Additional Integrated Program Review 2 Follow Ups

March 2015

FINANCIAL DISCLOSURE

This information has been made publically available by BPA on March 9, 2015 and contains information not reported in BPA financial statements.

1. **Please explain how 1) historic conservation and 2) expected future utility conservation is incorporated into utility high watermark calculations.**

   Response:

   a. Historic conservation is included in the load forecast. These forecasts are driven by historical information and augmented for expected future utility conservation by updated and known or reasonably anticipated EE planning.
   b. Conservation identified in the Power Plan target, but not revealed in this forecasting process are excluded from the Total Retail Load forecasts provided for the Rate Period High Water Mark (RHWM) process each two year cycle. To the extent that there is "undistributed conservation" identified in the Power Plan, but not yet distributed to the individual Total Retail Load forecasts, these forecasts are presumably higher in aggregate than should be anticipated in Power Plan targets are met.
   c. But by the very nature of being undistributed, this presumed inflated Above RHWM load is not yet targeted to individual customers. Therefore the billing determinants which are (mostly) determined in the RHWM process will not match the sales forecast upon which rates are based.
   d. Previously, BPA credited customers for a lower system augmentation purchase in the Power rate, but computed rates based upon billing determinates which had NOT netted out this undistributed conservations (since there was no way to do so down to the customer level). This provided a credit to customers for avoided augmentation costs, but did not reduce the sales forecast by that same amount, crediting customers twice for this undistributed conservation.
   e. When undistributed conservation amounts were small, the impact of this misgiving was relatively small; but with the BP-16 period, the amount of undistributed conservation more than doubled (presumably a result of the stale 6th Power Plan). This made the rate implications transparent to rates staff; the decision to NOT include the lower augmentation costs in the power rates computation was proposed in the initial proposal to ensure revenue recovery. This option was chose over a potential modification to the Tier One Cost Allocator calculation which may have required a change to the Tiered Rates Methodology.

2. **During the meeting, scenarios related to the residential exchange were discussed. Please provide information or links to the information, describing residential exchange scenarios and the resulting outcomes.**

   Response: The analysis showing the effects of conservation financing on Residential Exchange Program benefits are in the Final Proposal study from the REP-12 rate case. http://www.bpa.gov/Finance/RateCases/InactiveRateCases/REP12/Final%20Proceeding/REP-12-FS-BPA-01.pdf

   Section 9.5.1 on page 138 (150/216 in the electronic document), describes the two scenarios that were analyzed: (1) the PPC position that conservation should be capitalized over a longer period of time and (2) the OPUC and IOU position that conservation should be expensed. These positions were examined in Scenario 11 (the OPUC/IOU position) and Scenario 12 (the PPC position) as described on page 159 (171/216 in the electronic document), and results presented on Tables 10.2 and 10.3.1-2, pages 188-190 (200/216 – 202/216). The results are graphically presented on Figure 4, page 199 (211/216).

   In addition to the financing scenarios, the REP-12 analysis considered the COU position that loads in the 7(b)(2) Case should not be adjusted for conservation savings and that conservation savings

should be included in the 7(b)(2) Case at zero cost. The IOU position on this issue agreed with the COU position that loads in the 7(b)(2) Case should not be adjusted for conservation savings, but that the cost of conservation savings should be included in the 7(b)(2) Case at the same level as in the Program Case. This issue is described on pages 130-132 (142/216 – 144/216). The COU position is modeled as Scenario 5, page 156 (168/216) and the IOU position is modeled as Scenario 6, page 157 (169/216). The results are on the same tables and figure cited above.

EE Program Questions

3. **BPA mentioned that 29% of utilities undertook self-funding in the last 5-years.**

    a. **Can BPA provide more information in terms of the fraction of load these utilities represent?**

    b. **"Please provide more information regarding the history of utility self-funding under the 75/25 agreement. Specifically, please provide a table, or equivalent, that contains more information regarding the utilities that did self-fund including the amount of self-funding, by year, for every year available. If BPA is reluctant to identify specific utilities, please provide this information anonymously (e.g. Utility 1, Utility 2, etc)."**

    c. **"Please provide the percentage of actual self-funded savings for the last 5 years, by year"**

Response: BPA has assembled aggregate self-funding data points as well as a listing of anonymized utilities and their multi-year self-funding accomplishments. Based on this data, BPA can say that the end of a rate period seems to drive increased self-funding (potentially to support programs after BPA funding is exhausted), but beyond that we cannot establish any clear and universal drivers for utility self-funding of energy efficiency. We examined above high water mark load, retail load, Slice participation, and Washington I-937 compliance and found no universal correlation with self-funding.

Please note: BPA has provided information on self-funding from fiscal years 2012, 2013, and 2014 below. This period represents the years for which we have full data while the current self-funding policy (i.e. 75/25%) was in place. Prior to this period, utility self-funding had other drivers (e.g. contract high water mark) which would make it inappropriate to include in this analysis.

Self-Funding Summary Data Fiscal Years 2012-2014 Aggregate Totals	
BPA funded Energy Efficiency (aMW)	133.83
Self-Funded Energy Efficiency (aMW)	53.51
Percentage of Self-Funded Savings	29%
Total Utilities Self-Funding	39
Percent of Utilities Self-Funding	29%
Total Retail Load of Self-Funding Customers (aMW)	5,923.5
Total Retail Load of all BPA Customers (aMW)	8,533.9
Percent of Total Retail Load Represented by Self-Funding Customers	69%
Percent of Slice Customers Self-Funding	58%
Percent of Self-Funding Customers with Above High Water Mark Load	62%
Percent of WA I-937 Compliant BPA Customers Self-Funding	83%

Utility Specific Self-Funding Data (aMW)*				
	2012	2013	2014	Total
Utility 1	2.79769	8.51805	4.08985	15.40559
Utility 2	2.99495	5.64521	1.66777	10.30793
Utility 3	2.34814	3.47985	2.82576	8.65374
Utility 4	1.08466	1.41389	1.25164	3.75019
Utility 5	0.01872	2.83041	0.27949	3.12862
Utility 6	0.68207	1.65172		2.33380
Utility 7	0.17244	2.12212		2.29457
Utility 8		1.55907		1.55907
Utility 9	0.00086	0.81353	0.57642	1.39081
Utility 10	0.44673	0.10670	0.54884	1.10227
Utility 11	0.54796	0.30829	0.00000	0.85624
Utility 12	0.27507	0.29795	0.23430	0.80733
Utility 13	0.17200	0.21886	0.13145	0.52231
Utility 14	0.25234	0.05633		0.30867
Utility 15	0.01849	0.18350	0.03454	0.23653
Utility 16	0.02079	0.08165	0.12410	0.22653
Utility 17	0.03302	0.09197	0.04518	0.17017
Utility 18	0.02862	0.12519		0.15382
Utility 19		0.06788		0.06788
Utility 20	0.00044	0.02699	0.02439	0.05182
Utility 21	0.01191		0.01981	0.03172
Utility 22	0.02692	0.00082		0.02774
Utility 23	0.00239	0.01842	0.00209	0.02290
Utility 24		0.01486		0.01486
Utility 25		0.01464		0.01464
Utility 26		0.00620	0.00832	0.01452
Utility 27		0.01321		0.01321
Utility 28		0.00956		0.00956
Utility 29			0.00758	0.00758
Utility 30	0.00623	0.00000		0.00623
Utility 31		0.00499		0.00499
Utility 32		0.00337		0.00337
Utility 33		0.00298		0.00298
Utility 34		0.00226		0.00226
Utility 35		0.00079		0.00079
Utility 36		0.00058		0.00058
Utility 37		0.00047		0.00047
Utility 38			0.00035	0.00035
Utility 39		0.00032		0.00032
Total	**11.94244**	**29.69262**	**11.87188**	**53.51**

*Reported to 5 decimal places to provide the granularity necessary to capture all utility self-funding.

4. **Regarding momentum savings, as depicted in the table on slide 9 of the 2014 Integrated Program Review 2 meeting materials on February 24, 2015, please provide detailed information or work papers that explain how the mid-range savings estimates, by year for 2015-2017, were calculated. Please explain how the mid-range estimates differ from the low and high range estimates. Also, please provide the low and high savings estimates and information about how those were calculated.**

   Response: Momentum Savings projections are based on expert staff estimates, which take into account previous project work, national secondary research, Northwest Energy Efficiency Alliance research and risk associated with project completion (from data access to market changes). These projections were presented publicly at the Northwest Power and Conservation Council meeting on August 5, 2014 and are summarized in the table below.

   BPA's webpage has information on current projects underway and reports are posted as they are completed, at www.bpa.gov/goto/MomentumSavings. We also have current draft standards models posted for public review and comment. Given early draft results, the middle projection could be conservative. However, given that this effort to track Momentum Savings is new we think a conservative approach is appropriate.

	2015	2016	2017
Momentum Projection Low	27	29	30
Momentum Projection Mid	48	50	49
Momentum Projection High	68	70	68

Debt Management / Scenario Questions

5. **"On page 24, BPA states that there is a possibility that more CGS regional cooperation debt could be refinanced to reduce the rate impact of expensing conservation spending and that $134.4 million would be available for this in BP-16, and $181 million in BP-18. In discussions during the IPR-2 meeting, BPA staff indicated that these bonds were essentially the last bonds available for offsetting the rate impact of revenue financing, because there were relatively few suitable Energy Northwest bonds available for this purpose after 2018. Energy Northwest has more than $300 million CGS bonds maturing every year between 2018 and 2024. Please explain why these bonds can't be refinanced to mitigate the impact of revenue financing conservation, in a manner analogous to what BPA has proposed to do with the bonds in BP-16 and BP-18."**

   Response: The vast majority of those bonds are already part of the existing regional cooperation debt program and cannot be used simultaneously for two different purposes. There are small amounts of additional debt that could be used in 2020-24 (roughly $15m/year). This debt, as well as the remainder of the debt not extended in 2018, is not included in the Immediate Transition with Debt Management scenario presented because the objective is to smooth the transition to expense.

6. **"Please provide a scenario where there is a four year transition from capitalizing energy efficiency to expensing, assuming no refinancing of CGS bonds."**

   Response: See results for new 4 year transition scenario below:

Scenario Results: Principal and Interest

	Base Case	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	Outstanding Principal	9,995	10,312	10,429	10,531	10,254	10,177	10,084	10,050	10,016	9,979	9,911	9,890	9,839	9,845	9,797
2	Interest Paid	454	458	428	427	405	406	406	406	408	410	418	420	426	430	430
	8 Year Transition	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
3	Outstanding Principal	9,995	10,282	10,377	10,448	10,130	9,992	9,839	9,724	9,609	9,470	9,301	9,193	9,056	8,937	8,790
4	*Comparison to Base Case*	0	(30)	(52)	(83)	(124)	(184)	(245)	(326)	(407)	(509)	(610)	(697)	(783)	(908)	(1,007)
5	Interest Paid	454	457	425	423	398	396	393	389	387	384	387	385	384	382	378
6	*Comparison to Base Case*	0	(1)	(3)	(4)	(7)	(9)	(13)	(17)	(21)	(26)	(31)	(36)	(42)	(48)	(53)
	4 Year Transition*	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
3	Outstanding Principal	9,995	10,269	10,347	10,379	10,022	9,856	9,673	9,538	9,402	9,263	9,093	8,975	8,827	8,696	8,536
4	*Comparison to Base Case*	0	(43)	(82)	(153)	(232)	(320)	(411)	(512)	(614)	(716)	(818)	(915)	(1,012)	(1,150)	(1,262)
5	Interest Paid	454	457	424	420	394	390	386	381	377	374	376	373	373	369	364
6	*Comparison to Base Case*	0	(1)	(4)	(7)	(11)	(15)	(20)	(25)	(31)	(36)	(42)	(47)	(54)	(61)	(66)
	2 Year Transition	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
7	Outstanding Principal	9,995	10,260	10,327	10,332	9,950	9,766	9,563	9,415	9,263	9,124	8,955	8,830	8,674	8,535	8,366
8	*Comparison to Base Case*	0	(52)	(102)	(199)	(303)	(411)	(521)	(635)	(752)	(854)	(956)	(1,060)	(1,165)	(1,311)	(1,431)
9	Interest Paid	454	457	424	419	391	386	381	375	370	367	369	366	365	361	355
10	*Comparison to Base Case*	0	(1)	(4)	(8)	(14)	(19)	(25)	(31)	(37)	(43)	(49)	(54)	(62)	(69)	(75)
	Immediate Transition with Debt Management	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
15	Outstanding Principal	9,995	10,282	10,377	10,494	10,112	9,928	9,724	9,577	9,425	9,286	9,117	8,999	8,852	8,737	8,572
16	*Comparison to Base Case*	0	(30)	(52)	(37)	(141)	(249)	(360)	(473)	(591)	(692)	(794)	(891)	(987)	(1,108)	(1,226)
17	Interest Paid	454	457	424	422	397	392	387	381	376	373	376	374	374	371	366
18	*Comparison to Base Case*	0	(1)	(3)	(5)	(8)	(14)	(19)	(25)	(32)	(37)	(42)	(46)	(52)	(59)	(65)

Scenario Results: Principal and Interest (continued)

	Base Case	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	Sum
1	Outstanding Principal	9,796	9,718	9,696	9,619	9,559	9,470	9,374	9,294	9,202	9,063	8,935	8,769	8,534	8,359	8,081	
2	Interest Paid	433	432	428	428	429	428	428	426	421	416	410	401	394	385	374	12,564
	8 Year Transition	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**Sum**
3	Outstanding Principal	8,698	8,530	8,419	8,253	8,106	7,930	7,755	7,593	7,421	7,192	6,963	6,695	6,363	6,113	5,760	
4	*Comparison to Base Case*	(1,097)	(1,187)	(1,277)	(1,366)	(1,453)	(1,540)	(1,619)	(1,701)	(1,781)	(1,871)	(1,972)	(2,074)	(2,170)	(2,246)	(2,321)	
5	Interest Paid	376	370	361	357	353	349	344	338	328	318	307	293	281	268	253	10,918
6	*Comparison to Base Case*	(57)	(62)	(67)	(71)	(76)	(80)	(84)	(88)	(93)	(98)	(103)	(108)	(112)	(116)	(120)	(1,646)
	4 Year Transition*	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**Sum**
3	Outstanding Principal	8,430	8,248	8,122	7,940	7,776	7,582	7,388	7,206	7,013	6,768	6,538	6,269	5,937	5,686	5,333	
4	*Comparison to Base Case*	(1,365)	(1,469)	(1,574)	(1,679)	(1,783)	(1,888)	(1,986)	(2,088)	(2,189)	(2,295)	(2,397)	(2,500)	(2,597)	(2,673)	(2,748)	
5	Interest Paid	361	355	345	340	335	330	324	317	306	296	284	271	259	246	231	10,512
6	*Comparison to Base Case*	(72)	(77)	(83)	(88)	(94)	(99)	(104)	(109)	(115)	(120)	(125)	(131)	(135)	(139)	(143)	(2,052)
	2 Year Transition	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**Sum**
7	Outstanding Principal	8,252	8,060	7,924	7,731	7,556	7,350	7,144	6,948	6,741	6,486	6,255	5,985	5,653	5,401	5,048	
8	*Comparison to Base Case*	(1,544)	(1,657)	(1,772)	(1,888)	(2,003)	(2,120)	(2,230)	(2,346)	(2,461)	(2,578)	(2,681)	(2,784)	(2,881)	(2,957)	(3,033)	
9	Interest Paid	352	345	335	329	323	317	310	303	291	281	270	256	244	231	216	10,242
10	*Comparison to Base Case*	(81)	(87)	(93)	(99)	(106)	(111)	(117)	(123)	(129)	(135)	(140)	(145)	(150)	(154)	(157)	(2,322)
	Immediate Transition with Debt Management	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**Sum**
15	Outstanding Principal	8,466	8,292	8,156	7,977	7,815	7,624	7,433	7,254	7,064	6,827	6,592	6,328	5,997	5,743	5,391	
16	*Comparison to Base Case*	(1,330)	(1,425)	(1,540)	(1,643)	(1,744)	(1,845)	(1,941)	(2,040)	(2,139)	(2,237)	(2,344)	(2,441)	(2,537)	(2,616)	(2,691)	
17	Interest Paid	364	358	348	342	338	332	327	320	309	299	288	274	262	249	234	10,568
18	*Comparison to Base Case*	(69)	(74)	(80)	(86)	(91)	(96)	(101)	(106)	(111)	(117)	(122)	(127)	(132)	(136)	(140)	(1,996)

*Estimated based on the 8 Year Transition and 2 Year Transition scenario results.

Power Capital Related Costs with EE Expense

	Scenario (millions)	2014/15	2016/17	2018/19	2020/21	2022/23	2024/25	2026/28**	2029/30
1	**Base Case**	937	1,025	1,041	1,013	994	1,017	1,017	1,015
2	*Year After Year Change*	-	88	16	(28)	(19)	23	0	(2)
3	**8 Year Transition**	937	1,043	1,076	1,062	1,055	1,082	1,067	1,048
4	*Year After Year Change*	-	106	33	(14)	(7)	27	(15)	(18)
5	*Comparison to Base*	0	18	35	49	61	65	49	33
6	**4 Year Transition***	937	1,056	1,104	1,108	1,074	1,077	1,067	1,048
7	*Year After Year Change*	-	119	47	5	(34)	4	(11)	(18)
8	*Comparison to Base*		31	62	95	80	61	50	33
9	**2 Year Transition**	937	1,072	1,136	1,103	1,068	1,073	1,067	1,048
10	*Year After Year Change*	-	135	63	(33)	(34)	5	(6)	(18)
11	*Comparison to Base*	0	47	94	89	74	56	50	33
12	**Immediate Transition with Debt Management**	937	1,051	1,075	1,105	1,080	1,076	1,067	1,049
13	*Year After Year Change*	-	114	24	30	(25)	(4)	(9)	(18)
14	*Comparison to Base*	0	26	34	92	86	59	50	33

	Scenario (millions)	2031/32	2033/34	2035/36	2037/38	2039/40	2041/42	2043/44	Sum
1	**Base Case**	1,015	1,016	1,023	1,016	1,022	1,060	1,089	15,302
2	*Year After Year Change*	0	1	7	(7)	6	38	30	
3	**8 Year Transition**	1,038	1,027	1,017	1,010	1,023	1,035	1,045	15,567
4	*Year After Year Change*	(10)	(11)	(11)	(7)	12	12	10	
5	*Comparison to Base*	23	12	(6)	(6)	1	(25)	(44)	265
6	**4 Year Transition***	1,038	1,027	1,017	1,008	1,005	1,017	1,027	15,611
7	*Year After Year Change*	(10)	(11)	(11)	(9)	(3)	12	10	
8	*Comparison to Base*	23	12	(6)	(8)	(17)	(43)	(63)	309
9	**2 Year Transition**	1,038	1,027	1,017	1,005	987	999	1,008	15,587
10	*Year After Year Change*	(10)	(11)	(11)	(12)	(18)	12	10	
11	*Comparison to Base*	23	12	(6)	(11)	(35)	(61)	(81)	285
12	**Immediate Transition with Debt Management**	1,038	1,027	1,017	1,005	1,004	1,016	1,026	15,575
13	*Year After Year Change*	(10)	(11)	(11)	(12)	(1)	12	10	
14	*Comparison to Base*	23	12	(6)	(11)	(18)	(44)	(63)	273

*Estimated based on the 8 Year Transition and 2 Year Transition scenario results.
** The current Regional Dialogue Contracts expire in 2028 so a 3 Year Rate Period is used.