysis Model, and adjusted in the ToolKit for PNRR, updates in the flat-block broker price for FY 2008 and FY 2009, and for any DDC amounts. After this, the expected values of the surcharge amounts were divided into the amount collected from PF loads and from IOU benefits, and the PF rate impact of the surcharge was estimated.

Cash Impacts

The first-half surcharge went into effect on April 1, affecting power sales for April. BPA would bill for these sales in early May, and receive additional cash as customers paid their bills in late May. Power sales for May are net-billed, and the increased revenue generated by the surcharge for May sales would also be net-billed, and therefore not received by BPA until after the Energy Northwest budget was fully funded. If the EN budget is paid off after three months – May, June, and July – the bills for August sales would be received as cash by BPA before the end of the year. This was deemed unlikely. The bills for September sales are never received in the same fiscal year, because the bills are not sent until October. In summary, only the surcharge revenues from April would be received as cash in the same fiscal year, 1/6 of the total of Surcharge 1. The remaining 5/6 of Surcharge 1 would be received as cash in the following fiscal year. All of Surcharge 2 would be received as cash (or paid out as cash) in the following fiscal year. Note that this means that 11/12 of the surcharge based on FY 2009 secondary marketing results would be received as cash in the subsequent rate period.

Cash Impacts Under EN Direct Pay

The EN Direct Pay plan, if feasible, would reshape BPA's cash flow significantly. BPA would pay EN's monthly budget needs each month, and net billing would not come into play. With this change to BPA's cash, the surcharge amounts billed for April through August would be received as cash by the end of BPA's fiscal year, or 5/6 of the first surcharge amount. 1/6 of the first surcharge amount and all of the second surcharge amount (positive or negative) would be received in the following fiscal year. Note that this means that 7/12 of the surcharge based on FY 2009 secondary marketing results would be received as cash in the subsequent rate period.

Results

The results should be interpreted by comparing a Surcharge case with the corresponding Initial Proposal case using the same set of liquidity tools in order to see the impact of the Surcharge itself.

Net Billing: the three-year average rate is about \$1.50 higher under the mid-year surcharge.

Direct Pay: the three-year average rate is about \$0.50 higher under the mid-year surcharge.

Net Billing Scenario

Mid-year Hydro Surcharge (Net Billing)										
	Oct-Mar 2007	Apr-Sep 2007	Annual 2007	Oct-Mar 2008	Apr-Sep 2008	Annual 2008	Oct-Mar 2009	Apr-Sep 2009	Annual 2009	3-yr Ave
CRACcable PF load, annual			5154			5195			5234	
Semi-annual factors	54%	46%		54%	46%		54%	46%		
CRACcable PF load, semi-annual	2783	2371		2805	2390		2826	2408		
PNRR			155			155			155	\$ 155
Base rates + PNRR			31.80			31.80			31.80	\$ 31.80
DDC (PF portion)			0			76			181	\$ 86
Base rates + PNRR + DDC			31.80			30.13			27.85	\$ 29.93
Surcharge amounts		81	81	28	68	95	21	63	84	\$ 87
Base rates + PNRR + DDC + Surcharge	31.80	35.70	33.59	31.27	33.35	32.23	28.69	30.84	29.68	\$ 31.83
Ave ending reserves			731			914			946	

BPA Initial Proposal (Net Billing)										
	Oct-Mar 2007	Apr-Sep 2007	Annual 2007	Oct-Mar 2008	Apr-Sep 2008	Annual 2008	Oct-Mar 2009	Apr-Sep 2009	Annual 2009	3-yr Ave
CRACcable PF load, annual			5154			5195			5234	
Semi-annual factors	54%	46%		54%	46%		54%	46%		
CRACcable PF load, semi-annual	2783	2371		2805	2390		2826	2408		
PNRR			97			97			97	\$ 97
Base rates + PNRR			30.62			30.62			30.62	\$ 30.62
DDC (PF portion)			0			82			145	\$ 76
CRAC (PF portion)			72			78			38	\$ 63
Base rates + PNRR + DDC + CRAC			32.22			30.52			28.29	\$ 30.34
Ave ending reserves			716			790			759	

Direct Pay

Mid-year Hydro Surcharge + Direct Pay										
	Oct-Mar 2007	Apr-Sep 2007	Annual 2007	Oct-Mar 2008	Apr-Sep 2008	Annual 2008	Oct-Mar 2009	Apr-Sep 2009	Annual 2009	3-yr Ave
CRACcable PF load, annual			5154			5195			5234	
Semi-annual factors	54%	46%		54%	46%		54%	46%		
CRACcable PF load, semi-annual	2783	2371		2805	2390		2826	2408		
PNRR			-17			-17			-17	\$ (17)
Base rates + PNRR			28.25			28.25			28.25	\$ 28.25
DDC (PF portion)			0			47			73	\$ 40
Base rates + PNRR + DDC			28.25			27.22			26.66	\$ 27.38
Surcharge amounts		81	81	28	68	95	21	63	84	\$ 87
Base rates + PNRR + DDC + Surcharge	28.25	32.15	30.04	28.35	30.44	29.31	27.49	29.64	28.48	\$ 29.28
Ave ending reserves			885			966			917	

BPA Initial Proposal + Direct Pay										
	Oct-Mar 2007	Apr-Sep 2007	Annual 2007	Oct-Mar 2008	Apr-Sep 2008	Annual 2008	Oct-Mar 2009	Apr-Sep 2009	Annual 2009	3-yr Ave
CRACcable PF load, annual			5154			5195			5234	
Semi-annual factors	54%	46%		54%	46%		54%	46%		
CRACcable PF load, semi-annual	2783	2371		2805	2390		2826	2408		
PNRR			59			59			59	\$ 59
Base rates + PNRR			29.83			29.83			29.83	\$ 29.83
DDC (PF portion)			0			127			150	\$ 92
CRAC (PF portion)			52			52			34	\$ 46
Base rates + PNRR + DDC + CRAC			30.97			28.18			27.29	\$ 28.81
Ave ending reserves			921			938			854	