EXHIBIT 1

LOST MARGIN/DEFERRED REVENUE CALCULATION

JULY 2010 – JUNE 2011

DEFERRAL CALCULATION for DECOUPLING FISCAL PERIOD
JULY 2010 THROUGH JUNE 2011

AVISTA UTILITIES
Washington - Gas
Approved Decoupling Mechanism per Order No. 10 Docket No. UG-090135
July through November 2010 compared to 12 ME September 2008 Test Year - UG-090135 rates
December 2010 through June 2011 compared to 12 ME December 2009 Test Year - UG-100468 rates
Adjusted for Actual New Customer Usage and Schedule Shifting
Period July 2010 - June 2011

	2010 July	2010 August	2010 September	2010 October	2010 November	2010 December	2011 January	2011 February	2011 March	2011 April	2011 May	2011 June	Period to Date Total
12 Months Ended June 2011 Actual													
Schedule 101													
Schedule 101 Billed Therms	3,313,811	2,388,155	2,436,473	3,588,712	8,096,570	18,685,652	20,587,656	18,101,774	17,689,122	12,727,741	10,355,100	5,262,768	123,233,534
Deduct New Customer Usage(1)	(79,496)	(50,724)	(49,513)	(129,126)	(296,150)	(196,517)	(464,287)	(402,016)	(377,617)	(250,021)	(208,973)	(99,516)	(2,603,956)
Schedule Shifting Adjustment (2)	9,435	15,624	20,369	38,447	76,828	68,912	154,796	123,637	46,311	48,836	37,633	35,281	676,109
Deduct Prior Month Unbilled Therms	(2,290,886)	(1,475,600)	(1,470,836)	(2,167,427)	(6,369,870)	(12,632,762)	(14,149,481)	(13,995,304)	(14,216,031)	(10,488,247)	(9,160,899)	(4,883,128)	(93,300,471)
Add Current Month Unbilled Therms	1,475,600	1,470,836	2,167,427	6,369,870	13,112,916	14,149,481	13,995,304	14,216,031	10,488,247	9,160,899	4,883,128	2,686,086	94,175,825
Add Weather Adjustment	-	-	-	911,825	(651,522)	989,755	274,705	(1,502,652)	(226,043)	(2,110,729)	(1,054,245)	(661,450)	(4,030,356)
Weather Adj Calendar Therms	2,428,464	2,348,291	3,103,920	8,612,301	13,968,772	21,064,521	20,398,693	16,541,470	13,403,989	9,088,479	4,851,744	2,340,041	118,150,685
Weather Adj Calendar Therms	2,428,464	2,348,291	3,103,920	8,612,301	13,968,772	21,064,521	20,398,693	16,541,470	13,403,989	9,088,479	4,851,744	2,340,041	118,150,685
Less Test Year Therms	2,287,103	2,287,617	3,079,647	8,101,726	13,914,616	21,404,351	21,165,181	16,641,322	14,487,057	8,175,548	5,149,629	3,543,438	120,237,234
Therm Difference	141,361	60,674	24,273	510,575	54,156	(339,830)	(766,488)	(99,852)	(1,083,068)	912,931	(297,885)	(1,203,397)	(2,086,549)
Times Current Margin Rate per Therm	0.24216	0.24216	0.24216	0.24216	0.24216	0.27088	0.27088	0.27088	0.27088	0.27088	0.27088	0.27088	
Revenue Excess (Shortfall)	**$34,232**	**$14,693**	**$5,878**	**$123,641**	**$13,114**	**($92,053)**	**($207,625)**	**($27,048)**	**($293,380)**	**$247,293**	**($80,691)**	**($325,974)**	**($587,918)**
35% Limitation	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	
Deferred Revenue	**$11,981**	**$5,142**	**$2,057**	**$43,274**	**$4,590**	**($32,218)**	**($72,669)**	**($9,467)**	**($102,683)**	**$86,553**	**($28,242)**	**($114,091)**	**($205,773)**
Rebate (Surcharge)													

(1) Per monthly reports - current month usage for new services opened since that month of the test year.
(2) The schedule shifting adjustment adds back test year usage of customers that have shifted away from Schedule 101 and deducts the current month usage of customers that were on a different schedule during the test year and have shifted to

DEFERRAL CALCULATION for DECOUPLING FISCAL PERIOD
JULY 2010 THROUGH JUNE 2011

Weather Normalization and Unbilled Calculation
July 2010 through November 2010 (with 12ME September 2008 test year base)

2008 Test Year Factors, 2010 -2011 Actual Weather and Cycle Days

Weather Normalization

		Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-10	Aug-10	Sep-10	Total
Normal Degree Days (30 Year Average 1979 - 200		541	899	1160	1136	914	770	542	323	144	36	35	189	6,689
Actual Degree Days		472	948	1160	1136	914	770	542	323	144	48	47	158	6,662
Degree Day Adjustment (1,6)		69	-49	0	0	0	0	0	0	0	-12	-12	31	7
	Monthly													
Res 101	Use/DD/Cust(6)	0.0877	0.0877	0.1002	0.1002	0.1002	0.1002	0.0877	0.0877	0.0877	0.0000	0.0000	0.0000	
Com 101	Use/DD/Cust(6)	0.1670	0.1670	0.2467	0.2467	0.2467	0.2467	0.1670	0.1670	0.1670	0.0000	0.0000	0.0000	
Ind 101	Use/DD/Cust(6)	0.2961	0.2961	0.4266	0.4266	0.4266	0.4266	0.2961	0.2961	0.2961	0.0000	0.0000	0.0000	
Sch. 101														
Res 101		776,811	(555,289)	-	-	-	-	-	-	-	-	-	-	221,522
Com 101		133,114	(94,898)	-	-	-	-	-	-	-	-	-	-	38,216
Ind 101		1,900	(1,335)	-	-	-	-	-	-	-	-	-	-	565
Total 101		911,825	(651,522)	-	-	-	-	-	-	-	-	-	-	260,303

Monthly Unbilled Calculation

			Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jun-10	Jul-10	Aug-10	Sep-10
Unbilled DDH (current period cycle day workst			374.9	792.5	0.0	0.0	0	0.0	0.0	0.0	0.0	116.8	18.0	47.6	106.9
Unbilled Factor (current period cycle day work			68.58%	75.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	72.51%	70.82%	70.57%	69.46%
	08 Baseld(6)	Monthly													
Res 101	15	)D/Cust(6)	0.0877	0.0940	0.1002	0.1002	0.1002	0.0940	0.0877	0.0877	0.0439	0.0439	0.0000	0.0000	0.0439
Com 101	12	)D/Cust(6)	0.1670	0.2069	0.2467	0.2467	0.2467	0.2069	0.1670	0.1670	0.0835	0.0835	0.0000	0.0000	0.0835
Ind 101	0	)D/Cust(6)	0.2961	0.3614	0.4266	0.4266	0.4266	0.3614	0.2961	0.2961	0.1481	0.1481	0.0000	0.0000	0.1481
Sch. 101															
Res 101			5,541,227	11,080,686	-	-	-	-	-	-	-	2,073,044	1,376,305	1,371,764	1,964,246
Com 101			818,319	2,005,884	-	-	-	-	-	-	-	216,355	99,295	99,072	201,820
Ind 101			10,324	26,346	-	-	-	-	-	-	-	1,487	-	-	1,361
Total			6,369,870	13,112,916	-	-	-	-	-	-	-	2,290,886	1,475,600	1,470,836	2,167,427

Revenue Run Customers (Meters Billed)

	Class	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	12 ME Sept
Residential 101	01	127,898	128,371	129,218	129,424	129,776	129,941	129,950	129,861	129,773	129,580	129,559	129,589	130,026	1,555,068
Commercial 101	21	11,551	11,552	11,597	11,702	11,689	11,691	11,700	11,691	11,683	11,724	11,684	11,699	11,692	140,104
Industrial 101	31	95	93	92	93	92	90	90	87	87	86	87	87	86	1,070
Interdepartmental 10	80	24	23	23	23	23	23	23	23	23	23	24	24	25	280
Total		139,568	140,039	140,930	141,242	141,580	141,745	141,763	141,662	141,566	141,413	141,354	141,399	141,829	1,696,522

DEFERRAL CALCULATION for DECOUPLING FISCAL PERIOD
JULY 2010 THROUGH JUNE 2011

Weather Normalization and Unbilled Calculation
December 2010 through June 2011 (with 12ME December 2009 test year base)

2009 Test Year Factors, 2010 -2011 Actual Weather and Unbilled
12 Months Ended December 2009 Monthly Data

Weather Normalization

	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-10	Total
Normal Degree Days (30 Year Average 1980 - 200	1,120	913	776	542	323	143	35	34	185	540	889	1,157	6,657
Actual Degree Days	1,103	1,006	790	698	401	192	35	34	185	540	889	1,096	6,969
Degree Day Adjustment (1,7)	17	(93)	(14)	(156)	(78)	(49)	-	-	-	-	-	61	(312)
Monthly													
Res 101 Use/DD/Cust(7)	0.1002	0.1002	0.1002	0.0877	0.0877	0.0877	0.0000	0.0000	0.0000	0.0877	0.0877	0.1002	
Com 101 Use/DD/Cust(7)	0.2467	0.2467	0.2467	0.1670	0.1670	0.1670	0.0000	0.0000	0.0000	0.1670	0.1670	0.2467	
Ind 101 Use/DD/Cust(7)	0.4266	0.4266	0.4266	0.2961	0.2961	0.2961	0.0000	0.0000	0.0000	0.2961	0.2961	0.4266	
Sch. 101													
Res 101	224,547	(1,228,341)	(184,819)	(1,800,159)	(898,992)	(563,879)	-	-	-	-	-	809,310	(3,642,333)
Com 101	49,534	(270,820)	(40,710)	(306,736)	(153,290)	(96,338)	-	-	-	-	-	178,207	(640,153)
Ind 101	624	(3,491)	(514)	(3,834)	(1,963)	(1,233)	-	-	-	-	-	2,238	(8,173)
Total 101	274,705	(1,502,652)	(226,043)	(2,110,729)	(1,054,245)	(661,450)	-	-	-	-	-	989,755	(4,290,659)

Revenue Run Customers (Meters Billed)

Class			Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Annual Total
Residential 101	01	(8)	131,823	131,816	131,750	131,579	131,420	131,217	131,144	131,208	131,483	131,710	132,145	132,409	1,579,704
Commercial 101	21	(8)	11,811	11,804	11,787	11,774	11,768	11,773	11,757	11,776	11,805	11,808	11,866	11,842	141,571
Industrial 101	31	(8)	86	88	86	83	85	85	85	86	87	86	83	86	1,026
Interdepartmental 101	80	(8)	27	26	26	26	26	26	26	26	26	26	26	26	313
Total			143,747	143,734	143,649	143,462	143,299	143,101	143,012	143,096	143,401	143,630	144,120	144,363	1,722,614

Monthly Unbilled Calculation

	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11
Unbilled Sch 101 per Books	12,739,525	14,293,952	14,203,169	14,414,731	10,637,340	9,290,207	4,956,495	2,725,410
Rev Run Customers (Meters Billed)	145,338	145,837	145,882	145,743	145,691	145,487	145,452	145,196
Average Unbilled per Customer	87.65	98.01	97.36	98.91	73.01	63.86	34.08	18.77
Test Year Customer Current Unbilled	12,632,762	14,149,481	13,995,304	14,216,031	10,488,247	9,160,899	4,883,128	2,686,086

TEST YEAR BASE July through November 2010

Avista Utilities
Washington - Gas - Test Year Calculations for Decoupling
12 Months Ended September 2008 - Docket No. UG-090135

12 MONTHS ENDED SEPTEMBER 2008 TEST YEAR BASE

Allowed Docket No. UG-090135

Rates Effective January 1, 2010

Schedule 101	Per BJH(1)	**Annual Total**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Therms														
Usage from Revenue Run(2)	124,456,548	124,456,548	20,755,627	22,514,347	14,859,076	13,629,159	8,714,627	4,232,714	2,763,613	2,223,233	2,487,966	4,484,817	9,398,517	18,392,852
Ded: Prior Mo. Unbilled(2)	(2,516,904)	(79,369,540)	(12,430,831)	(13,260,094)	(10,089,194)	(9,329,893)	(7,012,777)	(3,198,435)	(1,795,216)	(1,318,706)	(1,383,090)	(2,516,904)	(6,292,391)	(10,742,009)
Add: Current Mo. Unbilled(2)	1,974,771	78,827,407	13,260,094	10,089,194	9,329,893	7,012,777	3,198,435	1,795,216	1,318,706	1,383,090	1,974,771	6,292,391	10,742,009	12,430,831
Add: Weather Adjustment(2)	(5,272,984)	(5,272,984)	(1,704,132)	(605,820)	(1,754,035)	(1,884,742)	654,538	(427,121)	-	-	-	(158,578)	66,481	540,425
Test Year Monthly Therms	118,641,430	118,641,430	19,880,758	18,737,627	12,345,740	9,427,301	5,554,823	2,402,374	2,287,103	2,287,617	3,079,647	8,101,726	13,914,616	20,622,099
Adjust to Annual Pro Forma		-	-	-	-	-	-	-	-	-	-	-	-	-
Monthly Pro Forma Therms		118,641,430	19,880,758	18,737,627	12,345,740	9,427,301	5,554,823	2,402,374	2,287,103	2,287,617	3,079,647	8,101,726	13,914,616	20,622,099
Customers / Billings														
Test Yr Customers/Billings(2)	1,673,784	1,696,522	141,580	141,745	141,763	141,662	141,566	141,413	141,354	141,399	141,829	140,039	140,930	141,242
Test Year Average Use/Cust		70	140	132	87	67	39	17	16	16	22	58	99	146

	Total	Schedule 101	Schedule 156 (14th revision)
Sch 101 Base Rate/therm(3)	1.18765	1.13798	0.04967
Times: 1 minus Revenue Related Items (4)	0.957059	0.957059	0.957059
Revenue prior to gross up	$1.13665	$1.08911	$0.04754
Less: Weighted Average Gas Cost/therm(5)	($0.89449)	($0.84695)	($0.04754)
Margin Rate/therm	**$0.24216**	**$0.24216**	**$0.00000**

(1) From Hirschkorn workpapers in Docket No. UG-090135 BJH -1, BJH -11, and BJH - 18
(2) From 12 ME September 2008 Monthly Data (below)
(3) From Compliance Filing Schedule 101 per therm rate (with and without 11/1/2008 Schedule 156 gas cost adder)
(4) From Andrews Compliance Revenue Requirement model, page 4, line 7
(5) From Schedule 156 purchased gas cost per therm rate (14th revision sheet effective 11/1/2008)
(6) From Hirschkorn workpapers in Docket No. UG-090135 BJH-12, BJH -17, BJH -19, and BJH - 20

TEST YEAR BASE July through November 2010

Avista Utilities
Washington - Gas - Test Year Calculations for Decoupling
12 Months Ended September 2008 - Docket No. UG-090135

12 MONTHS ENDED SEPTEMBER 2008 TEST YEAR BASE

UG-090135 Weather Normalization and Unbilled Calculation

Rates Effective January 1, 2010

12 Months Ended September 2008 Monthly Data

Revenue Run Therms	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Total
Total 101	4,484,817	9,398,517	18,392,852	20,755,627	22,514,347	14,859,076	13,629,159	8,714,627	4,232,714	2,763,613	2,223,233	2,487,966	124,456,548

Weather Normalization

	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Total
Normal Degree Days (30 Year Average 1979 - 2008)	541	899	1160	1136	914	770	542	323	144	36	35	189	6,689
Actual Degree Days	553	894	1126	1243	952	880	683	274	176	8	52	142	6,983
Degree Day Adjustment (1,6)	-12	5	34	-107	-38	-110	-141	49	-32	28	-17	47	-294
Monthly													
Res 101 Use/DD/Cust(6)	0.0877	0.0877	0.1002	0.1002	0.1002	0.1002	0.0877	0.0877	0.0877	0.0000	0.0000	0.0000	
Com 101 Use/DD/Cust(6)	0.1670	0.1670	0.2467	0.2467	0.2467	0.2467	0.1670	0.1670	0.1670	0.0000	0.0000	0.0000	
Ind 101 Use/DD/Cust(6)	0.2961	0.2961	0.4266	0.4266	0.4266	0.4266	0.2961	0.2961	0.2961	0.0000	0.0000	0.0000	

Sch. 101

Res 101	(135,098)	56,662	440,922	(1,391,380)	(494,763)	(1,432,309)	(1,605,822)	557,674	(363,653)	-	-	-	(4,367,767)
Com 101	(23,150)	9,683	98,154	(308,553)	(109,598)	(317,503)	(275,288)	95,602	(62,653)	-	-	-	(893,306)
Ind 101	(330)	136	1,349	(4,199)	(1,459)	(4,223)	(3,632)	1,262	(815)	-	-	-	(11,911)
Total 101	(158,578)	66,481	540,425	(1,704,132)	(605,820)	(1,754,035)	(1,884,742)	654,538	(427,121)	-	-	-	(5,272,984)

Monthly Unbilled Calculation

	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08
Unbilled DDH (6)	161.9	377.3	642.8	702.2	756.7	554.3	549.0	424.2	140.1	71.2	4.7	45.9	101.5
Unbilled Factor (6)	60.95%	63.29%	66.19%	60.98%	57.91%	59.93%	61.29%	64.29%	63.59%	63.33%	63.29%	66.36%	62.86%
08 Baseld(6) Monthly													
Res 101 15 Use/DD/Cust(6)	0.0439	0.0877	0.0940	0.1002	0.1002	0.1002	0.0940	0.0877	0.0877	0.0439	0.0000	0.0000	0.0439
Com 101 12 Use/DD/Cust(6)	0.0835	0.1670	0.2069	0.2467	0.2467	0.2467	0.2069	0.1670	0.1670	0.0835	0.0000	0.0000	0.0835
Ind 101 0 Use/DD/Cust(6)	0.1481	0.2961	0.3614	0.4266	0.4266	0.4266	0.3614	0.2961	0.2961	0.1481	0.0000	0.0000	0.1481

Sch. 101

Res 101	2,077,295	5,466,385	9,086,553	10,290,171	10,967,089	8,385,140	7,897,328	6,083,448	2,832,331	1,635,509	1,229,968	1,289,929	1,804,731
Com 101	240,638	815,616	1,634,087	2,112,801	2,263,307	1,682,772	1,414,711	918,401	362,495	158,800	88,738	93,161	187,288
Ind 101	2,277	10,390	21,369	27,859	29,698	21,282	17,854	10,928	3,609	907	-	-	1,292
Total	2,320,210	6,292,391	10,742,009	12,430,831	13,260,094	10,089,194	9,329,893	7,012,777	3,198,435	1,795,216	1,318,706	1,383,090	1,993,311
Pro Rata Adjustment to per Books Unbilled Total	196,694												(18,540)
Pro Rata Adjusted Unbilled Total (1)	2,516,904												1,974,771

Revenue Run Customers (Meters Billed)

	Class	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	12 ME Sept
Residential 101	01	127,898	128,371	129,218	129,424	129,776	129,941	129,950	129,861	129,773	129,580	129,559	129,589	130,026	1,555,068
Commercial 101	21	11,551	11,552	11,597	11,702	11,689	11,691	11,700	11,691	11,683	11,724	11,684	11,699	11,692	140,104
Industrial 101	31	95	93	92	93	92	90	90	87	87	86	87	87	86	1,070
Interdepartmental 101	80	24	23	23	23	23	23	23	23	23	23	24	24	25	280
Total		139,568	140,039	140,930	141,242	141,580	141,745	141,763	141,662	141,566	141,413	141,354	141,399	141,829	1,696,522

TEST YEAR BASE December 2010 through June 2011

Avista Utilities
Washington - Gas - Test Year Calculations for Decoupling
12 Months Ended December 2009 - Docket No. UG-100468

12 MONTHS ENDED DECEMBER 2009 TEST YEAR BASE

Settlement Docket No. UG-100468

Rates Effective December 1, 2010

Schedule 101	Per PDE(1)	**Annual Total**	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
Therms														
Usage from Revenue Run(2)	124,216,208	124,216,208	24,885,757	21,106,338	17,754,612	12,666,299	7,615,545	3,714,717	2,373,945	2,111,270	2,274,191	4,129,665	9,700,573	15,883,296
Ded: Prior Mo. Unbilled(2)	(15,919,236)	(80,466,703)	(15,919,236)	(13,556,027)	(9,801,943)	(9,117,730)	(5,222,312)	(2,486,077)	(1,639,848)	(1,405,084)	(1,544,210)	(1,964,249)	(7,223,636)	(10,586,351)
Add: Current Mo. Unbilled(2)	17,648,827	82,196,294	13,556,027	9,801,943	9,117,730	5,222,312	2,486,077	1,639,848	1,405,084	1,544,210	1,964,249	7,223,636	10,586,351	17,648,827
Add: Weather Adjustment(2)	(6,829,575)	(6,829,575)	(1,357,367)	(710,932)	(2,583,342)	(595,333)	270,319	674,950	-	-	-	(1,734,191)	747,742	(1,541,421)
Test Year Monthly Therms	119,116,224	119,116,224	21,165,181	16,641,322	14,487,057	8,175,548	5,149,629	3,543,438	2,139,181	2,250,396	2,694,230	7,654,861	13,811,030	21,404,351
Customers / Billings														
Test Yr Customers/Billings(2)	1,722,614	1,722,614	143,747	143,734	143,649	143,462	143,299	143,101	143,012	143,096	143,401	143,630	144,120	144,363
Test Year Average Use/Cust		69	147	116	101	57	36	25	15	16	19	53	96	148

	Schedule 101
Sch 101 Base Rate/therm(3)	$0.89276
Times: 1 minus Revenue Related Items (4)	0.955843
Revenue prior to gross up	$0.85334
Less: Weighted Average Gas Cost/therm(5)	$0.58246
Margin Rate/therm	**$0.27088**

(1) From Ehrbar workpapers in Docket No. UG-100468 PDE-G -1, PDE-G-16, and PDE-G-17
(2) From Monthly Data below
(3) From Docket No. UG-100468 Settlement Stipulation Appendix 4, page 5
(4) From Docket No. UG-100468 Andrews Exhibit EMA-3, page 4, line 7
(5) From Schedule 156 purchased gas cost per therm rate (15th revision sheet effective 11/1/2009)

TEST YEAR BASE December 2010 through June 2011

Avista Utilities
Washington - Gas - Test Year Calculations for Decoupling
12 Months Ended December 2009 - Docket No. UG-100468

12 MONTHS ENDED DECEMBER 2009 TEST YEAR BASE

UG-100468 Weather Normalization and Unbilled Calculation

Rates Effective December 1, 2010

12 Months Ended December 2009 Monthly Data

Revenue Run Therms	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Total
Total 101 (6)	24,885,757	21,106,338	17,754,612	12,666,299	7,615,545	3,714,717	2,373,945	2,111,270	2,274,191	4,129,665	9,700,573	15,883,296	124,216,208

Weather Normalization

	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Total
Normal Degree Days (30 Year Average 1980 - 2009)	1,120	913	776	542	323	143	35	34	185	540	889	1,157	6,657
Actual Degree Days	1,204	957	936	586	303	93	17	23	103	668	834	1,252	6,976
Degree Day Adjustment (1,7)	(84)	(44)	(160)	(44)	20	50	18	11	82	(128)	55	(95)	(319)
Monthly													
Res 101 Use/DD/Cust(7)	0.1002	0.1002	0.1002	0.0877	0.0877	0.0877	0.0000	0.0000	0.0000	0.0877	0.0877	0.1002	
Com 101 Use/DD/Cust(7)	0.2467	0.2467	0.2467	0.1670	0.1670	0.1670	0.0000	0.0000	0.0000	0.1670	0.1670	0.2467	
Ind 101 Use/DD/Cust(7)	0.4266	0.4266	0.4266	0.2961	0.2961	0.2961	0.0000	0.0000	0.0000	0.2961	0.2961	0.4266	

Sch. 101

Res 101	(1,109,528)	(581,150)	(2,112,216)	(507,737)	230,511	575,387	-	-	-	(1,478,524)	637,401	(1,260,401)	(5,606,257)
Com 101	(244,757)	(128,130)	(465,256)	(86,515)	39,305	98,305	-	-	-	(252,408)	108,989	(277,535)	(1,208,002)
Ind 101	(3,082)	(1,652)	(5,870)	(1,081)	503	1,258	-	-	-	(3,259)	1,352	(3,485)	(15,316)
Total 101	(1,357,367)	(710,932)	(2,583,342)	(595,333)	270,319	674,950	-	-	-	(1,734,191)	747,742	(1,541,421)	(6,829,575)

Revenue Run Customers (Meters Billed)

Class			Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Annual Total
Residential 101	01	(8)	131,823	131,816	131,750	131,579	131,420	131,217	131,144	131,208	131,483	131,710	132,145	132,409	1,579,704
Commercial 101	21	(8)	11,811	11,804	11,787	11,774	11,768	11,773	11,757	11,776	11,805	11,808	11,866	11,842	141,571
Industrial 101	31	(8)	86	88	86	83	85	85	85	86	87	86	83	86	1,026
Interdepartmental 101	80	(8)	27	26	26	26	26	26	26	26	26	26	26	26	313
Total			143,747	143,734	143,649	143,462	143,299	143,101	143,012	143,096	143,401	143,630	144,120	144,363	1,722,614

Monthly Unbilled Calculation

	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
WA101 (9)	15,919,236	13,556,027	9,801,943	9,117,730	5,222,312	2,486,077	1,639,848	1,405,084	1,544,210	1,964,249	7,223,636	10,586,351	17,648,827

(6) From Knox workpapers in Docket No. UG-100468, TLK-R-120
(7) From Knox workpapers in Docket No. UG-100468, TLK-R-53
(8) From Knox workpapers in Docket No. UG-100468, TLK-R-23
(9) From Knox workpapers in Docket No. UG-100468, TLK-R-6 with monthly columns expanded

EXHIBIT 2

CALCULATION OF PROPOSED DECOUPLING SURCHARGE RATE

EFFECTIVE NOVEMBER 1, 2011

Avista Utilities
Calculation of Decoupling Surcharge/Amortization Rate
Effective November 1, 2011 - October 1, 2012

	Unamortized Balance(1)	Interest(2)	Forecast Sch. 101 Use
	$ 0.00172	3.25%(3)	
Nov '10	**$205,773**		14,430,759
		$524	
Dec '10	$181,009		21,088,625
		$441	
Jan '11	$144,819		20,840,464
		$344	
Feb '11	$109,055		15,953,206
		$258	
Mar '11	$81,679		13,556,444
		$190	
Apr '11	$58,415		8,928,611
		$137	
May '11	$43,093		5,150,776
		$105	
Jun '11	$34,253		3,295,532
		$85	
Jul '11	$28,598		2,570,280
		$71	
Aug '11	$24,187		2,676,994
		$59	
Sep '11	$19,593		3,486,866
		$45	
Oct '11	$13,610		7,930,709
		$18	
Nov '11	$0		
Total		$2,278	119,909,266
Incremental Rate to Recover Est. Interest		**$0.00002**	
Est. Rate to Recover Deferral Balance		**$0.00172**	
Rate before Gross-up for Revenue-related items		**$0.00174**	
Times: Gross-up for Revenue-related items(4)		**1.046023**	
Proposed decoupling rate		**0.00181**	

(1)Deferral balance at beginning of the month / Rate of $0.00181 is rate to recover deferral balance of $205,773 over 12 months

(2)Interest computed on average balance between beginning and end of month.

(3)FERC rate @ July '11 - changes quarterly (http://ferc.gov/legal/acct-matts/interest-rates.asp)

(4)From page 2 of Exh. 2

AVISTA UTILITIES
Revenue Conversion Factor
Washington - Gas System
TWELVE MONTHS ENDED December 31, 2010
from Docket No. UG-110877

Line No.	Description	Factor
1	**Revenues**	1.000000
	Expense:	
2	Uncollectibles	0.003617
3	Commission Fees	0.002000
4	Washington Excise Tax	0.038381
5	Franchise Fees (City of Millwood Expired in 2004)	0.000000
6	Total Expense	0.043998
7	Net Operating Income Before FIT	0.956002
8	Federal Income Tax @ 35%	0.334601
9	REVENUE CONVERSION FACTOR	0.621401
10	Calculation of Revenue Adjustment Factor 1 ÷ (1 - 0.044157)	1.046023

EXHIBIT 3

AVISTA COMMISSION BASIS REPORT FOR WASHINGTON NATURAL GAS OPERATIONS

YEAR ENDED DECEMBER 31, 2010

UG-110767-SI

Avista Corp.
1411 East Mission P.O. Box 3727
Spokane. Washington 99220-0500
Telephone 509-489-0500
Toll Free 800-727-9170

AVISTA Corp.

April 28, 2011

Mr. David W. Danner, Executive Director and Secretary
Washington Utilities and Transportation Commission
1300 S. Evergreen Park Drive, S.W.
Olympia, WA 98504-7250

RE: 2010 Gas Commission Basis Report Pursuant to WAC 480-090-257

Dear Mr. Danner:

Enclosed are two copies of the 2010 Gas Commission Basis Report for Avista Utilities. The report is being filed pursuant to WAC 480-090-257. The report is based on the period of twelve months ended December 31, 2010. This report is being supplied for informational purposes only.

If you have any questions, please contact me at (509) 495-8601.

Sincerely,

Liz M. Andrews

Liz M. Andrews
Manager, Revenue Requirements

Enclosure

A1

AVISTA UTILITIES
Washington Gas
Restatement Summary

Twelve Months Ended December 31, 2010
(000's OF DOLLARS)

Column	Description	Washington Gas NOI	Rate Base	ROR
b	Per Results Report	$9,457	$214,663	
c	Deferred FIT Rate Base	0	(36,762)	
d	Deferred Gain on Office Building	0	(44)	
e	Gas Inventory	0	10,226	
f	Customer Advances	0	(31)	
g	Customer Deposits	(2)	(1,132)	
	Actual	9,455	186,920	5.06%
h	Weather Normalize Revenue & Gas Cost Adjust	1,163	0	
i	Eliminate B & O Taxes	(3)	0	
j	Property Tax	(1)	0	
k	Uncollectible Expense	110	0	
l	Regulatory Expense Adjustment	86	0	
m	Injuries and Damages	107	0	
n	FIT	11	0	
o	Net Gains/losses	3	0	
p	Eliminate A/R Expenses	25	0	
q	Office Space Charges to Subs	1	0	
r	Restate Excise Taxes	62	0	
s	Misc Restating Adjustments	36	0	
t	Restate Debt Interest	(28)	0	
	Restated Total	$11,027	$186,920	5.90%

AVISTA UTILITIES

GAS RESULTS OF OPERATION

WASHINGTON RESTATED RESULTS

TWELVE MONTHS ENDED DECEMBER 31, 2010

(000's OF DOLLARS)

Line No.	DESCRIPTION	Per Results Report	Deferred FIT Rate Base	Deferred Gain on Office Building	Gas Inventory	Customer Advances	Customer Deposits	Subtotal Actual
	a	b	c	d	e	f	g	-
	REVENUES							
1	Total General Business	$140,588						$140,588
2	Total Transportation	3,245						3,245
3	Other Revenues	115,257						115,257
4	Total Gas Revenues	259,090	0	0	0	0	0	259,090
	EXPENSES							
5	Exploration and Development	0						0
	Production							
6	City Gate Purchases	192,776						192,776
7	Purchased Gas Expense	801						801
8	Net Nat Gas Storage Trans	(3,322)						(3,322)
9	Total Production	190,255	0	0	0	0	0	190,255
	Underground Storage							
10	Operating Expenses	380						380
11	Depreciation	348						348
12	Taxes	120						120
13	Total Underground Storage	848	0	0	0	0	0	848
	Distribution							
14	Operating Expenses	7,705						7,705
15	Depreciation	6,371						6,371
16	Taxes	12,249						12,249
17	Total Distribution	26,325	0	0	0	0	0	26,325
18	Customer Accounting	5,415			0		3	5,418
19	Customer Service & Information	9,471						9,471
20	Sales Expenses	105						105
	Administrative & General							
21	Operating Expenses	11,746						11,746
22	Depreciation	2,628						2,628
23	Taxes	25						25
24	Total Admin. & General	14,399	0	0	0	0	0	14,399
25	Total Gas Expense	246,818	0	0	0	0	3	246,821
26	OPERATING INCOME BEFORE FIT	12,272	0	0	0	0	(3)	12,269
	FEDERAL INCOME TAX							
27	Current Accrual	(6,910)					(1)	(6,911)
28	Deferred FIT	9,754						9,754
29	Amort ITC	(29)						(29)
30	NET OPERATING INCOME	$9,457	$0	$0	$0	$0	($2)	$9,455
	RATE BASE: PLANT IN SERVICE							
31	Underground Storage	20,047						20,047
32	Distribution Plant	269,469				(31)	(1,132)	268,306
33	General Plant	33,401						33,401
34	Total Plant in Service	322,917	0	0	0	(31)	(1,132)	321,754
	ACCUMULATED DEPRECIATION							
35	Underground Storage	7,912						7,912
36	Distribution Plant	89,620						89,620
37	General Plant	10,722						10,722
38	Total Accum. Depreciation	108,254	0	0	0	0	0	108,254
39	DEFERRED FIT	0	(36,762)					(36,762)
40	GAS INVENTORY	0			10,226			10,226
41	WORKING CAPITAL	0						0
42	GAIN ON SALE OF BUILDING	0		(44)				(44)
43	TOTAL RATE BASE	$214,663	($36,762)	($44)	$10,226	($31)	($1,132)	$186,920
44	RATE OF RETURN							5.06%

AVISTA UTILITIES

GAS RESULTS OF OPERATION

WASHINGTON RESTATED RESULTS

TWELVE MONTHS ENDED DECEMBER 31, 2010

(000's OF DOLLARS)

Line No.	DESCRIPTION	Weather Normalize Revenue & Gas Cost Adjust	Eliminate B & O Taxes	Property Tax	Uncollectible Expense	Regulatory Expense Adjustment	Injuries and Damages
	a	h	i	j	k	l	m
	REVENUES						
1	Total General Business	6,808	$ (5,026)				
2	Total Transportation		(90)				
3	Other Revenues						
4	Total Gas Revenues	6,808	(5,116)	0	0	0	0
	EXPENSES						
5	Exploration and Development						
	Production						
6	City Gate Purchases	4,718					
7	Purchased Gas Expense						
8	Net Nat Gas Storage Trans						
9	Total Production	4,718	0	0	0	0	0
	Underground Storage						
10	Operating Expenses						
11	Depreciation						
12	Taxes			1			
13	Total Underground Storage	0	0	1	0	0	0
	Distribution						
14	Operating Expenses						
15	Depreciation						
16	Taxes	261	(5,112)				
17	Total Distribution	261	(5,112)	0	0	0	0
18	Customer Accounting	25	0		(169)	0	
19	Customer Service & Information						
20	Sales Expenses						
	Administrative & General						
21	Operating Expenses	14				(133)	(164)
22	Depreciation						
23	Taxes			1			
24	Total Admin. & General	14	0	1	0	(133)	(164)
25	Total Gas Expense	5,018	(5,112)	2	(169)	(133)	(164)
26	OPERATING INCOME BEFORE FIT	1,790	(4)	(2)	169	133	164
	FEDERAL INCOME TAX						
27	Current Accrual	627	(1)	(1)	59	47	57
28	Deferred FIT						
29	Amort ITC						
30	NET OPERATING INCOME	$1,163	($3)	($1)	$110	$86	$107
	RATE BASE: PLANT IN SERVICE						
31	Underground Storage						
32	Distribution Plant						
33	General Plant						
34	Total Plant in Service	0	0	0	0	0	0
	ACCUMULATED DEPRECIATION						
35	Underground Storage						
36	Distribution Plant						
37	General Plant						
38	Total Accum. Depreciation	0	0	0	0	0	0
39	DEFERRED FIT						
40	GAS INVENTORY						
41	WORKING CAPITAL						
42	GAIN ON SALE OF BUILDING						
43	TOTAL RATE BASE	$0	$0	$0	$0	$0	$0
44	RATE OF RETURN						

AVISTA UTILITIES

GAS RESULTS OF OPERATION

WASHINGTON RESTATED RESULTS

TWELVE MONTHS ENDED DECEMBER 31, 2010

(000's OF DOLLARS)

Line No.	DESCRIPTION	FIT	Net Gains/losses	Eliminate A/R Expenses	Office Space Charges to Subs	Restate Excise Taxes	Misc Restating Adjustments	Restate Debt Interest
	a	n	o	p	q	r	s	t
	REVENUES							
1	Total General Business							
2	Total Transportation							
3	Other Revenues							
4	Total Gas Revenues	0	0	0	0	0	0	0
	EXPENSES							
5	Exploration and Development							
	Production							
6	City Gate Purchases							
7	Purchased Gas Expense						(1)	
8	Net Nat Gas Storage Trans							
9	Total Production	0	0	0	0	0	(1)	0
	Underground Storage							
10	Operating Expenses							
11	Depreciation							
12	Taxes							
13	Total Underground Storage	0	0	0	0	0	0	0
	Distribution							
14	Operating Expenses						(9)	
15	Depreciation		(4)					
16	Taxes					(96)		
17	Total Distribution	0	(4)	0	0	(96)	(9)	0
18	Customer Accounting		0	(38)	0	0	(2)	
19	Customer Service & Information						34	
20	Sales Expenses							
	Administrative & General							
21	Operating Expenses				(2)		(78)	
22	Depreciation							
23	Taxes							
24	Total Admin. & General	0	0	0	(2)	0	(78)	0
25	Total Gas Expense	0	(4)	(38)	(2)	(96)	(56)	0
26	OPERATING INCOME BEFORE FIT	0	4	38	2	96	56	0
	FEDERAL INCOME TAX							
27	Current Accrual	149	1	13	1	34	20	28
28	Deferred FIT	(160)						
29	Amort ITC							
30	NET OPERATING INCOME	$11	$3	$25	$1	$62	$36	($28)
	RATE BASE: PLANT IN SERVICE							
31	Underground Storage							
32	Distribution Plant							
33	General Plant							
34	Total Plant in Service	0	0	0	0	0	0	0
	ACCUMULATED DEPRECIATION							
35	Underground Storage							
36	Distribution Plant							
37	General Plant							
38	Total Accum. Depreciation	0	0	0	0	0	0	0
39	DEFERRED FIT							
40	GAS INVENTORY							
41	WORKING CAPITAL							
42	GAIN ON SALE OF BUILDING							
43	TOTAL RATE BASE	$0	$0	$0	$0	$0	$0	$0
44	RATE OF RETURN							

AVISTA UTILITIES

GAS RESULTS OF OPERATION

WASHINGTON RESTATED RESULTS
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000's OF DOLLARS)

Line No.	DESCRIPTION	Restated Total
	a	-
	REVENUES	
1	Total General Business	$142,370
2	Total Transportation	3,155
3	Other Revenues	115,257
4	Total Gas Revenues	260,782
	EXPENSES	
5	Exploration and Development	0
	Production	
6	City Gate Purchases	197,494
7	Purchased Gas Expense	800
8	Net Nat Gas Storage Trans	(3,322)
9	Total Production	194,972
	Underground Storage	
10	Operating Expenses	380
11	Depreciation	348
12	Taxes	121
13	Total Underground Storage	849
	Distribution	
14	Operating Expenses	7,696
15	Depreciation	6,367
16	Taxes	7,302
17	Total Distribution	21,365
18	Customer Accounting	5,234
19	Customer Service & Information	9,505
20	Sales Expenses	105
	Administrative & General	
21	Operating Expenses	11,383
22	Depreciation	2,628
23	Taxes	26
24	Total Admin. & General	14,037
25	Total Gas Expense	246,067
26	OPERATING INCOME BEFORE FIT	14,715
	FEDERAL INCOME TAX	
27	Current Accrual	(5,877)
28	Deferred FIT	9,594
29	Amort ITC	(29)
30	NET OPERATING INCOME	$11,027
	RATE BASE: PLANT IN SERVICE	
31	Underground Storage	20,047
32	Distribution Plant	268,306
33	General Plant	33,401
34	Total Plant in Service	321,754
	ACCUMULATED DEPRECIATION	
35	Underground Storage	7,912
36	Distribution Plant	89,620
37	General Plant	10,722
38	Total Accum. Depreciation	108,254
39	DEFERRED FIT	(36,762)
40	GAS INVENTORY	10,226
41	WORKING CAPITAL	0
42	GAIN ON SALE OF BUILDING	(44)
43	TOTAL RATE BASE	$186,920
44	RATE OF RETURN	5.90%

AVISTA UTILIITES

Commission Basis Report
Washington Gas Adjustment Descriptions
Twelve Months Ended December 31, 2010

b. Per Results Report

Results of Operations Report amounts are for the twelve months ended December 31, 2010. Dollar figures tie to the Company's financial general ledger records in total. Rate base was computed using the average of monthly averages method. These amounts are a component of actual results of operations.

c. Deferred FIT Rate Base

These amounts reflect the deferred tax balances arising from accelerated tax depreciation, bond refinancing premiums and contributions in aid of construction, which are not included in the Results of Operations Utility Plant Report. These amounts are reflected on an average-of-monthly-averages basis. These amounts are a component of actual results of operations.

d. Deferred Gain on Office Building

These amounts reduce rate base by the net of tax, unamortized gain on the sale of the office building. The facility was sold in December 1986 and leased back by the Company. Although the Company repurchased the building in November 2005, the Company opted to continue to amortize the deferred gain over the remaining amortization period scheduled to end in 2011. The treatment of the gain on the sale follows the Commission's Order Granting Application in Cause No. FR-86-150, and the continuation of the existing amortization after the sale was approved in Docket No. U-071805. These amounts are a component of actual results of operations.

e. Gas Inventory

This adjustment increases rate base by the average of monthly average value of gas stored at the Company's Jackson Prairie underground storage facility. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

f. Customer Advances

These amounts decrease rate base for customer advances, as they will most likely be recorded as contributions in aid of construction at some future time. These amounts are a component of actual results of operations.

AVISTA UTILIITES

Commission Basis Report
Washington Gas Adjustment Descriptions
Twelve Months Ended December 31, 2010

g. Customer Deposits

These amounts decrease rate base for the average-of-monthly averages of customer deposits held by the Company. The corresponding interest paid on customer deposits is reclassified to an operating expense. This adjustment is consistent with Docket No. UG-090135.

h. Weather Normalization and Gas Cost Adjustment

This adjustment normalizes weather sensitive gas therm sales by eliminating the effect of temperature deviations above or below historical normals. This adjustment also restates therms sold to reflect the weather normalized therms and then reprices the adjusted therms sold based upon the authorized weighted average cost of gas. These restating adjustments are required per WAC 480-90-208.

i. Eliminate B & O Taxes

This adjustment removes the revenues and expenses associated with local business and occupation taxes. The adjustment eliminates any timing mismatch that exists between the revenues and expenses by eliminating the revenues and expenses in their entirety. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

j. Property Tax

This adjustment restates the test period accrued levels of property taxes to reflect the actual amounts. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

k. Uncollectible Expense

This adjustment restates the accrued expense to the actual level of net write-offs for the test period. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

l. Regulatory Expense Adjustment

This adjustment restates regulatory expense to reflect the WUTC and IPUC assessment rates applied to revenues for the test period. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

AVISTA UTILIITES

Commission Basis Report
Washington Gas Adjustment Descriptions
Twelve Months Ended December 31, 2010

m. Injuries and Damages

As a result of the Commission's Order in Docket No. U-88-2380-T the Company changed to the reserve method of accounting for injuries and damages not covered by insurance. This restating adjustment replaces the accrual with actuals to adjust to the six-year rolling average of injuries and damages payments not covered by insurance. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

n. FIT Adjustment

This adjustment removes the effect of certain Schedule M items and matches the jurisdictional allocation of other Schedule M items to related Results of Operations allocations. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

o. Net Gains/Losses

This adjustment reflects a ten-year amortization of net gains realized from the sale of real property disposed of between 2001 and 2010. This restating adjustment is made as a result of the Commission's Order in Docket No. UE-050842/UG-050483 and is consistent with Docket Nos. following UG-050483.

p. Eliminate Accounts Receivable Expenses

This adjustment removes expenses associated with the sale of customer accounts receivable. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

q. Office Space Charges to Subsidiaries

This adjustment removes a portion of the office space costs (building lease and O&M costs, common area costs, copier expense and annual office furniture rental) using the percentage of labor dollars charged to subsidiary activities by employee compared to total labor dollars by employee. These percentages are applied to the employees' office space (expressed in square feet) and multiplied by office space costs/per square foot. This restating adjustment is made as a result of the Commission's Third Supplemental Order in Docket No. U-88-2380-T, which required the company to perform a space utilization study to allocate costs to subsidiaries. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

AVISTA UTILIITES

Commission Basis Report
Washington Gas Adjustment Descriptions
Twelve Months Ended December 31, 2010

r. Restate Excise/Franchise Taxes

This adjustment removes the effect of a one-month accrual lag in actual results to reflect the actual level of taxes paid. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

s. Miscellaneous restating

This adjustment removes a number of non-operating or non-utility expenses, i.e. advertising, dues, donations and other expenses included in error in the test period actual results. The Company also removed 50% of director meeting expenses and 10% of director fees. This adjustment also eliminated all Buck-a-Block costs from Washington 2010 results, per Docket UE-100468.

t. Restate Debt Interest

This adjustment restates debt interest using the average weighted cost of total debt authorized at December 31, 2010 and reflects the federal income tax effect of the restated level of interest for the test period. This restating adjustment is consistent with prior dockets (including Docket No. UG-991607 forward).

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AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

Line No.	Description		PER RESULTS OF OPERATIONS REPORTS GAS System	Washington	Idaho
	REVENUES				
	NET OPERATING INCOME		16,379	9,457	6,922
	NET PLANT		330,612	214,663	115,949
1	Total General Business		$203,466	$140,588	$62,878
2	Total Transportation		3,699	3,245	454
3	Other Revenues		166,698	115,257	51,441
4	Total Gas Revenues		373,863	259,090	114,773
	EXPENSES				
5	Exploration & Development		0	0	0
	Production				
6	City Gate Purchases		278,159	192,776	85,383
7	Purchased Gas Expense		1,186	801	385
8	Net Nat. Gas Storage Trans		(4,892)	(3,322)	(1,570)
9	Total Production		274,453	190,255	84,198
	Underground Storage				
10	Operating Expenses		547	380	167
11	Depreciation		502	348	154
12	Taxes		173	120	53
13	Total Underground Storage		1,222	848	374
	Distribution				
14	Operating Expenses		11,593	7,705	3,888
15	Depreciation		9,816	6,371	3,445
16	Taxes		13,921	12,249	1,672
17	Total Distribution		35,330	26,325	9,005
18	Customer Accounting		7,619	5,415	2,204
19	Customer Service & Information		12,643	9,471	3,172
20	Sales		112	105	7
	Administrative and General				
21	Operating Expenses		17,147	11,746	5,401
22	Depreciation		3,654	2,628	1,026
23	Taxes		36	25	11
24	Total Admin. & General		20,837	14,399	6,438
25	Total Gas Expense		352,216	246,818	105,398
26	Operating Income before FIT		21,647	12,272	9,375
	Federal Income Taxes				
27	Current Accrual	35.0%	(9,139)	(6,910)	(2,229)
28	Deferred FIT		14,453	9,754	4,699
29	Amort ITC		(46)	(29)	(17)
30	NET OPERATING INCOME		$16,379	$9,457	$6,922
			-	-	-
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage		$28,886	$20,047	$8,839
32	Distribution Plant		417,813	269,469	148,344
33	General Plant incl Intangible		48,916	33,401	15,515
34	Total Plant in Service		495,615	322,917	172,698
	ACCUMULATED DEPRECIATION				
35	Underground Storage		11,400	7,912	3,488
36	Distribution Plant		138,092	89,620	48,472
37	General Plant incl Intangible		15,511	10,722	4,789
38	Total Accum. Depreciation		165,003	108,254	56,749
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$330,612	$214,663	$115,949

GAS ALLOCATION PERCENTAGES For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-ALL-12A

Basis	Ref	Description		System	Washington	Idaho
1	Input	System Contract Demand	11/1/2010	100.000%	69.400%	30.600%
		Number of Customers	12/31/2010	221,274	147,064	74,210
2		Percent		100.000%	66.462%	33.538%
	G-OPS	Direct Distribution Operating Expense		8,706,293	5,786,356	2,919,937
3		Percent		100.000%	66.462%	33.538%
		Jurisdictional Four Factor Allocator - Direct Method				
		Allocation Rate Calculation - Updated	12/31/2010			
		Direct O&M				
		Amount: Accounts 798 - 894		2,960,332	1,958,779	1,001,553
		Amount: Accounts 901 - 935		12,985,723	9,788,850	3,196,873
		Total		15,946,055	11,747,629	4,198,426
		Percentage		100.000%	73.671%	26.329%
		Direct Labor				
		Amount: Accounts 798 - 894		5,777,102	3,849,651	1,927,451
		Amount: Accounts 901 - 935		2,393,355	1,904,696	488,659
		Total		8,170,457	5,754,347	2,416,110
		Percentage		100.000%	70.429%	29.571%
		Total Number of Customers		223,040	148,247	74,793
		Percentage		100.000%	66.467%	33.533%
		Total Direct Plant		298,884,304	189,804,990	109,079,314
		Percentage		100.000%	63.505%	36.495%
		Total Four Factor Allocators		400.000%	274.072%	125.928%
4		Percent		100.000%	68.518%	31.482%
		Underground Storage & Dist Plant		System	Washington	Idaho
	G-PLT	Underground Storage		28,886,114	20,046,963	8,839,151
	G-PLT	Distribution		417,813,902	269,469,380	148,344,522
		Total Underground Storage/Dist Plant		446,700,016	289,516,343	157,183,673
5		Percent		100.000%	64.812%	35.188%
	Input	Actual Therms Purchased	12/31/2010	235,900,540	164,699,793	71,200,747
6		Percent		100.000%	69.817%	30.183%

GAS ALLOCATION PERCENTAGES For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-ALL-12A

				Total	Electric	Gas North	Oregon Gas
	Input	Elec/Gas North/Oregon 4-Factor	1/1/2010				
		Direct O&M Accts 500 - 894		51,081,946	45,988,228	3,116,832	1,976,886
		Direct O&M Accts 901 - 935		51,945,284	35,419,000	12,684,856	3,841,428
		Direct O&M Accts 901 - 905 Utility 9 Only		3,516,695	2,172,122	1,344,573	XXXXXX
		Adjustments		0			
		Total		106,543,925	83,579,350	17,146,261	5,818,314
		Percentage		100.000%	78.446%	16.093%	5.461%
		Direct Labor Accts 500 - 894		55,092,383	43,337,007	8,181,894	3,573,482
		Direct Labor Accts 901 - 935		5,731,661	4,212,733	361,664	1,157,264
		Direct Labor Accts 901 - 905 Utility 9 Only		3,029,709	1,871,330	1,158,379	XXXXXX
		Total		63,853,753	49,421,070	9,701,937	4,730,746
		Percentage		100.000%	77.397%	15.194%	7.409%
		Number of Customers at 12/31/09		672,970	356,620	220,748	95,602
		Percentage		100.000%	52.992%	32.802%	14.206%
		Net Direct Plant		2,269,179,267	1,813,979,169	309,908,801	145,291,297
		Percentage		100.000%	79.940%	13.657%	6.403%
		Total Percentages		400.000%	288.775%	77.746%	33.479%
7		Average (CD AA)		100.000%	72.193%	19.437%	8.370%

				Total	Electric	Gas North	Oregon Gas
	Input	Gas North/Oregon 4-Factor	1/1/2010				
		Direct O&M Accts 580 - 894		5,093,718	0	3,116,832	1,976,886
		Direct O&M Accts 901 - 935		16,526,284	0	12,684,856	3,841,428
		Direct O&M Accts 901 - 905 Utility 9 Only		1,344,573	0	1,344,573	XXXXXX
		Total		22,964,575	0	17,146,261	5,818,314
		Percentage		100.000%	0.000%	74.664%	25.336%
		Direct Labor Accts 580 - 894		11,755,376	0	8,181,894	3,573,482
		Direct Labor Accts 901 - 935		1,518,928	0	361,664	1,157,264
		Direct Labor Accts 901 - 905 Utility 9 Only		1,158,379	0	1,158,379	XXXXXX
		Total		14,432,683	0	9,701,937	4,730,746
		Percentage		100.000%	0.000%	67.222%	32.778%
		Number of Customers at 12/31/09		316,350	0	220,748	95,602
		Percentage		100.000%	0.000%	69.780%	30.220%
		Net Direct Plant		450,456,474	0	305,689,899	144,766,575
		Percentage		100.000%	0.000%	67.862%	32.138%
		Total Percentages		400.000%	0.000%	279.528%	120.472%
8		Average (GD AA)		100.000%	0.000%	69.882%	30.118%

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GAS ALLOCATION PERCENTAGES For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-ALL-12A

				Total	Electric	Gas North	Oregon Gas
	Input	Elec/Gas North 4-Factor	1/1/2010				
		Direct O&M Accts 580 - 894		49,105,060	45,988,228	3,116,832	0
		Direct O&M Accts 901 - 935		48,103,856	35,419,000	12,684,856	0
		Adjustments		0	0	0	0
		Total		97,208,916	81,407,228	15,801,688	0
		Percentage		100.000%	83.745%	16.255%	0.000%
		Direct Labor Accts 580 - 894		51,518,901	43,337,007	8,181,894	0
		Direct Labor Accts 901 - 935		4,574,397	4,212,733	361,664	0
		Total		56,093,298	47,549,740	8,543,558	0
		Percentage		100.000%	84.769%	15.231%	0.000%
		Number of Customers at 12/31/09		577,368	356,620	220,748	0
		Percentage		100.000%	61.766%	38.234%	0.000%
		Net Direct Plant		2,108,415,405	1,802,725,506	305,689,899	0
		Percentage		100.000%	85.501%	14.499%	0.000%
		Total Percentages		400.000%	315.781%	84.219%	0.000%
9		Average (CD AN/ID/WA)		100.000%	78.945%	21.055%	0.000%

				System	Washington	Idaho
		Actual Annual Throughput	12/31/2010	345,660,550	233,500,090	112,160,460
10		Percent		100.000%	67.552%	32.448%
	G-OPS	Book Depreciation		12,569,412	8,196,955	4,372,457
11		Percent		100.000%	65.214%	34.786%
	G-PLT	Net Gas Plant		330,611,592	214,661,935	115,949,657
12		Percent		100.000%	64.929%	35.071%
	G-PLT	Net Gas General Plant		28,754,896	19,386,426	9,368,470
13		Percent		100.000%	67.420%	32.580%
	G-SCM	Net Allocated Schedule M		-33,054,930	-21,447,395	-11,607,535
14		Percent		100.000%	64.884%	35.116%
99	Input	Not Allocated		0.000%	0.000%	0.000%

		Situs Plant by Functional Group: (Used to functionalize R&P Property Tax on Report G-OTX)	12/31/2009	Washington	Idaho
	Input	Underground Storage (Actual, not Situs)		20,046,963	8,839,151
	Input	Distribution		266,845,782	145,465,343
	Input	General		3,550,811	2,692,487
	Input	TOTAL		290,443,556	156,996,981

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GAS OPERATING STATEMENT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-OPS-12A

Ref/Basis	Account	Description	********** SYSTEM ********** Direct	Allocated	Total	********** WASHINGTON ********** Direct	Allocated	Total	********** IDAHO ********** Direct	Allocated	Total
		REVENUES									
		SALES OF GAS:									
99	480000	Residential	133,455,198	0	133,455,198	91,727,283	0	91,727,283	41,727,915	0	41,727,915
99	4812XX	Commercial - Firm & Interruptible	68,251,928	0	68,251,928	47,940,384	0	47,940,384	20,311,544	0	20,311,544
99	4813XX	Industrial-Firm	3,290,764	0	3,290,764	2,099,848	0	2,099,848	1,190,916	0	1,190,916
99	481400	Interruptible	0	0	0	0	0	0	0	0	0
99	499XXX	Unbilled Revenue	-1,804,160	0	-1,804,160	-1,417,397	0	-1,417,397	-386,763	0	-386,763
99	484000	Interdepartmental Revenue	272,844	0	272,844	238,359	0	238,359	34,485	0	34,485
		TOTAL SALES TO ULTIMATE CUSTOMERS	203,466,574	0	203,466,574	140,588,477	0	140,588,477	62,878,097	0	62,878,097
		OTHER OPERATING REVENUES:									
99	483000	Sales for Resale	157,676,953	0	157,676,953	109,008,703	0	109,008,703	48,668,250	0	48,668,250
99	488000	Miscellaneous Service Revenues	29,592	0	29,592	15,818	0	15,818	13,774	0	13,774
99	489300	Transportation For Others	3,699,103	0	3,699,103	3,245,427	0	3,245,427	453,676	0	453,676
99	493000	Rent from Gas Property	-237	0	-237	-297	0	-297	60	0	60
4	495000	Other Gas Revenues	8,920,149	70,908	8,991,057	6,183,812	48,585	6,232,397	2,736,337	22,323	2,758,660
		TOTAL OTHER OPERATING REVENUES	170,325,560	70,908	170,396,468	118,453,463	48,585	118,502,048	51,872,097	22,323	51,894,420
		TOTAL GAS REVENUES	373,792,134	70,908	373,863,042	259,041,940	48,585	259,090,525	114,750,194	22,323	114,772,517
		PRODUCTION EXPENSES:									
G-804	804/805	City Gate Purchases	278,159,078	0	278,159,078	192,776,382	0	192,776,382	85,382,696	0	85,382,696
6	808XXX	Net Natural Gas Storage Transactions	-3,877,785	0	-3,877,785	-2,619,007	0	-2,619,007	-1,258,778	0	-1,258,778
6	811000	Gas Used for Products Extraction	-1,014,362	0	-1,014,362	-703,553	0	-703,553	-310,809	0	-310,809
10	813000	Other Gas Expenses	0	1,153,914	1,153,914	0	779,492	779,492	0	374,422	374,422
99	813010	Gas Technology Institute (GTI) Expenses	31,143	0	31,143	22,075	0	22,075	9,068	0	9,068
		TOTAL PRODUCTION EXPENSES	273,298,074	1,153,914	274,451,988	189,475,897	779,492	190,255,389	83,822,177	374,422	84,196,599
		UNDERGROUND STORAGE EXPENSES:									
1	814000	Supervision & Engineering	0	844	844	0	586	586	0	258	258
1	824000	Other Expenses	0	276,628	276,628	0	191,980	191,980	0	84,648	84,648
1	837000	Other Equipment	0	269,851	269,851	0	187,277	187,277	0	82,574	82,574
		TOTAL UNDERGROUND STORAGE OP. EXP	0	547,323	547,323	0	379,843	379,843	0	167,480	167,480
G-ADP		Depreciation Expense	0	501,805	501,805	0	348,253	348,253	0	153,552	153,552
1	404X40	Amortization Expense	0	227	227	0	158	158	0	69	69
G-OTX		Taxes Other Than FIT	0	172,335	172,335	0	119,600	119,600	0	52,735	52,735
		TOTAL UNDERGROUND STORAGE EXP	0	1,221,690	1,221,690	0	847,854	847,854	0	373,836	373,836

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GAS OPERATING STATEMENT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-OPS-12A

			********** SYSTEM **********			********** WASHINGTON **********			********** IDAHO **********		
Ref/Basis	Account	Description	Direct	Allocated	Total	Direct	Allocated	Total	Direct	Allocated	Total
		DISTRIBUTION EXPENSES:									
		OPERATION									
3	870000	Supervision & Engineering	164,847	547,961	712,808	98,356	364,186	462,542	66,491	183,775	250,266
3	871000	Distribution Load Dispatching	0	0	0	0	0	0	0	0	0
3	874000	Mains & Services Expenses	2,012,717	129,901	2,142,618	1,454,161	86,335	1,540,496	558,556	43,566	602,122
3	875000	Measuring & Reg Sta Exp-General	103,792	0	103,792	65,968	0	65,968	37,824	0	37,824
3	876000	Measuring & Reg Sta Exp-Industrial	13,516	0	13,516	8,042	0	8,042	5,474	0	5,474
3	877000	Measuring & Reg Sta Exp-City Gate	163,288	0	163,288	64,917	0	64,917	98,371	0	98,371
3	878000	Meter & House Regulator Expenses	880,947	0	880,947	657,924	0	657,924	223,023	0	223,023
3	879000	Customer Installation Expenses	1,314,409	80,007	1,394,416	722,737	53,174	775,911	591,672	26,833	618,505
3	880000	Other Expenses	950,498	693,682	1,644,180	675,737	461,035	1,136,772	274,761	232,647	507,408
3	881000	Rents	60	24,470	24,530	60	16,263	16,323	0	8,207	8,207
		MAINTENANCE									
3	885000	Supervision & Engineering	141,854	75	141,929	52,637	50	52,687	89,217	25	89,242
3	887000	Mains	1,542,454	1,531	1,543,985	1,014,148	1,018	1,015,166	528,306	513	528,819
3	889000	Measuring & Reg Sta Exp-General	233,193	40	233,233	123,556	27	123,583	109,637	13	109,650
3	890000	Measuring & Reg Sta Exp-Industrial	108,965	26,751	135,716	51,718	17,779	69,497	57,247	8,972	66,219
3	891000	Measuring & Reg Sta Exp-City Gate	104,020	115	104,135	57,974	76	58,050	46,046	39	46,085
3	892000	Services	633,272	552,023	1,185,295	487,817	366,886	854,703	145,455	185,137	330,592
3	893000	Meters & House Regulators	336,942	611,730	948,672	249,403	406,568	655,971	87,539	205,162	292,701
3	894000	Other Equipment	1,519	219,162	220,681	1,201	145,659	146,860	318	73,503	73,821
		TOTAL DISTRIBUTION OPERATING EXP	8,706,293	2,887,448	11,593,741	5,786,356	1,919,056	7,705,412	2,919,937	968,392	3,888,329
G-ADP		Depreciation	9,753,043	62,328	9,815,371	6,326,988	43,516	6,370,504	3,426,055	18,812	3,444,867
G-OTX		Taxes Other Than FIT	13,920,762	0	13,920,762	12,248,601	0	12,248,601	1,672,161	0	1,672,161
		TOTAL DISTRIBUTION EXPENSES	32,380,098	2,949,776	35,329,874	24,361,945	1,962,572	26,324,517	8,018,153	987,204	9,005,357
		CUSTOMER ACCOUNTS EXPENSES:									
2	901000	Supervision	0	367,039	367,039	0	243,941	243,941	0	123,098	123,098
2	902000	Meter Reading Expenses	1,546,477	71,790	1,618,267	1,351,032	47,713	1,398,745	195,445	24,077	219,522
G-903	903XXX	Customer Records & Collection Expenses	896,198	3,619,346	4,515,544	624,420	2,404,598	3,029,018	271,778	1,214,748	1,486,526
2	904000	Uncollectible Accounts	0	1,036,599	1,036,599	0	688,944	688,944	0	347,655	347,655
2	905000	Misc Customer Accounts	0	81,102	81,102	0	53,902	53,902	0	27,200	27,200
		TOTAL CUSTOMER ACCOUNTS EXPENSES	2,442,675	5,175,876	7,618,551	1,975,452	3,439,098	5,414,550	467,223	1,736,778	2,204,001
		CUSTOMER SERVICE & INFO EXPENSES:									
2	908XXX	Customer Assistance Expenses	11,660,739	306,781	11,967,520	8,818,221	203,893	9,022,114	2,842,518	102,888	2,945,406
2	909000	Advertising	65	570,756	570,821	65	379,336	379,401	0	191,420	191,420
2	910000	Misc Customer Service & Info Exp	0	104,597	104,597	0	69,517	69,517	0	35,080	35,080
		TOTAL CUSTOMER SERVICE & INFO EXP	11,660,804	982,134	12,642,938	8,818,286	652,746	9,471,032	2,842,518	329,388	3,171,906

B2

GAS OPERATING STATEMENT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-OPS-12A

Ref/Basis	Account	Description	********** SYSTEM ********** Direct	Allocated	Total	********** WASHINGTON ********** Direct	Allocated	Total	********** IDAHO ********** Direct	Allocated	Total
		SALES EXPENSES:									
2	912000	Demonstrating & Selling Expenses	0	-6,983	-6,983	0	-4,641	-4,641	0	-2,342	-2,342
2	913000	Advertising	0	280	280	0	186	186	0	94	94
2	916000	Miscellaneous Sales Expenses	99,777	19,221	118,998	96,558	12,775	109,333	3,219	6,446	9,665
		TOTAL SALES EXPENSES	99,777	12,518	112,295	96,558	8,320	104,878	3,219	4,198	7,417
		ADMINISTRATIVE & GENERAL EXPENSES:									
4	920000	Salaries	22,552	6,451,088	6,473,640	9,017	4,420,156	4,429,173	13,535	2,030,932	2,044,467
4	921000	Office Supplies & Expenses	168	1,076,116	1,076,284	168	737,333	737,501	0	338,783	338,783
4	922000	Admin. Expenses Transferred - Credit	229	-32,025	-31,796	0	-21,943	-21,943	229	-10,082	-9,853
4	923000	Outside Services Employed	0	3,969,098	3,969,098	0	2,719,547	2,719,547	0	1,249,551	1,249,551
4	924000	Property Insurance Premium	0	302,234	302,234	0	207,085	207,085	0	95,149	95,149
4	925XXX	Injuries and Damages	0	1,131,479	1,131,479	0	775,267	775,267	0	356,212	356,212
4	926XXX	Employee Pensions and Benefits	55,641	193,074	248,715	55,641	132,290	187,931	0	60,784	60,784
4	927000	Franchise Requirements	0	0	0	0	0	0	0	0	0
4	928000	Regulatory Commission Expenses	814,739	287,736	1,102,475	548,082	197,151	745,233	266,657	90,585	357,242
4	930000	Miscellaneous General Expenses	59,074	908,971	968,045	50,297	622,809	673,106	8,777	286,162	294,939
4	931000	Rents	16,619	199,666	216,285	15,924	136,807	152,731	695	62,859	63,554
4	935000	Maintenance of General Plant	206,800	1,483,473	1,690,273	124,120	1,016,446	1,140,566	82,680	467,027	549,707
		TOTAL ADMIN & GEN OPERATING EXP	1,175,822	15,970,910	17,146,732	803,249	10,942,948	11,746,197	372,573	5,027,962	5,400,535
G-ADP		Depreciation	923,314	1,328,922	2,252,236	567,647	910,551	1,478,198	355,667	418,371	774,038
4	404X30	Amortization - Intangible Distribution Plant	20,376	0	20,376	16,552	0	16,552	3,824	0	3,824
4	404X31	Amortization - Mainframe Software	0	1,135,216	1,135,216	0	777,827	777,827	0	357,389	357,389
4	404X32	Amortization - PC Software	0	202,646	202,646	0	138,849	138,849	0	63,797	63,797
4	404X50	Amortization - Leasehold Imp	0	2,003	2,003	0	1,372	1,372	0	631	631
99	407025	Jackson Prairie Deferral (per WA GRC)	0	0	0	0	0	0	0	0	0
99	407X28	Amortization - Decoupling Revenue	-277,671	0	-277,671	-277,671	0	-277,671	0	0	0
99	407329	Decoupling Surcharge	494,079	0	494,079	494,079	0	494,079	0	0	0
99	407335	DSIT Amortization - ID	-173,149	0	-173,149	0	0	0	-173,149	0	-173,149
G-OTX		Taxes Other than FIT	0	36,296	36,296	0	24,869	24,869	0	11,427	11,427
		TOTAL ADMIN & GENERAL EXPENSES	2,162,771	18,675,993	20,838,764	1,603,856	12,796,416	14,400,272	558,915	5,879,577	6,438,492
		TOTAL EXPENSES BEFORE FIT	322,044,199	30,171,901	352,216,100	226,331,994	20,486,498	246,818,492	95,712,205	9,685,403	105,397,608
		NET OPERATING INCOME BEFORE FIT			21,646,942			12,272,033			9,374,909
G-FIT		FEDERAL INCOME TAX			-9,138,945			-6,909,744			-2,229,201
G-FIT		DEFERRED FEDERAL INCOME TAX			14,453,110			9,753,698			4,699,412
G-FIT		AMORTIZED INVESTMENT TAX CREDIT			-46,236			-28,632			-17,604
		GAS NET OPERATING INCOME			16,379,013			9,456,711			6,922,302

ALLOCATION RATIOS:

G-ALL	1	System Contract Demand	100.000%	69.400%	30.600%
G-ALL	2	Number of Customers	100.000%	66.462%	33.538%
G-ALL	3	Direct Distribution Operating Expense	100.000%	66.462%	33.538%
G-ALL	4	Jurisdictional Four Factor Allocator - Direct Method	100.000%	68.518%	31.482%
G-ALL	6	Actual Therms Purchased	100.000%	69.817%	30.183%
G-ALL	10	Actual Annual Throughput	100.000%	67.552%	32.448%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%

B7

ALLOCATION OF PURCHASED GAS COSTS For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-804-12A

Ref/Basis	Account	Description	********** SYSTEM **********			********** WASHINGTON **********			********** IDAHO **********		
			Direct	Allocated	Total	Direct	Allocated	Total	Direct	Allocated	Total
99	805110	Gas Exp - Rate Amortizations	-27,584,074	0	-27,584,074	-19,259,800	0	-19,259,800	-8,324,274	0	-8,324,274
99	805120	Gas Expense - Rate Deferrals	9,194,629	0	9,194,629	6,039,722	0	6,039,722	3,154,907	0	3,154,907
99	805980	Gas Expense - Estimated Amortizations	0	0	0	0	0	0	0	0	0
99	805990	Gas Expense - Estimated Deferrals	0	0	0	0	0	0	0	0	0
6	804000	Gas Purchases	239,101,123	0	239,101,123	165,895,718	0	165,895,718	73,205,405	0	73,205,405
1	804001	Pipeline Demand Costs	26,746,335	0	26,746,335	18,683,044	0	18,683,044	8,063,291	0	8,063,291
99	804010	Gas Costs - Fixed Hedge	1,005,981	0	1,005,981	696,930	0	696,930	309,051	0	309,051
99	804014	GTI Contributions	75,495	0	75,495	57,774	0	57,774	17,721	0	17,721
99	804017	Transaction Fees	82,245	0	82,245	56,899	0	56,899	25,346	0	25,346
99	804140	Gas Research Contributions	0	0	0	0	0	0	0	0	0
6	804170	Gas Transaction Fees	0	0	0	0	0	0	0	0	0
6	804600	Gas Purchases - Financial	2,562,671	0	2,562,671	1,783,675	0	1,783,675	778,996	0	778,996
6	804700	Off System Gas Purchases - Bookout	14,629,883	0	14,629,883	10,211,929	0	10,211,929	4,417,954	0	4,417,954
6	804730	Gas Costs - Intracompany LDC Gas	12,344,790	0	12,344,790	8,610,491	0	8,610,491	3,734,299	0	3,734,299
6	804999	Off System Gas Purchases	0	0	0	0	0	0	0	0	0
		TOTAL PURCHASED GAS COSTS	278,159,078	0	278,159,078	192,776,382	0	192,776,382	85,382,696	0	85,382,696

ALLOCATION RATIOS:

G-ALL	1	System Contract Demand	100.000%	69.400%	30.600%
G-ALL	6	Actual Therms Purchased	100.000%	69.817%	30.183%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%

B8

ALLOCATION OF ACCOUNT 903 For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-903-12A

Ref/Basis	Account	Description	SYSTEM Direct	SYSTEM Allocated	SYSTEM Total	WASHINGTON Direct	WASHINGTON Allocated	WASHINGTON Total	IDAHO Direct	IDAHO Allocated	IDAHO Total
2	903000	Customer Records & Collections	896,198	3,561,120	4,457,318	624,420	2,366,792	2,991,212	271,778	1,194,328	1,466,106
12	903920	Accts Rec Sold - Program Fees	0	57,475	57,475	0	37,318	37,318	0	20,157	20,157
12	903930	Accts Rec Sold - Maturity Yield Fees	0	751	751	0	488	488	0	263	263
		Total Account 903	896,198	3,619,346	4,515,544	624,420	2,404,598	3,029,018	271,778	1,214,748	1,486,526

ALLOCATION RATIOS:

G-ALL	2	Number of Customers	100.000%	66.462%	33.538%
G-ALL	12	Net Gas Plant	100.000%	64.929%	35.071%

B9

ALLOCATION OF ACCOUNT 908 For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis			Report ID: G-908-12A								
			********** SYSTEM **********			********** WASHINGTON **********			********** IDAHO **********		
Ref/Basis	Account	Description	Direct	Allocated	Total	Direct	Allocated	Total	Direct	Allocated	Total
2	908000	Customer Assistance Expense	65,040	306,781	371,821	44,500	203,893	248,393	20,540	102,888	123,428
99	908600	Customer Service & Info Expense	10,842,207	0	10,842,207	8,073,178	0	8,073,178	2,769,029	0	2,769,029
99	908610	Limited Income Tax Refund Program	217,326	0	217,326	217,326	0	217,326	0	0	0
99	908690	Schedule 91 Amortization included in Unbilled	295,077	0	295,077	343,272	0	343,272	-48,195	0	-48,195
99	908990	DSM Amortization	241,089	0	241,089	139,945	0	139,945	101,144	0	101,144
		Total Account 908	11,660,739	306,781	11,967,520	8,818,221	203,893	9,022,114	2,842,518	102,888	2,945,406

ALLOCATION RATIOS:

G-ALL	2	Number of Customers	100.000%	66.462%	33.538%
G-ALL	99	Not Allocated			

B/o

FEDERAL INCOME TAXES--GAS For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-FIT-12A

Ref/Basis		Description	System	Washington	Idaho
		Calculation of Taxable Operating Income:			
G-OPS		Operating Revenue	373,863,042	259,090,525	114,772,517
G-OPS		Operating & Maintenance Expense	324,113,568	225,077,301	99,036,267
G-OPS		Book Depreciation & Amortization	13,973,139	9,348,121	4,625,018
G-OTX		Taxes Other than FIT	14,129,393	12,393,070	1,736,323
		Net Operating Income Before FIT	21,646,942	12,272,033	9,374,909
		Less: Interest Expense	9,349,028	6,005,788	3,343,240
G-SCM		Add: Schedule M Additions	-3,310,737	-3,191,381	-119,356
G-SCM		Less: Schedule M Deductions	35,098,450	22,816,991	12,281,459
		Taxable Net Operating Income	-26,111,273	-19,742,127	-6,369,146
		Percent	35%	35%	35%
		Total Federal Income Tax	-9,138,945	-6,909,744	-2,229,201
G-DTE		Deferred FIT	14,453,110	9,753,698	4,699,412
99	411400	Amortized Investment Tax Credit	-46,236	-28,632	-17,604
		Total FIT/Deferred FIT & ITC	5,267,929	2,815,322	2,452,607
ALLOCATION RATIOS:					
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%

B-11

GAS SCHEDULE M ITEMS For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-SCM-12A

			********** SYSTEM **********			********** WASHINGTON **********			********** IDAHO **********		
Ref/Basis	Account	Description	Direct	Allocated	Total	Direct	Allocated	Total	Direct	Allocated	Total
		Schedule M Additions:									
	G-OPS	Book Depreciation & Amortization (997000)	10,696,733	3,233,147	13,929,880	6,911,187	2,220,526	9,131,713	3,785,546	1,012,621	4,798,167
12	997001	Contributions In Aid of Construction	0	290,305	290,305	0	188,492	188,492	0	101,813	101,813
2	997002	Injuries and Damages	0	-643,000	-643,000	0	-427,351	-427,351	0	-215,649	-215,649
12	997003	Salvage	0	-8,450	-8,450	0	-5,487	-5,487	0	-2,963	-2,963
4	997005	FAS106 Current Retiree Medical Accrual	0	-86,603	-86,603	0	-59,339	-59,339	0	-27,264	-27,264
6	997008	DSM Book Amortization	0	241,089	241,089	0	168,321	168,321	0	72,768	72,768
99	997010	Deferred Gas Credit and Refunds	-18,379,698	0	-18,379,698	-13,210,330	0	-13,210,330	-5,169,368	0	-5,169,368
4	997015	Airplane Lease Payments	0	82,399	82,399	0	56,458	56,458	0	25,941	25,941
12	997016	1992 Redemptions	0	-2,092,310	-2,092,310	0	-1,358,516	-1,358,516	0	-733,794	-733,794
4	997020	FAS87 Current Pension Accrual	0	-699,239	-699,239	0	-479,105	-479,105	0	-220,134	-220,134
99	997029	FAS 106 Post Retirement Benefits	55,561	0	55,561	55,561	0	55,561	0	0	0
99	997031	Decoupling Mechanism	206,660	0	206,660	206,660	0	206,660	0	0	0
12	997032	Interest Rate Swaps	0	173,419	173,419	0	112,599	112,599	0	60,820	60,820
99	997033	DSM Tariff Rider	1,944,559	0	1,944,559	1,132,673	0	1,132,673	811,886	0	811,886
4	997033	DSM Tariff Rider	0	21	21	0	14	14	0	7	7
1	997055	Deferred Gas Exchange	0	130,435	130,435	0	90,522	90,522	0	39,913	39,913
99	997065	Amortization of Unbilled Revenue Add-Ins	235,817	0	235,817	343,272	0	343,272	-107,455	0	-107,455
11	997080	Book Transportation Depreciation	0	1,014,405	1,014,405	0	661,534	661,534	0	352,871	352,871
4	997081	Deferred Compensation	0	75,772	75,772	0	51,917	51,917	0	23,855	23,855
4	997082	Meal Disallowances	0	82,073	82,073	0	56,235	56,235	0	25,838	25,838
4	997083	Paid Time Off	0	110,692	110,692	0	75,844	75,844	0	34,848	34,848
2	997084	Customer Uncollectibles	0	25,476	25,476	0	16,932	16,932	0	8,544	8,544
		TOTAL SCHEDULE M ADDITIONS	-5,240,368	1,929,631	-3,310,737	-4,560,977	1,369,596	-3,191,381	-679,391	560,035	-119,356
		Schedule M Deductions:									
12	997048	AFUDC	0		0	0	0	0	0	0	0
11	997049	Tax Depreciation	0	34,919,197	34,919,197	0	22,772,205	22,772,205	0	12,146,992	12,146,992
4	997062	Gain on Sale of Office Building	0	65,364	65,364	0	44,786	44,786	0	20,578	20,578
99	997073	DSIT Amortization - ID	113,889	0	113,889	0	0	0	113,889	0	113,889
		TOTAL SCHEDULE M DEDUCTIONS	113,889	34,984,561	35,098,450	0	22,816,991	22,816,991	113,889	12,167,570	12,281,459

ALLOCATION RATIOS:

G-ALL	1	Contract System Demand	100.000%	69.400%	30.600%
G-ALL	2	Number of Customers	100.000%	66.462%	33.538%
G-ALL	3	Direct Distribution Operating Expense	100.000%	66.462%	33.538%
G-ALL	4	Jurisdictional Four Factor Allocator - Direct Method	100.000%	68.518%	31.482%
G-ALL	6	Actual Therms Purchased	100.000%	69.817%	30.183%
G-ALL	11	Book Depreciation	100.000%	65.214%	34.786%
G-ALL	12	Net Gas Plant	100.000%	64.929%	35.071%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%

B-2

DEFERRED INCOME TAX EXPENSE--GAS For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-DTE-12A

Ref/Basis	Account	Description	System	Washington	Idaho
14	410100	Deferred Federal Income Tax Expense - Allocated	8,745,901	5,674,690	3,071,211
99	410100	Deferred Federal Income Tax Exp	5,616,002	4,086,422	1,529,580
		SUBTOTAL	14,361,903	9,761,112	4,600,791
14	411100	Deferred Federal Income Tax Expense - Allocated	173,743	112,731	61,012
99	411100	Deferred Federal Income Tax Exp	-82,536	-120,145	37,609
		SUBTOTAL	91,207	-7,414	98,621
		Total Deferred Federal Income Tax Expense	14,453,110	9,753,698	4,699,412

ALLOCATION RATIOS:

G-ALL	14	Net Allocated Schedule M	100.000%	64.884%	35.116%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%

B 13

FEDERAL INCOME TAXES--GAS NORTH For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-INT-12A

Ref/Basis	Description	System	Washington	Idaho
	Debt			
1	Washington Capital Structure Ratio		53.50%	
2	Idaho Capital Structure Ratio			50.00%
3	Cost of Debt		5.930%	6.600%
	Total Cost of Debt		3.173%	3.300%
	Total Weighted Cost		3.173%	3.300%
G-APL	Net Rate Base	290,588,200	189,277,900	101,310,300
	Interest Deduction for FIT Calculation	9,349,028	6,005,788	3,343,240

1 From last WA GRC (UG-100468)
2 From ID GRC (AVU-G-09-1) - Cap Structure Non-specific in AVU-G-10-01
3 Debt Cost from last GRCs

B-4

TAXES OTHER THAN FEDERAL INCOME TAX For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-OTX-12A

Ref/Basis	Account	Description	SYSTEM Direct	SYSTEM Allocated	SYSTEM Total	WASHINGTON Direct	WASHINGTON Allocated	WASHINGTON Total	IDAHO Direct	IDAHO Allocated	IDAHO Total
		UNDERGROUND STORAGE									
1	408170	R&P Property Tax	0	172,335	172,335	0	119,600	119,600	0	52,735	52,735
		DISTRIBUTION									
99	408110	State Excise Tax	5,443,941	0	5,443,941	5,443,941	0	5,443,941	0	0	0
99	408120	Municipal Occupation & License Tax	6,241,839	0	6,241,839	5,112,214	0	5,112,214	1,129,625	0	1,129,625
99	408130	Excise Tax	0	0	0	0	0	0	0	0	0
99	408170	R&P Property Tax (See Below)	2,436,194	0	2,436,194	1,692,446	0	1,692,446	743,748	0	743,748
99	408160	Miscellaneous State or Local Tax	0	0	0	0	0	0	0	0	0
99	409100	State Income Tax	-201,212	0	-201,212	0	0	0	-201,212	0	-201,212
		TOTAL	13,920,762	0	13,920,762	12,248,601	0	12,248,601	1,672,161	0	1,672,161
		ADMINISTRATIVE & GENERAL									
4	408170	R&P Property Tax	0	36,296	36,296	0	24,869	24,869	0	11,427	11,427
		TOTAL TAXES OTHER THAN FIT	13,920,762	208,631	14,129,393	12,248,601	144,469	12,393,070	1,672,161	64,162	1,736,323

	FUNCTIONALIZATION OF R&P PROPERTY TAX--ACCOUNT 1408.15--BASED ON PLANT BALANCES AT: 12/31/2009	SYSTEM Plant	SYSTEM Percent	SYSTEM Tax	WASHINGTON Plant	WASHINGTON Percent	WASHINGTON Tax	IDAHO Plant	IDAHO Percent	IDAHO Tax
G-ALL	Underground Storage	28,886,114		172,335	20,046,963	6.902%	127,143	8,839,151	5.630%	45,192
G-ALL	Distribution	412,311,125		2,436,194	266,845,782	91.875%	1,692,446	145,465,343	92.655%	743,748
G-ALL	General	6,243,298		36,296	3,550,811	1.223%	22,529	2,692,487	1.715%	13,767
	TOTAL	447,440,537		2,644,825	290,443,556	100.000%	1,842,118	156,996,981	100.000%	802,707

ALLOCATION RATIOS:

			SYSTEM	WASHINGTON	IDAHO
G-ALL	1	System Contract Demand	100.000%	69.400%	30.600%
G-ALL	4	Jurisdictional Four Factor Allocator - Direct Method	100.000%	68.518%	31.482%

B15

GAS UTILITY PLANT
For Twelve Months Ended December 31, 2010
Average of Monthly Averages Basis

Report ID: G-PLT-12A

Ref/Basis	Account	Description	SYSTEM Direct	SYSTEM Allocated	SYSTEM Total	WASHINGTON Direct	WASHINGTON Allocated	WASHINGTON Total	IDAHO Direct	IDAHO Allocated	IDAHO Total
		PLANT IN SERVICE									
		INTANGIBLE PLANT--SOFTWARE:									
		(from Report C-IPL)									
4	C-IPL	Misc Intangible Plt (303000)	872,591	40,859	913,450	704,141	27,996	732,137	168,450	12,863	181,313
4	C-IPL	Misc Intangible Plt-Mainframe Software (303100)	0	5,638,060	5,638,060	0	3,863,086	3,863,086	0	1,774,974	1,774,974
4	C-IPL	Misc Intangible Plant-PC Software (303110)	0	2,033,140	2,033,140	0	1,393,067	1,393,067	0	640,073	640,073
		TOTAL INTANGIBLE PLANT--SOFTWARE	872,591	7,712,059	8,584,650	704,141	5,284,149	5,988,290	168,450	2,427,910	2,596,360
		UNDERGROUND STORAGE PLANT:									
1	350XXX	Land & Land Rights	0	472,775	472,775	0	328,106	328,106	0	144,669	144,669
1	351XXX	Structures & Improvements	0	1,290,965	1,290,965	0	895,930	895,930	0	395,035	395,035
1	352XXX	Wells	0	12,823,225	12,823,225	0	8,899,318	8,899,318	0	3,923,907	3,923,907
1	353000	Lines	0	1,050,333	1,050,333	0	728,931	728,931	0	321,402	321,402
1	354000	Compressor Station Equipment	0	11,211,351	11,211,351	0	7,780,678	7,780,678	0	3,430,673	3,430,673
1	355000	Measuring & Regulating Equipment	0	173,784	173,784	0	120,606	120,606	0	53,178	53,178
1	356000	Purification Equipment	0	407,617	407,617	0	282,886	282,886	0	124,731	124,731
1	357000	Other Equipment	0	1,456,064	1,456,064	0	1,010,508	1,010,508	0	445,556	445,556
		TOTAL UNDERGROUND STORAGE PLANT	0	28,886,114	28,886,114	0	20,046,963	20,046,963	0	8,839,151	8,839,151
		DISTRIBUTION PLANT:									
6	374200	Land & Land Rights	84,970	0	84,970	60,300	0	60,300	24,670	0	24,670
6	374400	Land & Land Rights	64,233	0	64,233	1,098	0	1,098	63,135	0	63,135
6	375000	Structures & Improvements	630,163	22,254	652,417	443,137	15,537	458,674	187,026	6,717	193,743
6	376000	Mains	208,611,750	2,512,521	211,124,271	133,012,093	1,754,167	134,766,260	75,599,657	758,354	76,358,011
6	378000	Measuring & Reg Station Equip-General	4,671,791	57,440	4,729,231	2,899,315	40,103	2,939,418	1,772,476	17,337	1,789,813
6	379000	Measuring & Reg Station Equip-City Gate	5,922,347	60,967	5,983,314	1,771,844	42,565	1,814,409	4,150,503	18,402	4,168,905
6	380000	Services	135,106,481	0	135,106,481	89,131,217	0	89,131,217	45,975,264	0	45,975,264
6	381000	Meters	57,402,294	0	57,402,294	38,230,295	0	38,230,295	19,171,999	0	19,171,999
6	382000	Meter Installations	0	0	0	0	0	0	0	0	0
6	383000	House Regulators	0	0	0	0	0	0	0	0	0
6	384000	House Regulator Installations	0	0	0	0	0	0	0	0	0
6	385000	Industrial Measuring & Reg Sta Equip	2,666,691	0	2,666,691	2,067,709	0	2,067,709	598,982	0	598,982
6	387000	Other Equipment	0	0	0	0	0	0	0	0	0
		TOTAL DISTRIBUTION PLANT	415,160,720	2,653,182	417,813,902	267,617,008	1,852,372	269,469,380	147,543,712	800,810	148,344,522
		GENERAL PLANT: (From C-GPL)									
4	389XXX	Land & Land Rights	668,330	851,719	1,520,049	576,272	583,581	1,159,853	92,058	268,138	360,196
4	390XXX	Structures & Improvements	2,253,911	9,193,548	11,447,459	1,312,914	6,299,235	7,612,149	940,997	2,894,313	3,835,310
4	391XXX	Office Furniture & Equipment	0	7,201,580	7,201,580	0	4,934,379	4,934,379	0	2,267,201	2,267,201
4	392XXX	Transportation Equipment	4,642,712	1,199,159	5,841,871	3,421,417	821,640	4,243,057	1,221,295	377,519	1,598,814
4	393000	Stores Equipment	159,410	214,792	374,202	115,527	147,171	262,698	43,883	67,621	111,504
4	394000	Tools, Shop & Garage Equipment	1,465,625	1,958,399	3,424,024	1,008,925	1,341,856	2,350,781	456,700	616,543	1,073,243
4	395000	Laboratory Equipment	134,286	303,537	437,823	101,281	207,977	309,258	33,005	95,560	128,565
4	396XXX	Power Operated Equipment	3,782,816	610,899	4,393,715	2,850,515	418,576	3,269,091	932,301	192,323	1,124,624

B 16

GAS UTILITY PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis			Report ID: G-PLT-12A	********** SYSTEM **********			********** WASHINGTON **********			********** IDAHO **********		
Ref/Basis	Account	Description		Direct	Allocated	Total	Direct	Allocated	Total	Direct	Allocated	Total
4	397XXX	Communications Equipment		1,690,870	3,906,767	5,597,637	531,055	2,676,839	3,207,894	1,159,815	1,229,928	2,389,743
4	398000	Miscellaneous Equipment		839	91,007	91,846	360	62,356	62,716	479	28,651	29,130
		TOTAL GENERAL PLANT		14,798,799	25,531,407	40,330,206	9,918,266	17,493,610	27,411,876	4,880,533	8,037,797	12,918,330
		TOTAL PLANT IN SERVICE		430,832,110	64,782,762	495,614,872	278,239,415	44,677,094	322,916,509	152,592,695	20,105,668	172,698,363
99	1118.XX	CONSTRUCTION WORK IN PROGRESS		0	0	0	0	0	0	0	0	0
		GROSS GAS PLANT		430,832,110	64,782,762	495,614,872	278,239,415	44,677,094	322,916,509	152,592,695	20,105,668	172,698,363
		ACCUMULATED DEPRECIATION										
G-ADP	1119.X1	Underground Storage		0	11,399,974	11,399,974	0	7,911,582	7,911,582	0	3,488,392	3,488,392
G-ADP	1119.X5	Distribution		137,138,539	876,395	138,014,934	88,964,426	611,873	89,576,299	48,174,113	264,522	48,438,635
G-ADP	1119.X6	General Plant - Non-Transportation		5,440,937	5,132,215	10,573,152	3,800,909	3,516,491	7,317,400	1,640,028	1,615,724	3,255,752
G-ADP	1119.X7	General Plant - Transportation		926,629	75,529	1,002,158	656,299	51,751	708,050	270,330	23,778	294,108
		TOTAL ACCUMULATED DEPRECIATION		143,506,105	17,484,113	160,990,218	93,421,634	12,091,697	105,513,331	50,084,471	5,392,416	55,476,887
		ACCUMULATED AMORTIZATION										
4	111X30	Intangible Plant - Communication Equipment (C-AAM)		77,088	0	77,088	43,806	0	43,806	33,282	0	33,282
4	111X31	Intangible Plant - Mainframe Software (C-AAM)		0	2,207,798	2,207,798	0	1,512,739	1,512,739	0	695,059	695,059
4	111X32	Intangible Plant - PC Software (C-AAM)		0	1,702,727	1,702,727	0	1,166,674	1,166,674	0	536,053	536,053
4	111X50	Leasehold Improvements (C-AAM)		1,863	23,586	25,449	1,863	16,161	18,024	0	7,425	7,425
4	111X60	Leasehold Improvements (C-AAM)		0	0	0	0	0	0	0	0	0
		TOTAL ACCUMULATED AMORTIZATION		78,951	3,934,111	4,013,062	45,669	2,695,574	2,741,243	33,282	1,238,537	1,271,819
		NET GAS UTILITY PLANT		287,247,054	43,364,538	330,611,592	184,772,112	29,889,823	214,661,935	102,474,942	13,474,715	115,949,657

ALLOCATION RATIOS:

G-ALL	1	System Contract Demand	100.000%	69.400%	30.600%
G-ALL	4	Jurisdictional Four Factor Allocator - Direct Method	100.000%	68.518%	31.482%
G-ALL	6	Actual Therms Purchased	100.000%	69.817%	30.183%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%

B-17

ADJUSTMENTS TO NET GAS UTILITY PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-APL-12A

Ref/Basis	Account	Description	********** SYSTEM ********** Direct	Allocated	Total	********** WASHINGTON ********** Direct	Allocated	Total	********** IDAHO ********** Direct	Allocated	Total
G-PLT		NET GAS PLANT IN SERVICE	287,247,054	43,364,538	330,611,592	184,772,112	29,889,823	214,661,935	102,474,942	13,474,715	115,949,657
		ADJUSTMENTS: ACCUM. DEF. INC. TAX									
12	C-DTX	Gas General Plant	0	-3,344,248	-3,344,248	0	-2,171,387	-2,171,387	0	-1,172,861	-1,172,861
12	282900	Deferred F.I.T. - Plant In Service	0	-50,903,947	-50,903,947	0	-33,051,424	-33,051,424	0	-17,852,523	-17,852,523
12	190180	FAS 109 ITC	0	162,234	162,234	0	105,337	105,337	0	56,897	56,897
12	283850	Gas portion of Bond Redemptions	0	-745,264	-745,264	0	-483,892	-483,892	0	-261,372	-261,372
4	190850	Gain on Sale of General Office Bldg--GAS	0	34,334	34,334	0	23,525	23,525	0	10,809	10,809
99	190610	Contrib in Aid of Construction	0	0	0	0	0	0	0	0	0
		TOTAL ACCUM DEFERRED INCOME TAX	0	-54,796,891	-54,796,891	0	-35,577,841	-35,577,841	0	-19,219,050	-19,219,050
		OTHER ADJUSTMENTS:									
1	117100	Gas Stored - Recoverable Base Gas	0	1,734,939	1,734,939	0	1,204,048	1,204,048	0	530,891	530,891
1	164100	Gas Inventory--Jackson Prairie	0	12,999,458	12,999,458	0	9,021,624	9,021,624	0	3,977,834	3,977,834
99	186710	DSM Programs	137,148	0	137,148	35,313	0	35,313	101,835	0	101,835
4	253850	Gain on Sale of General Office Building	0	-98,046	-98,046	0	-67,179	-67,179	0	-30,867	-30,867
		TOTAL OTHER ADJUSTMENTS	137,148	14,636,351	14,773,499	35,313	10,158,493	10,193,806	101,835	4,477,858	4,579,693
		NET RATE BASE	287,384,202	3,203,998	290,588,200	184,807,425	4,470,475	189,277,900	102,576,777	-1,266,477	101,310,300

ALLOCATION RATIOS:					
G-ALL	1	System Contract Demand	100.000%	69.400%	30.600%
G-ALL	4	Jurisdictional Four Factor Allocator - Direct Method	100.000%	68.518%	31.482%
G-ALL	12	Net Gas Plant	100.000%	64.929%	35.071%
G-ALL	13	Net Gas General Plant	100.000%	67.420%	32.580%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%

B-18

GAS ACCUMULATED DEPRECIATION AND DEPRECIATION EXPENSE For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-ADP-12A

Ref/Basis	Account	Description	********** SYSTEM ********** Direct	Allocated	Total	********** WASHINGTON ********** Direct	Allocated	Total	********** IDAHO ********** Direct	Allocated	Total
		UNDERGROUND STORAGE PLANT:									
G-PLT		Plant in Service	0	28,886,114	28,886,114	0	20,046,963	20,046,963	0	8,839,151	8,839,151
G-PLT	350XXX	Less: Land and Land Rights	0	472,775	472,775	0	328,106	328,106	0	144,669	144,669
		Depreciable Underground Storage Plant	0	28,413,339	28,413,339	0	19,718,857	19,718,857	0	8,694,482	8,694,482
		Percentage		100.000%	100.000%	0.000%			0.000%		
		ALLOCATION TO DIRECT/ALLOCATED BASED ON DEPRECIABLE PLANT:									
	108X08/111X40	Accumulated Depreciation		11,399,974	11,399,974	0			0		
	403X80	Depreciation Expense - JP		501,805	501,805	0			0		
		JURISDICTIONAL ALLOCATION:									
1	108X08/111X40	Accumulated Depreciation	0	11,399,974	11,399,974	0	7,911,582	7,911,582	0	3,488,392	3,488,392
1	403X80	Depreciation Expense - JP	0	501,805	501,805	0	348,253	348,253	0	153,552	153,552
		DISTRIBUTION PLANT:									
G-PLT		Plant in Service	415,160,720	2,653,182	417,813,902	267,617,008	1,852,372	269,469,380	147,543,712	800,810	148,344,522
G-PLT	374000	Less: Land and Land Rights	84,970	0	84,970	60,300	0	60,300	24,670	0	24,670
		Depreciable Distribution Plant	415,075,750	2,653,182	417,728,932	267,556,708	1,852,372	269,409,080	147,519,042	800,810	148,319,852
		Percentage		0.635%	100.000%	64.460%			34.905%		
		ALLOCATION TO DIRECT/ALLOCATED BASED ON DEPRECIABLE PLANT:									
	108X05	Accumulated Depreciation		876,395	138,014,934	88,964,426			48,174,113		
	403X50	Depreciation Expense		62,328	9,815,371	6,326,988			3,426,055		
		JURISDICTIONAL ALLOCATION:									
6	108X05	Accumulated Depreciation	137,138,539	876,395	138,014,934	88,964,426	611,873	89,576,299	48,174,113	264,522	48,438,635
6	403X50	Depreciation Expense	9,753,043	62,328	9,815,371	6,326,988	43,516	6,370,504	3,426,055	18,812	3,444,867
		GENERAL PLANT--NON-TRANSPORTATION									
G-PLT		Plant in Service	14,798,799	25,531,407	40,330,206	9,918,266	17,493,610	27,411,876	4,880,533	8,037,797	12,918,330
G-PLT	389XXX	Less: Land and Land Rights	668,330	851,719	1,520,049	576,272	583,581	1,159,853	92,058	268,138	360,196
G-PLT	392XXX	Less: Transportation	4,642,712	1,199,159	5,841,871	3,421,417	821,640	4,243,057	1,221,295	377,519	1,598,814
		Depreciable Non-Transport Genl Plant	9,487,757	23,480,529	32,968,286	5,920,577	16,088,389	22,008,966	3,567,180	7,392,140	10,959,320
		Percentage		71.222%	100.000%	17.958%			10.820%		

B.9

GAS ACCUMULATED DEPRECIATION AND DEPRECIATION EXPENSE For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: G-ADP-12A

Ref/Basis	Account	Description	********** SYSTEM ********** Direct	Allocated	Total	********** WASHINGTON ********** Direct	Allocated	Total	********** IDAHO ********** Direct	Allocated	Total
		ALLOCATED ON DEPRECIABLE PLANT									
C-ADP	108X06	Accum Depr--Gas General Plant		5,132,215	7,205,940	1,294,043			779,683		
	108X06	Accum Depr--Gas General Plant - Direct	3,367,211		3,367,211	2,506,866			860,345		
	403X60	Depreciation Expense	534,286	1,322,292	1,856,578	333,404			200,882		
	403X60	Washington Depreciation Expense (C-DEP)			22,346	22,346					
	403X60	Idaho Depreciation Expense (C-DEP)			87,029				87,029		
	403X60	Depreciation Expense (Direct)	253,984		253,984	192,980			61,004		
		JURISDICTIONAL ALLOCATION:									
4	108X06	Accumulated Depreciation	5,440,937	5,132,215	10,573,152	3,800,909	3,516,491	7,317,400	1,640,028	1,615,724	3,255,752
4	403X60	Depreciation Expense	897,645	1,322,292	2,219,937	548,730	906,008	1,454,738	348,915	416,284	765,199
		GENERAL PLANT--TRANSPORTATION									
G-PLT	392XXX	Transportation General Plant	4,642,712	1,199,159	5,841,871	3,421,417	821,640	4,243,057	1,221,295	377,519	1,598,814
		Percentage		20.527%	100.000%	58.567%			20.906%		
		ALLOCATED ON DEPRECIABLE PLANT									
C-ADP	1119.X7	Accum Depr--Gas General Transportation Plant		75,529	367,951	215,498			76,924		
	1119.X7	Accum Depr--Gas General Transp Plant - Direct	634,207		634,207	440,801			193,406		
	403X70	Depreciation Expense		6,630	32,299	18,917			6,752		
		JURISDICTIONAL ALLOCATION:									
4	1119.X7	Accumulated Depreciation	926,629	75,529	1,002,158	656,299	51,751	708,050	270,330	23,778	294,108
4	403X70	Depreciation Expense	25,669	6,630	32,299	18,917	4,543	23,460	6,752	2,087	8,839
ALLOCATION RATIOS:											
G-ALL	1	System Contract Demand		100.000%			69.400%			30.600%	
G-ALL	4	Jurisdictional Four Factor Allocator - Direct Method		100.000%			68.518%			31.482%	
G-ALL	6	Actual Therms Purchased		100.000%			69.817%			30.183%	
G-ALL	99	Not Allocated		0.000%			0.000%			0.000%	

B 30

ALLOCATION OF COMM AMORTIZATION EXPENSE For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: C-AMT-12A

Ref/Basis		Description		Total	Allocation to Electric	Allocation to Gas North	Allocation to Oregon Gas
7	404X30	Communication Equipment	Utility 7	0	0	0	0
		TOTAL		0	0	0	0
7	404X31	Mainframe Software	Utility 7	5,325,951	3,844,964	1,035,205	445,782
8			Utility 8	140,191	0	97,968	42,223
9			Utility 9	9,703	7,660	2,043	0
			TOTAL	5,475,845	3,852,624	1,135,216	488,005
7	404X32	PC Software	Utility 7	724,825	523,273	140,884	60,668
8			Utility 8	82,943	0	57,962	24,981
9			Utility 9	0	0	0	0
			TOTAL	807,768	523,273	198,846	85,649
7	404X50	Leasehold Improvements	Utility 7	10,303	7,438	2,003	862
			TOTAL	10,303	7,438	2,003	862
		TOTAL		6,293,916	4,383,335	1,336,065	574,516

ALLOCATION RATIOS:

G-ALL	7	Elec/Gas North/Oregon 4-Factor	100.000%	72.193%	19.437%	8.370%
G-ALL	8	Gas North/Oregon 4-Factor	100.000%	0.000%	69.882%	30.118%
G-ALL	9	Elec/Gas North 4-Factor	100.000%	78.945%	21.055%	0.000%

ALLOCATION OF COMM DEPRECIATION EXPENSE For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: C-DEP-12A

Ref/Basis		Description	Total	Allocation to Electric	Allocation to Gas North	Allocation to Oregon
7	403X60	Utility 7	8,215,780	5,931,218	1,596,901	687,661
8		Utility 8	140,112	0	97,913	42,199
9		Utility 9	634,384	500,814	133,570	0
9		Utility 9 - Washington	106,130	83,784	22,346	0
9		Utility 9 - Idaho	413,340	326,311	87,029	0
		Total	9,509,746	6,842,127	1,937,759	729,860
7	403X70	Utility 7	6,453	4,659	1,254	540
9		Utility 9	15,959	12,599	3,360	0
		Total	22,412	17,258	4,614	540
ALLOCATION RATIOS:						
G-ALL	7	Elec/Gas North/Oregon 4-Factor	100.000%	72.193%	19.437%	8.370%
G-ALL	8	Gas North/Oregon 4-Factor	100.000%	0.000%	69.882%	30.118%
G-ALL	9	Elec/Gas North 4-Factor	100.000%	78.945%	21.055%	0.000%

B 22

COMMON GENERAL PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis			Report ID: C-GPL-12A											
				********** ELECTRIC **********				********** GAS NORTH**********				********** OREGON **********		
Ref/Basis	Account	Description	Total	Direct - Wa	Direct - Idaho	Allocated	Total	Direct - Wa	Direct - Idaho	Allocated	Total	Direct - Oregon	Allocated	Total
	389XXX	Land & Land Rights												
99		Utility 0	124,681	0	101,907	22,774	124,681	0	0	0	0	0	0	0
99		Utility 1	477,164	0	0	0	0	477,164	0	0	477,164	0	0	0
99		Utility 2	472,230	0	0	0	0	0	0	0	0	472,230	0	472,230
7		Utility 7	4,082,521	0	0	2,947,294	2,947,294	0	0	793,520	793,520	0	341,707	341,707
9		Utility 9 - Wa	470,711	371,603	0	0	371,603	99,108	0	0	99,108	0	0	0
9		Utility 9 - Idaho	437,225	0	345,167	0	345,167	0	92,058	0	92,058	0	0	0
9		Utility 9 - Allocated	276,414	0	0	218,215	218,215	0	0	58,199	58,199	0	0	0
		TOTAL ACCOUNT	6,340,946	371,603	447,074	3,188,283	4,006,960	576,272	92,058	851,719	1,520,049	472,230	341,707	813,937
	390XXX	Structures & Improvements												
99		Utility 0	3,508,825	502,249	1,396,603	1,609,973	3,508,825	0	0	0	0	0	0	0
99		Utility 1	939,860	0	0	0	0	939,860	0	0	939,860	0	0	0
99		Utility 2	3,392,149	0	0	0	0	0	0	0	0	3,392,149	0	3,392,149
7		Utility 7	42,111,672	0	0	30,401,679	30,401,679	0	0	8,185,246	8,185,246	0	3,524,747	3,524,747
9		Utility 9 - Wa	1,771,807	1,398,753	0	0	1,398,753	373,054	0	0	373,054	0	0	0
9		Utility 9 - Idaho	4,469,232	0	3,528,235	0	3,528,235	0	940,997	0	940,997	0	0	0
9		Utility 9 - Allocated	4,788,895	0	0	3,780,593	3,780,593	0	0	1,008,302	1,008,302	0	0	0
		TOTAL ACCOUNT	60,982,440	1,901,002	4,924,838	35,792,245	42,618,085	1,312,914	940,997	9,193,548	11,447,459	3,392,149	3,524,747	6,916,896
	391XXX	Office Furniture & Equipment												
99		Utility 0	1,514,963	0	0	1,514,963	1,514,963	0	0	0	0	0	0	0
7		Utility 7	35,653,554	0	0	25,739,370	25,739,370	0	0	6,929,981	6,929,981	0	2,984,202	2,984,202
8		Utility 8	388,654	0	0	0	0	0	0	271,599	271,599	0	117,055	117,055
		TOTAL ACCOUNT	37,557,171	0	0	27,254,333	27,254,333	0	0	7,201,580	7,201,580	0	3,101,257	3,101,257
	392XXX	Transportation Equipment												
99		Utility 0	14,260,870	6,588,415	2,511,372	5,161,083	14,260,870	0	0	0	0	0	0	0
99		Utility 1	5,134,990	0	0	0	0	3,160,314	1,070,154	904,522	5,134,990	0	0	0
99		Utility 2	2,088,609	0	0	0	0	0	0	0	0	2,088,609	0	2,088,609
7		Utility 7	470,368	0	0	339,573	339,573	0	0	91,425	91,425	0	39,370	39,370
9		Utility 9 - Wa	1,240,099	978,996	0	0	978,996	261,103	0	0	261,103	0	0	0
9		Utility 9 - Idaho	717,837	0	566,696	0	566,696	0	151,141	0	151,141	0	0	0
9		Utility 9 - Allocated	965,147	0	0	761,935	761,935	0	0	203,212	203,212	0	0	0
		TOTAL ACCOUNT	24,877,920	7,567,411	3,078,068	6,262,591	16,908,070	3,421,417	1,221,295	1,199,159	5,841,871	2,088,609	39,370	2,127,979

B 23

COMMON GENERAL PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis			Report ID: C-GPL-12A											
				********** ELECTRIC **********				********** GAS NORTH**********				********** OREGON **********		
Ref/Basis	Account	Description	Total	Direct - Wa	Direct - Idaho	Allocated	Total	Direct - Wa	Direct - Idaho	Allocated	Total	Direct - Oregon	Allocated	Total
	393000	Stores Equipment	392,675	10,739	14,745	367,191	392,675	0	0	0	0	0	0	0
99		Utility 0	84,271	0	0	0	0	84,271	0	0	84,271	0	0	0
99		Utility 1	57,227	0	0	0	0	0	0	0	0	57,227	0	57,227
99		Utility 2	148,451	117,195	0	0	117,195	31,256	0	0	31,256	0	0	0
9		Utility 9 - Wa	208,422	0	164,539	0	164,539	0	43,883	0	43,883	0	0	0
9		Utility 9 - Idaho	1,020,146	0	0	805,354	805,354	0	0	214,792	214,792	0	0	0
9		Utility 9 - Allocated	1,911,192	127,934	179,284	1,172,545	1,479,763	115,527	43,883	214,792	374,202	57,227	0	57,227
		TOTAL ACCOUNT												
	394000	Tools, Shop, & Garage Equipment	3,420,379	1,271,616	426,600	1,722,163	3,420,379	0	0	0	0	0	0	0
99		Utility 0	1,879,583	0	0	0	0	999,857	454,704	425,022	1,879,583	0	0	0
99		Utility 1	947,584	0	0	0	0	0	0	0	0	947,584	0	947,584
99		Utility 2	3,782,575	0	0	2,730,754	2,730,754	0	0	735,219	735,219	0	316,602	316,602
7		Utility 7	1,050,990	0	0	0	0	0	0	734,453	734,453	0	316,537	316,537
8		Utility 8	43,069	34,001	0	0	34,001	9,068	0	0	9,068	0	0	0
9		Utility 9 - Wa	9,481	0	7,485	0	7,485	0	1,996	0	1,996	0	0	0
9		Utility 9 - Idaho	302,564	0	0	238,859	238,859	0	0	63,705	63,705	0	0	0
9		Utility 9 - Allocated	11,436,225	1,305,617	434,085	4,691,776	6,431,478	1,008,925	456,700	1,958,399	3,424,024	947,584	633,139	1,580,723
		TOTAL ACCOUNT												
	395000	Laboratory Equipment	1,387,300	213,373	133,744	1,040,183	1,387,300	0	0	0	0	0	0	0
99		Utility 0	299,599	0	0	0	0	97,497	31,797	170,305	299,599	0	0	0
99		Utility 1	264,945	0	0	0	0	0	0	0	0	264,945	0	264,945
99		Utility 2	355,663	0	0	256,764	256,764	0	0	69,130	69,130	0	29,769	29,769
7		Utility 7	11,386	0	0	0	0	0	0	7,957	7,957	0	3,429	3,429
8		Utility 8	17,974	14,190	0	0	14,190	3,784	0	0	3,784	0	0	0
9		Utility 9 - Wa	5,737	0	4,529	0	4,529	0	1,208	0	1,208	0	0	0
9		Utility 9 - Idaho	266,658	0	0	210,513	210,513	0	0	56,145	56,145	0	0	0
9		Utility 9 - Allocated	2,609,262	227,563	138,273	1,507,460	1,873,296	101,281	33,005	303,537	437,823	264,945	33,198	298,143
		TOTAL ACCOUNT												
	396XXX	Power Operated Equipment	30,052,826	14,088,448	7,525,996	8,438,382	30,052,826	0	0	0	0	0	0	0
99		Utility 0	3,898,507	0	0	0	0	2,701,377	823,195	373,935	3,898,507	0	0	0
99		Utility 1	43,834	0	0	0	0	0	0	0	0	43,834	0	43,834
99		Utility 2	554,036	0	0	399,975	399,975	0	0	107,688	107,688	0	46,373	46,373
7		Utility 7	708,328	559,190	0	0	559,190	149,138	0	0	149,138	0	0	0
9		Utility 9 - Wa	518,194	0	409,088	0	409,088	0	109,106	0	109,106	0	0	0
9		Utility 9 - Idaho	613,993	0	0	484,717	484,717	0	0	129,276	129,276	0	0	0
9		Utility 9 - Allocated	36,389,718	14,647,638	7,935,084	9,323,074	31,905,796	2,850,515	932,301	610,899	4,393,715	43,834	46,373	90,207
		TOTAL ACCOUNT												

Exh B

COMMON GENERAL PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis			Report ID: C-GPL-12A											
				********** ELECTRIC **********				********** GAS NORTH**********				********** OREGON **********		
Ref/Basis	Account	Description	Total	Direct - Wa	Direct - Idaho	Allocated	Total	Direct - Wa	Direct - Idaho	Allocated	Total	Direct - Oregon	Allocated	Total
	397XXX	Communication Equipment												
99		Utility 0	40,005,419	5,589,022	2,220,641	32,195,756	40,005,419	0	0	0	0	0	0	0
99		Utility 1	738,026	0	0	0	0	433,540	304,486	0	738,026	0	0	0
99		Utility 2	551,876	0	0	0	0	0	0	0	0	551,876	0	551,876
7		Utility 7	8,870,681	0	0	6,404,011	6,404,011	0	0	1,724,194	1,724,194	0	742,476	742,476
8		Utility 8	926,079	0	0	0	0	0	0	647,163	647,163	0	278,916	278,916
9		Utility 9 - Wa	463,142	365,627	0	0	365,627	97,515	0	0	97,515	0	0	0
9		Utility 9 - Idaho	4,062,358	0	3,207,029	0	3,207,029	0	855,329	0	855,329	0	0	0
9		Utility 9 - Allocated	7,292,379	0	0	5,756,969	5,756,969	0	0	1,535,410	1,535,410	0	0	0
		TOTAL ACCOUNT	62,909,960	5,954,649	5,427,670	44,356,736	55,739,055	531,055	1,159,815	3,906,767	5,597,637	551,876	1,021,392	1,573,268
	398000	Miscellaneous Equipment												
99		Utility 0	8,722	0	2,299	6,423	8,722	0	0	0	0	0	0	0
99		Utility 1	0	0	0	0	0	0	0	0	0	0	0	0
99		Utility 2	690	0	0	0	0	0	0	0	0	690	0	690
7		Utility 7	460,635	0	0	332,546	332,546	0	0	89,534	89,534	0	38,555	38,555
9		Utility 9 - Wa	1,710	1,350	0	0	1,350	360	0	0	360	0	0	0
9		Utility 9 - Idaho	2,276	0	1,797	0	1,797	0	479	0	479	0	0	0
9		Utility 9 - Allocated	6,995	0	0	5,522	5,522	0	0	1,473	1,473	0	0	0
		TOTAL ACCOUNT	481,028	1,350	4,096	344,491	349,937	360	479	91,007	91,846	690	38,555	39,245
		TOTAL GENERAL PLANT	245,495,862	32,104,767	22,568,472	133,893,534	188,566,773	9,918,266	4,880,533	25,531,407	40,330,206	7,819,144	8,779,738	16,598,882

ALLOCATION RATIOS:

G-ALL	7	Elec/Gas North/Oregon 4-Factor	100.000%	72.193%	19.437%	8.370%
G-ALL	8	Gas North/Oregon 4-Factor	100.000%	0.000%	69.882%	30.118%
G-ALL	9	Elec/Gas North 4-Factor	100.000%	78.945%	21.055%	0.000%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%	0.000%

B 35

ACCUMULATED DEPRECIATION COMMON GENERAL PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: C-ADP-12A

Ref/Basis	Account	Description	Total General	Total Electric	Total Gas North	Total Oregon Gas
		Accum Deprec - General Plant				
99	108X06	Utility 0	39,840,502	39,840,502	0	0
99	108X06	Utility 1 - Allocated	631,950	0	631,950	0
99	108X06	Utility 1 - Washington	2,506,866	0	2,506,866	0
99	108X06	Utility 1 - Idaho	860,345	0	860,345	0
99	108X06	Utility 2	2,332,908	0	0	2,332,908
7	108X06	Utility 7	13,975,092	10,089,038	2,716,339	1,169,715
7	108X06	Utility 7 - Asset Recovery Obligation (Note 1)	-349,693	-252,454	-67,970	-29,269
8	108X06	Utility 8	929,083	0	649,262	279,821
9	108X06	Utility 9	15,560,957	12,284,598	3,276,359	0
		Total	76,288,010	61,961,684	10,573,151	3,753,175
		Accum Deprec - General Plant, Transportation				
99	108X07	Utility 0	5,709,331	5,709,331	0	0
99	108X07	Utility 1 - Allocated	210,900	0	210,900	0
99	108X07	Utility 1 - Washington	440,801	0	440,801	0
99	108X07	Utility 1 - Idaho	193,406	0	193,406	0
99	108X07	Utility 2	1,009,570	0	0	1,009,570
7	108X07	Utility 7	20,088	14,502	3,905	1,681
9	108X07	Utility 9	727,363	574,217	153,146	0
		Total	8,311,459	6,298,050	1,002,158	1,011,251
ALLOCATION RATIOS:						
G-ALL	7	Elec/Gas North/Oregon 4-Factor	100.000%	72.193%	19.437%	8.370%
G-ALL	8	Gas North/Oregon 4-Factor	100.000%	0.000%	69.882%	30.118%
G-ALL	9	Elec/Gas North 4-Factor	100.000%	78.945%	21.055%	0.000%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%	0.000%

B26

COMMON INTANGIBLE PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis			Report ID: C-IPL-12A											
				********** ELECTRIC **********				********** GAS NORTH **********				********** OREGON **********		
Ref/Basis	Account	Description	Total	Direct - Wa	Direct - Idaho	Allocated	Total	Direct - Wa	Direct - Idaho	Allocated	Total	Direct	Allocated	Total
	303000	Intangible Plant												
99		Utility 1	872,591	0	0	0	0	704,141	168,450	0	872,591	0	0	0
7		Utility 7	0	0	0	0	0	0	0	0	0	0	0	0
9		Utility 9	194,058	0	0	153,199	153,199	0	0	40,859	40,859	0	0	0
		TOTAL ACCOUNT	1,066,649	0	0	153,199	153,199	704,141	168,450	40,859	913,450	0	0	0
	303100	Misc Intangible Plant--Mainframe Software												
99		Utility 0	804,754	24,152	0	780,602	804,754	0	0	0	0	0	0	0
99		Utility 2	46,440	0	0	0	0	0	0	0	0	46,440	0	46,440
7		Utility 7	26,486,694	0	0	19,121,539	19,121,539	0	0	5,148,219	5,148,219	0	2,216,936	2,216,936
8		Utility 8	700,954	0	0	0	0	0	0	489,841	489,841	0	211,113	211,113
		TOTAL ACCOUNT	28,038,842	24,152	0	19,902,141	19,926,293	0	0	5,638,060	5,638,060	46,440	2,428,049	2,474,489
	303110	Misc Intangible Plant--PC Software												
99		Utility 0	680,873	0	0	680,873	680,873	0	0	0	0	0	0	0
99		Utility 1	19,003	0	0	0	0	0	0	19,003	19,003	0	0	0
99		Utility 2	1,195	0	0	0	0	0	0	0	0	1,195	0	1,195
7		Utility 7	8,543,349	0	0	6,167,700	6,167,700	0	0	1,660,571	1,660,571	0	715,078	715,078
8		Utility 8	505,947	0	0	0	0	0	0	353,566	353,566	0	152,381	152,381
		TOTAL ACCOUNT	9,750,367	0	0	6,848,573	6,848,573	0	0	2,033,140	2,033,140	1,195	867,459	868,654
		TOTAL	38,855,858	24,152	0	26,903,913	26,928,065	704,141	168,450	7,712,059	8,584,650	47,635	3,295,508	3,343,143

ALLOCATION RATIOS:						
G-ALL	7	Elec/Gas North/Oregon 4-Factor	100.000%	72.193%	19.437%	8.370%
G-ALL	8	Gas North/Oregon 4-Factor	100.000%	0.000%	69.882%	30.118%
G-ALL	9	Elec/Gas North 4-Factor	100.000%	78.945%	21.055%	0.000%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%	0.000%

B7

ACCUMULATED AMORTIZATION COMMON PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: C-AAM-12A

Ref/Basis	Account	Description	Total	Allocation To Electric	Allocation to Gas North	Allocation to Oregon
	[redacted]					
99		Utility 0	4,179,482	4,179,482	0	0
		Total	4,179,482	4,179,482	0	0
	[redacted]					
99		Utility 0	618,467	618,467	0	0
99		Utility 1	0	0	0	0
99		Utility 2 - Oregon	0	0	0	0
7		Utility 7	0	0	0	0
8		Utility 8	0	0	0	0
9		Utility 9	0	0	0	0
		Total	618,467	618,467	0	0
	[redacted]					
99		Utility 0	853,443	853,443	0	0
99		Utility 1	0	0	0	0
99		Utility 2 - Oregon	0	0	0	0
7		Utility 7	11,106,270	8,017,950	2,158,726	929,595
8		Utility 8	63,035	0	44,050	18,985
9		Utility 9	23,853	18,831	5,022	0
		Total	12,046,601	8,890,224	2,207,798	948,580
	[redacted]					
99		Utility 0	0	0	0	0
99		Utility 1	7,826	0	7,826	0
99		Utility 2 - Oregon	0	0	0	0
7		Utility 7	7,048,055	5,088,202	1,369,930	589,922
8		Utility 8	465,028	0	324,971	140,057
9		Utility 9	0	0	0	0
		Total	7,520,909	5,088,202	1,702,727	729,979

	Accum Amort--Leasehold Improvements - 111X50				
99	Utility 0	0	0	0	0
99	Utility 1	0	0	0	0
99	Utility 2 - Oregon	0	0	0	0
7	Utility 7	107,403	77,537	20,876	8,990
8	Utility 8	0	0	0	0
9	Utility 9	12,869	10,159	2,710	0
	Total	120,272	87,696	23,586	8,990
	Accum Amort--Leasehold Improvements - 111X60				
99	Utility 0	0	0	0	0
99	Utility 1	0	0	0	0
99	Utility 2 - Oregon	0	0	0	0
7	Utility 7	0	0	0	0
8	Utility 8	0	0	0	0
9	Utility 9	0	0	0	0
	Total	0	0	0	0
	TOTAL Accumulated Amortization	24,485,731	18,864,071	3,934,111	1,687,549

ALLOCATION RATIOS:

G-ALL	7	Elec/Gas North/Oregon 4-Factor	100.000%	72.193%	19.437%	8.370%
G-ALL	8	Gas North/Oregon 4-Factor	100.000%	0.000%	69.882%	30.118%
G-ALL	9	Elec/Gas North 4-Factor	100.000%	78.945%	21.055%	0.000%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%	0.000%

B-81

ACCUMULATED AMORTIZATION COMMON PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: C-AAM-12A

Ref/Basis	Account	Description	Total	Allocation To Electric	Allocation to Gas North	Allocation to Oregon
	[redacted]					
99		Utility 0	4,179,482	4,179,482	0	0
		Total	4,179,482	4,179,482	0	0
	[redacted]					
99		Utility 0	618,467	618,467	0	0
99		Utility 1	0	0	0	0
99		Utility 2 - Oregon	0	0	0	0
7		Utility 7	0	0	0	0
8		Utility 8	0	0	0	0
9		Utility 9	0	0	0	0
		Total	618,467	618,467	0	0
	[redacted]					
99		Utility 0	853,443	853,443	0	0
99		Utility 1	0	0	0	0
99		Utility 2 - Oregon	0	0	0	0
7		Utility 7	11,106,270	8,017,950	2,158,726	929,595
8		Utility 8	63,035	0	44,050	18,985
9		Utility 9	23,853	18,831	5,022	0
		Total	12,046,601	8,890,224	2,207,798	948,580
	[redacted]					
99		Utility 0	0	0	0	0
99		Utility 1	7,826	0	7,826	0
99		Utility 2 - Oregon	0	0	0	0
7		Utility 7	7,048,055	5,088,202	1,369,930	589,922
8		Utility 8	465,028	0	324,971	140,057
9		Utility 9	0	0	0	0
		Total	7,520,909	5,088,202	1,702,727	729,979

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3b

	Accum Amort--Leasehold Improvements - 111X50				
99	Utility 0	0	0	0	0
99	Utility 1	0	0	0	0
99	Utility 2 - Oregon	0	0	0	0
7	Utility 7	107,403	77,537	20,876	8,990
8	Utility 8	0	0	0	0
9	Utility 9	12,869	10,159	2,710	0
	Total	120,272	87,696	23,586	8,990
	Accum Amort--Leasehold Improvements - 111X60				
99	Utility 0	0	0	0	0
99	Utility 1	0	0	0	0
99	Utility 2 - Oregon	0	0	0	0
7	Utility 7	0	0	0	0
8	Utility 8	0	0	0	0
9	Utility 9	0	0	0	0
	Total	0	0	0	0
	TOTAL Accumulated Amortization	24,485,731	18,864,071	3,934,111	1,687,549

ALLOCATION RATIOS:

G-ALL	7	Elec/Gas North/Oregon 4-Factor	100.000%	72.193%	19.437%	8.370%
G-ALL	8	Gas North/Oregon 4-Factor	100.000%	0.000%	69.882%	30.118%
G-ALL	9	Elec/Gas North 4-Factor	100.000%	78.945%	21.055%	0.000%
G-ALL	99	Not Allocated	0.000%	0.000%	0.000%	0.000%

ACCUMULATED DEFERRED FIT NON UTILITY - SPECIFIC GENERAL PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: C-DTX-12A

Ref/Basis	Account	Description	Total	Electric	Gas North	Oregon Gas
		Deferred FIT - General Plant (For Report APL)				
7	282900	Utility 7	-15,339,518	-11,074,058	-2,981,542	-1,283,918
9	282900	Utility 9	-1,722,658	-1,359,952	-362,706	0
		Total	-17,062,176	-12,434,010	-3,344,248	-1,283,918
ALLOCATION RATIOS:						
G-ALL	7	Elec/Gas North/Oregon 4-Factor	100.000%	72.193%	19.437%	8.370%
G-ALL	9	Elec/Gas North 4-Factor	100.000%	78.945%	21.055%	0.000%

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C1

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

DEFERRED FIT RATE BASE
GAS

Line No.	Description	System	Washington	Idaho
	REVENUES			
1	Total General Business			
2	Total Transportation			
3	Other Revenues			
4	Total Gas Revenues	0	0	0
	EXPENSES			
5	Exploration & Development			
	Production			
6	City Gate Purchases			
7	Purchased Gas Expense			
8	Net Nat. Gas Storage Trans			
9	Total Production	0	0	0
	Underground Storage			
10	Operating Expenses			
11	Depreciation			
12	Taxes			
13	Total Underground Storage	0	0	0
	Distribution			
14	Operating Expenses			
15	Depreciation			
16	Taxes	0		0
17	Total Distribution	0	0	0
18	Customer Accounting			
19	Customer Service & Information			
20	Sales			
	Administrative and General			
21	Operating Expenses			
22	Depreciation			
23	Taxes			
24	Total Admin. & General	0	0	0
25	Total Gas Expense	0	0	0
26	Operating Income before FIT	0	0	0
	Federal Income Taxes			
27	Current Accrual (at 35%)	0	0	0
28	Amort ITC			
29	Deferred FIT			
30	NET OPERATING INCOME	$0	$0	$0
	RATE BASE			
	PLANT IN SERVICE			
31	Underground Storage			
32	Distribution Plant			
33	General Plant			
34	Total Plant in Service	0	0	0
	ACCUMULATED DEPRECIATION			
35	Underground Storage			
36	Distribution Plant			
37	General Plant			
38	Total Accum. Depreciation	0	0	0
39	DEFERRED TAXES	(36,762)	(36,762)	0
40	GAS INVENTORY			
41	WORKING CAPITAL			
42	GAIN ON SALE OF BUILDING			
43	TOTAL RATE BASE	($36,762)	($36,762) ✓	$0

C2

AVISTA UTILITIES
Gas Accumulated Deferred Taxes
Average - Twelve Months Ended December 31, 2010

	Alloc Basis	Gas System	Washington	Idaho
ACCELERATED TAX DEPRECIATION				
Gas North	NDP	(52,479,822)	(33,899,866)	(18,579,956)
General Utility CD AA	4	(3,108,633)	(2,129,973)	(978,660)
General Utility CD AN	4	(362,706)	(248,519)	(114,187)
Total Plant DFIT		(55,951,161)	(36,278,358)	(19,672,803)
FMB & MTN Redeemed	12	(745,264)	(483,892)	(261,372)
DSM (Gas-WA) Gas (2)	D	0	0	
DSM (Gas-ID) Gas (2)	D	0		0
Total Other Deferred FIT		(745,264)	(483,892)	(261,372)
Total Deferred FIT		(56,696,425)	(36,762,250) ✓	(19,934,175)
Allocation Notes:				
Jurisdictional four-factor	4	100.000%	68.518%	31.482%
Net gas plant - AMA	12	100.000%	64.929%	35.071%
Net gas general plant - AMA	13	100.000%	67.420%	32.580%
Net distribution plant - AMA				
Gross (1)		417,813,902	269,469,380	148,344,522
A/D (1)		138,014,934	89,576,299	48,438,635
Net Distribution Plant		555,828,836	359,045,679	196,783,157
Percent	NDP	100.000%	64.596%	35.404%
Direct	D			

Source of Allocation Factors: Results of Operations Report G-PLT-12A
(1) Source: Results of Operations (G-PLT-12A)

(2) The remaining balance of the 1994 Gas Programs will be completely amortized as of June 2011. As no expense will be incurred during the rate year (ID, 12 ME June 2012 and WA, 12 ME December 2012), the 2010 accumulated deferred income tax is being eliminated in this adjustment.

C3

AVISTA UTILITIES
Accumulated Deferred Taxes
Average - Twelve Months Ended December 31, 2010

		Total System	Electric	Gas - North	Gas - South
Electric		(256,960,080)	(256,960,080)		
GAS North		(52,479,822)		(52,479,822)	
GAS Oregon		(27,169,065)			(27,169,065)
General Utility	CD AA	(15,993,378)	(11,546,099)	(3,108,633)	(1,338,646)
General Utility	CD AN	(1,722,658)	(1,359,952)	(362,706)	
Total Accelerated Tax Depr		(354,325,003)	(269,866,131)	(55,951,161)	(28,507,711)
Average of Monthly Averages					
CDA Lake CDR Fund	283324 ED AN	(3,447,500)	(3,447,500)		
CDA Lake IPA Fund	283325 ED AN	(29,167)	(29,167)		
CDA Lake Settlement	283382 ED AN	(12,851,707)	(12,851,707)		
Colstrip PCB	283200 ED AN	(539,293)	(539,293)		
FMB & MTN Redeemed	283850 CD AA	(3,834,253)	(2,768,062)	(745,264)	(320,927)
DSM (Elec-ID) Elec (1)	283720 ED ID	0	0		
DSM (Gas-WA) Gas (1)	283720 GD WA	0		0	
DSM (Gas-ID) Gas (1)	283720 GD ID	0		0	
Total Other Deferred FIT		(20,701,920)	(19,635,729)	(745,264)	(320,927)
Total Deferred FIT		(375,026,923)	(289,501,860)	(56,696,425)	(28,828,638)

Source of Allocation Factors: Results of Operations Report E-ALL-12A

CD AA - 7	100.000%	72.193%	19.437%	8.370%
CD AN - 9	100.000%	78.945%	21.055%	0.000%

(1) The remaining balance of the 1994 Gas Programs will be completely amortized as of June 2011. As no expense will be incurred during the rate year (ID, 12 ME June 2012 and WA, 12 ME December 2012), the 2010 accumulated deferred income tax is being eliminated in this adjustment.

C4

AVISTA UTILITIES
Accumulated Deferred Taxes
Associated with Accelerated Tax Depreciation
Estimated Balance at 12/31/2010

	Alloc	Balance at 12/31/2009	Balance at 12/31/2010	Average Balance 12/31/2010
Electric - 282900	ED AN	(250,678,851)	(263,241,309)	(256,960,080)
Gas North - 282900	GD AN	(49,014,334)	(55,945,310)	(52,479,822)
Oregon Gas - 282900	GD OR	(24,768,126)	(29,570,004)	(27,169,065)
General Utility - 282900	CD AA	(13,716,774)	(18,269,982)	(15,993,378)
General Utility - 282900	CD AN	(1,683,538)	(1,761,777)	(1,722,658)
Total Accelerated Tax Depr		(339,861,623) (1)	(368,788,382) (2)	(354,325,003) (X)

C5

Trial Balance
Balance as of 12-31-2009

				YTD - Actual 200912	*Adjustments in 2010*	*Adjustments in 2010*	*Adjustments in 2011*	Adjusted 200912 Balance
282900	ADFIT	CD	AA	(14,099,779.53)	383,006.00			(13,716,773.53)
282900	ADFIT	CD	AN	(1,683,538.33)	-			(1,683,538.33)
282900	ADFIT	ED	AN	(247,071,183.72)	(734,009.00)	(1,944,658.00)	(929,000.00)	(250,678,850.72)
282900	ADFIT	GD	AN	(48,279,819.13)	(221,342.00)	(513,173.00)		(49,014,334.13)
282900	ADFIT	GD	OR	(23,852,188.34)	(672,856.00)	(243,082.00)		(24,768,126.34)
				(334,986,509.05)	(1,245,201.00)	(2,700,913.00)	(929,000.00)	(339,861,623.05) (1)
					(1)	(2)	(3)	

(1) NSJ018 was recorded in September 2010 to adjust 2009 to actual per the tax return. These adjustments are necessary to restate the 12/31/09 balances for accurate AMA calculation.

(2) NSJ021 was recorded in September 2010 to adjust Cost of Removal (2006-2008) to actual per the Federal Income Tax Return. These adjustments are necessary to restate the 12/31/09 balances for accurate AMA calculation.

(3) NSJ012 was recorded in February 2011 to correct the Noxon ITC adjustment that was recorded in September 2010 to adjust 2009 to actual per the tax return. This adjustment is necessary to restate the 12/31/09 balance for accurate AMA calculation.

C2

Trial Balance
Balance as of 12-31-2010

				YTD - Actual 201012	*Adjustments in 2011*	Adjusted 201012 Balance
282900	ADFIT	CD	AA	(18,269,981.53)		(18,269,981.53)
282900	ADFIT	CD	AN	(1,761,777.33)		(1,761,777.33)
282900	ADFIT	ED	AN	(262,312,308.72)	(929,000.00)	(263,241,308.72)
282900	ADFIT	GD	AN	(55,945,310.13)		(55,945,310.13)
282900	ADFIT	GD	OR	(29,570,004.34)		(29,570,004.34)
				(367,859,382.05)	(929,000.00)	(368,788,382.05) (2)
					(1)	

(1) NSJ012 was recorded in February 2011 to correct the Noxon ITC adjustment that was recorded in September 2010 to adjust 2009 to actual per the tax return. This adjustment is necessary to restate the 12/31/10 balance for accurate AMA calculation.

AVISTA UTILITIES
Accumulated Deferred Taxes
AMA Twelve Months Ended December 31, 2010

	Colstrip PCB Elec 283200 ED AN	Bond Redemption 283850 CD AA
Dec-09	(575,160)	(3,708,385)
Dec-10	(503,426)	(7,475,987)
Total	(1,078,586)	(11,184,372)
Average	(539,293)	(5,592,186)
Jan-10	(569,182)	(3,664,560)
Feb-10	(563,204)	(3,616,929)
Mar-10	(557,226)	(3,569,299)
Apr-10	(551,248)	(3,521,605)
May-10	(545,270)	(3,894,661)
Jun-10	(539,293)	(3,819,508)
Jul-10	(533,315)	(3,768,490)
Aug-10	(527,337)	(3,717,233)
Sep-10	(521,359)	(3,665,977)
Oct-10	(515,381)	(3,614,720)
Nov-10	(509,404)	(3,565,871)
Total	(6,471,512)	(46,011,039)
Average of monthly averages	(539,293)	(3,834,253)

	DSM Elec-ID 283720 ED ID	DSM Gas-WA 283720 GD WA	DSM Gas-ID 283720 GD ID
Dec-09	(80,224)	(48,981)	(53,343)
Dec-10	-	-	(17,942)
Total	(80,224)	(48,981)	(71,285)
Average	(40,112)	(24,491)	(35,643)
Jan-10	(71,023)	(40,908)	(50,393)
Feb-10	(61,821)	(32,836)	(47,443)
Mar-10	(52,620)	(24,764)	(44,493)
Apr-10	(43,418)	(16,692)	(41,543)
May-10	(34,217)	(8,620)	(38,593)
Jun-10	(25,015)	0	(35,643)
Jul-10	(17,953)	0	(32,693)
Aug-10	(12,058)	0	(29,743)
Sep-10	(6,490)	0	(26,793)
Oct-10	(3,142)	0	(23,843)
Nov-10	(1,772)	0	(20,893)
Total	(369,641)	(148,311)	(427,716)
Average of monthly averages	(30,803)	(12,359)	(35,643)
Adjustment (1)	30,803	12,359	35,643
Average of monthly averages	0	0	0

Source: General Ledger

(1) The remaining balance of the 1994 Gas Programs will be completely amortized as of June 2011. As no expense will be incurred during the rate year (ID, 12 ME June 2012 and WA, 12 ME December 2012), the 2010 accumulated deferred income tax is being eliminated in this adjustment.

GL Account Balance Ferc Account : '283850' , Accounting Period : '2010%'

Ferc Acct:283850	Ferc Acct Desc:ADFIT FMB & MTN REDEEMED	Service:CD	Jurisdiction:AA
Accounting Period	Beginning Balance	Monthly Activity	Ending Balance
201001	-3,708,384.77	43,824.84	-3,664,559.93
201002	-3,664,559.93	47,630.54	-3,616,929.39
201003	-3,616,929.39	47,630.53	-3,569,298.86
201004	-3,569,298.86	47,694.14	-3,521,604.72
201005	-3,521,604.72	-373,056.44	-3,894,661.16
201006	-3,894,661.16	75,153.52	-3,819,507.64
201007	-3,819,507.64	51,017.80	-3,768,489.84
201008	-3,768,489.84	51,256.61	-3,717,233.23
201009	-3,717,233.23	51,256.61	-3,665,976.62
201010	-3,665,976.62	51,256.61	-3,614,720.01
201011	-3,614,720.01	48,849.07	-3,565,870.94
201012	-3,565,870.94	-3,910,115.96	-7,475,986.90
		Sum: -3,767,602.13	

GL Account Balance Ferc Account : '283720' , Accounting Period : '2010%'

Ferc Acct:283720	Ferc Acct Desc:ADFI	Service:GD	Jurisdiction:WA
Accounting Period	Beginning Balance	Monthly Activity	Ending Balance
201001	-48,980.53	8,072.05	-40,908.48
201002	-40,908.48	8,072.05	-32,836.43
201003	-32,836.43	8,072.05	-24,764.38
201004	-24,764.38	8,072.05	-16,692.33
201005	-16,692.33	8,072.05	-8,620.28
201006	-8,620.28	8,620.54	0.26
201007	0.26	0.00	0.26
201008	0.26	0.00	0.26
201009	0.26	0.00	0.26
201010	0.26	0.00	0.26
201011	0.26	0.00	0.26
201012	0.26	0.00	0.26
		Sum: 48,980.79	

GL Account Balance Ferc Account : '283720' , Accounting Period : '2010%'

Ferc Acct:283720	Ferc Acct Desc:ADFIT DSM	Service:GD	Jurisdiction:ID
Accounting Period	Beginning Balance	Monthly Activity	Ending Balance
201001	-53,342.85	2,950.03	-50,392.82
201002	-50,392.82	2,950.03	-47,442.79
201003	-47,442.79	2,950.03	-44,492.76
201004	-44,492.76	2,950.03	-41,542.73
201005	-41,542.73	2,950.03	-38,592.70
201006	-38,592.70	2,950.03	-35,642.67
201007	-35,642.67	2,950.03	-32,692.64
201008	-32,692.64	2,950.03	-29,742.61
201009	-29,742.61	2,950.03	-26,792.58
201010	-26,792.58	2,950.03	-23,842.55
201011	-23,842.55	2,950.03	-20,892.52
201012	-20,892.52	2,950.03	-17,942.49
		Sum: 35,400.36	

D1

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

DEFERRED GAIN
ON OFFICE BUILDING
GAS

Line No.	Description		System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense				
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses				
15	Depreciation				
16	Taxes		0		
17	Total Distribution		0	0	0
18	Customer Accounting				
19	Customer Service & Information				
20	Sales				
	Administrative and General				
21	Operating Expenses		0	0	
22	Depreciation				
23	Taxes				
24	Total Admin. & General		0	0	0
25	Total Gas Expense		0	0	0
26	Operating Income before FIT		0	0	0
	Federal Income Taxes				
27	Current Accrual	35.0%	0	0	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		$0	$0	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES		0	0	0
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING		(44)	(44)	0
43	TOTAL RATE BASE		($44)	($44)	$0

AVISTA UTILITIES
SALE/LEASEBACK OF GENERAL OFFICE FACILITY
RATE BASE ADJUSTMENT - DEFERRED GAIN AND RELATED TAXES
RATE PERIOD TWELVE MONTHS ENDED DECEMBER 31, 2009

CALCULATION OF AVERAGE OF MONTHLY AVERAGES:

		COMPANY		ELECTRIC		GAS	
		Deferred Gain Bal	Deferred Tax Bal	Deferred Gain Bal	Deferred Tax Bal	Deferred Gain Bal	Deferred Tax Bal
PERIOD		**253.850**	**190.850**	**253.850**	**190.850**	**253.850**	**190.850**
				(ED)		(GD)	
Dec	2009	(522,912)	183,046	(392,184)	137,276	(130,728)	45,770
Dec	2010	(261,456)	91,546	(196,092)	68,648	(65,364)	22,898
TOTAL		(784,368)	274,592	(588,276)	205,924	(196,092)	68,668
Divide by 2		÷2	÷2	÷2	÷2	÷2	÷2
Beg/End Mo Avg		(392,184)	137,296	(294,138)	102,962	(98,046)	34,334
Jan	2010	(501,124)	175,421	(375,843)	131,557	(125,281)	43,864
Feb	2010	(479,336)	167,796	(359,502)	125,838	(119,834)	41,958
Mar	2010	(457,548)	160,171	(343,161)	120,119	(114,387)	40,052
Apr	2010	(435,760)	152,546	(326,820)	114,400	(108,940)	38,146
May	2010	(413,972)	144,921	(310,479)	108,681	(103,493)	36,240
Jun	2010	(392,184)	137,296	(294,138)	102,962	(98,046)	34,334
Jul	2010	(370,396)	129,671	(277,797)	97,243	(92,599)	32,428
Aug	2010	(348,608)	122,046	(261,456)	91,524	(87,152)	30,522
Sep	2010	(326,820)	114,421	(245,115)	85,805	(81,705)	28,616
Oct	2010	(305,032)	106,796	(228,774)	80,086	(76,258)	26,710
Nov	2010	(283,244)	99,171	(212,433)	74,367	(70,811)	24,804
TOTAL		(4,706,208)	1,647,552	(3,529,656)	1,235,544	(1,176,552)	412,008
Divide by 12		÷12	÷12	÷12	÷12	÷12	÷12
Ave Monthly Average		(392,184)	137,296	(294,138)	102,962	(98,046)	34,333

Allocation to Jurisdictions--Gas

	System	Washington	Idaho
Per Gas Allocation Note 4:	100.000%	68.518%	31.482%
Deferred Gain	(98,046)	(67,179)	(30,867)
Deferred Taxes	34,333	23,524	10,809
Net Gas Adj	**(63,713)**	**(43,655)**	**(20,058)**

D3

GL Account Balance

Jurisdiction:. Statind:DL

Ferc Acct	Service	Accounting Period	Ferc Acct Desc	Beginning Balance	Monthly Activity	Ending Balance		
190850	ED	201001	ADFIT GAIN GENERAL OFFICE BLDG	137,275.65	-5,719.00	131,556.65	12/31/2009	$137,275.65
		201002	ADFIT GAIN GENERAL OFFICE BLDG	131,556.65	-5,719.00	125,837.65		-68,628.00
		201003	ADFIT GAIN GENERAL OFFICE BLDG	125,837.65	-5,719.00	120,118.65		68,647.65
		201004	ADFIT GAIN GENERAL OFFICE BLDG	120,118.65	-5,719.00	114,399.65		
		201005	ADFIT GAIN GENERAL OFFICE BLDG	114,399.65	-5,719.00	108,680.65	12/31/2010	$68,647.65
		201006	ADFIT GAIN GENERAL OFFICE BLDG	108,680.65	-5,719.00	102,961.65		-68,628.00
		201007	ADFIT GAIN GENERAL OFFICE BLDG	102,961.65	-5,719.00	97,242.65		19.65
		201008	ADFIT GAIN GENERAL OFFICE BLDG	97,242.65	-5,719.00	91,523.65		
		201009	ADFIT GAIN GENERAL OFFICE BLDG	91,523.65	-5,719.00	85,804.65		
		201010	ADFIT GAIN GENERAL OFFICE BLDG	85,804.65	-5,719.00	80,085.65		
		201011	ADFIT GAIN GENERAL OFFICE BLDG	80,085.65	-5,719.00	74,366.65		
		201012	ADFIT GAIN GENERAL OFFICE BLDG	74,366.65	-5,719.00	68,647.65		
					-68,628.00			
190850	GD	201001	ADFIT GAIN GENERAL OFFICE BLDG	45,769.55	-1,906.00	43,863.55	12/31/2009	$45,769.55
		201002	ADFIT GAIN GENERAL OFFICE BLDG	43,863.55	-1,906.00	41,957.55		-22,872.00
		201003	ADFIT GAIN GENERAL OFFICE BLDG	41,957.55	-1,906.00	40,051.55		22,897.55
		201004	ADFIT GAIN GENERAL OFFICE BLDG	40,051.55	-1,906.00	38,145.55		
		201005	ADFIT GAIN GENERAL OFFICE BLDG	38,145.55	-1,906.00	36,239.55	12/31/2010	$22,897.55
		201006	ADFIT GAIN GENERAL OFFICE BLDG	36,239.55	-1,906.00	34,333.55		-22,872.00
		201007	ADFIT GAIN GENERAL OFFICE BLDG	34,333.55	-1,906.00	32,427.55		25.55
		201008	ADFIT GAIN GENERAL OFFICE BLDG	32,427.55	-1,906.00	30,521.55		
		201009	ADFIT GAIN GENERAL OFFICE BLDG	30,521.55	-1,906.00	28,615.55		
		201010	ADFIT GAIN GENERAL OFFICE BLDG	28,615.55	-1,906.00	26,709.55		
		201011	ADFIT GAIN GENERAL OFFICE BLDG	26,709.55	-1,906.00	24,803.55		
		201012	ADFIT GAIN GENERAL OFFICE BLDG	24,803.55	-1,906.00	22,897.55		
					-22,872.00			
253850	ED	201001	DEF GAIN ON BLDG SALE/LEASEBAC	-392,184.00	16,341.00	-375,843.00	12/31/2009	($392,184.00)
		201002	DEF GAIN ON BLDG SALE/LEASEBAC	-375,843.00	16,341.00	-359,502.00		196,092.00
		201003	DEF GAIN ON BLDG SALE/LEASEBAC	-359,502.00	16,341.00	-343,161.00		-196,092.00
		201004	DEF GAIN ON BLDG SALE/LEASEBAC	-343,161.00	16,341.00	-326,820.00		
		201005	DEF GAIN ON BLDG SALE/LEASEBAC	-326,820.00	16,341.00	-310,479.00	12/31/2010	($196,092.00)
		201006	DEF GAIN ON BLDG SALE/LEASEBAC	-310,479.00	16,341.00	-294,138.00		196,092.00
		201007	DEF GAIN ON BLDG SALE/LEASEBAC	-294,138.00	16,341.00	-277,797.00		0.00
		201008	DEF GAIN ON BLDG SALE/LEASEBAC	-277,797.00	16,341.00	-261,456.00		
		201009	DEF GAIN ON BLDG SALE/LEASEBAC	-261,456.00	16,341.00	-245,115.00		
		201010	DEF GAIN ON BLDG SALE/LEASEBAC	-245,115.00	16,341.00	-228,774.00		
		201011	DEF GAIN ON BLDG SALE/LEASEBAC	-228,774.00	16,341.00	-212,433.00		
		201012	DEF GAIN ON BLDG SALE/LEASEBAC	-212,433.00	16,341.00	-196,092.00		
					196,092.00			
253850	GD	201001	DEF GAIN ON BLDG SALE/LEASEBAC	-130,728.00	5,447.00	-125,281.00	12/31/2009	($130,728.00)
		201002	DEF GAIN ON BLDG SALE/LEASEBAC	-125,281.00	5,447.00	-119,834.00		65,364.00
		201003	DEF GAIN ON BLDG SALE/LEASEBAC	-119,834.00	5,447.00	-114,387.00		-65,364.00
		201004	DEF GAIN ON BLDG SALE/LEASEBAC	-114,387.00	5,447.00	-108,940.00		
		201005	DEF GAIN ON BLDG SALE/LEASEBAC	-108,940.00	5,447.00	-103,493.00	12/31/2010	($65,364.00)
		201006	DEF GAIN ON BLDG SALE/LEASEBAC	-103,493.00	5,447.00	-98,046.00		65,364.00
		201007	DEF GAIN ON BLDG SALE/LEASEBAC	-98,046.00	5,447.00	-92,599.00		0.00
		201008	DEF GAIN ON BLDG SALE/LEASEBAC	-92,599.00	5,447.00	-87,152.00		
		201009	DEF GAIN ON BLDG SALE/LEASEBAC	-87,152.00	5,447.00	-81,705.00		
		201010	DEF GAIN ON BLDG SALE/LEASEBAC	-81,705.00	5,447.00	-76,258.00		
		201011	DEF GAIN ON BLDG SALE/LEASEBAC	-76,258.00	5,447.00	-70,811.00		
		201012	DEF GAIN ON BLDG SALE/LEASEBAC	-70,811.00	5,447.00	-65,364.00		
					65,364.00			

E,

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

GAS INVENTORY
ADJUSTMENT
GAS

Line No.	Description		System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense				
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses				
15	Depreciation				
16	Taxes		0		
17	Total Distribution		0	0	0
18	Customer Accounting				
19	Customer Service & Information				
20	Sales				
	Administrative and General				
21	Operating Expenses				
22	Depreciation				
23	Taxes				
24	Total Admin. & General		0	0	0
25	Total Gas Expense		0	0	0
26	Operating Income before FIT		0	0	0
	Federal Income Taxes				
27	Current Accrual	35.0%	0	0	0
28	Deferred FIT				
29	Amort ITC				
30	NET OPERATING INCOME		$0	$0	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY		10,226	10,226	0
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$10,226	$10,226	$0

E2

AVISTA UTILITIES
Calculation of Gas Inventory
Twelve Months Ended December 31, 2010

GAS IN STORAGE:	Jackson Prairie Working Gas Acct 164100 GDAN	Jackson Prairie Recoverable Base Gas Acct 117100 GDAN
Dec-09	10,703,361	0
Dec-10	14,537,136	1,870,765
Total	25,240,497	1,870,765
Divide by 2	÷2	÷2
Beg/End mo avg.	12,620,249	935,383
Jan-10	8,325,008	0
Feb-10	4,910,347	0
Mar-10	4,754,928	0
Apr-10	6,678,460	4,329,646
May-10	13,540,473	4,329,646
Jun-10	17,551,291	1,870,765
Jul-10	17,977,549	1,870,765
Aug-10	16,935,526	1,870,765
Sep-10	18,742,053	1,870,765
Oct-10	19,139,119	1,870,765
Nov-10	14,818,493	1,870,765
Totals	$155,993,496	$20,819,265
	÷12	÷12
Average Monthly Average	$12,999,458	$1,734,939

Allocation to Jurisdictions:	Total	Washington	Idaho
Allocation Note 1	100.00%	**69.40%**	**30.60%**
System Contract Demand-SGS-1 Demand			
WORKING GAS INVENTORY STORAGE RATE BASE	12,999,458	9,021,624	3,977,834
RECOVERABLE CUSHION GAS STORAGE RATE BASE	1,734,939	1,204,048	530,891
TOTAL INVENTORY STORAGE RATE BASE ADJ	14,734,397	10,225,672	4,508,725

NOTES:
(1) From account balance listing - Jackson Prairie.

GL Account Balance Ferc Account : '164100'

Ferc Acct:164100 Service:GD Jurisdiction:AN Ferc Acct Desc:GAS STORED UNDERGND-408AVA-JP

Accounting Period	Beginning Balance	Monthly Activity	Ending Balance
201001	10,703,361.18	-2,378,352.77	8,325,008.41
201002	8,325,008.41	-3,414,661.70	4,910,346.71
201003	4,910,346.71	-155,418.27	4,754,928.44
201004	4,754,928.44	1,923,531.71	6,678,460.15
201005	6,678,460.15	6,862,012.98	13,540,473.13
201006	13,540,473.13	4,010,818.21	17,551,291.34
201007	17,551,291.34	426,257.89	17,977,549.23
201008	17,977,549.23	-1,042,023.38	16,935,525.85
201009	16,935,525.85	1,806,526.70	18,742,052.55
201010	18,742,052.55	397,066.80	19,139,119.35
201011	19,139,119.35	-4,320,626.33	14,818,493.02
201012	14,818,493.02	-281,357.09	14,537,135.93
Total for All Values	154,076,609.36	3,833,774.75	157,910,384.11
200912	25,582,736.89	-14,879,375.71	10,703,361.18

GL Account Balance Ferc Account : '117100' , Accounting Period : '2010%'

Ferc Acct:117100 Service:GD Jurisdiction:AN Ferc Acct Desc:GAS STORED-RECOVERABLE BASE GA

Accounting Period	Beginning Balance	Monthly Activity	Ending Balance
201001	0.00	0.00	0.00
201002	0.00	0.00	0.00
201003	0.00	0.00	0.00
201004	0.00	4,329,646.35	4,329,646.35
201005	4,329,646.35	0.00	4,329,646.35
201006	4,329,646.35	-2,458,881.36	1,870,764.99
201007	1,870,764.99	0.00	1,870,764.99
201008	1,870,764.99	0.00	1,870,764.99
201009	1,870,764.99	0.00	1,870,764.99
201010	1,870,764.99	0.00	1,870,764.99
201011	1,870,764.99	0.00	1,870,764.99
201012	1,870,764.99	0.00	1,870,764.99
		Sum: 1,870,764.99	
200912	0.00	0.00	0.00

F,

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

CUSTOMER ADVANCES
GAS

Line No.	Description	System	Washington	Idaho
	REVENUES			
1	Total General Business	$0		
2	Total Transportation			
3	Other Revenues			
4	Total Gas Revenues	0	0	0
	EXPENSES			
5	Exploration & Development			
	Production			
6	City Gate Purchases			
7	Purchased Gas Expense			
8	Net Nat. Gas Storage Trans			
9	Total Production	0	0	0
	Underground Storage			
10	Operating Expenses			
11	Depreciation			
12	Taxes			
13	Total Underground Storage	0	0	0
	Distribution			
14	Operating Expenses			
15	Depreciation			
16	Taxes			
17	Total Distribution	0	0	0
18	Customer Accounting			
19	Customer Service & Information			
20	Sales			
	Administrative and General			
21	Operating Expenses			
22	Depreciation			
23	Taxes			
24	Total Admin. & General	0	0	0
25	Total Gas Expense	0	0	0
26	Operating Income before FIT	0	0	0
	Federal Income Taxes			
27	Current Accrual (at 35%)	0	0	0
28	Amort ITC			
29	Deferred FIT			
30	NET OPERATING INCOME	$0	$0	$0
	RATE BASE			
	PLANT IN SERVICE			
31	Underground Storage			
32	Distribution Plant	(31)	(31)	0
33	General Plant			
34	Total Plant in Service	(31)	(31)	0
	ACCUMULATED DEPRECIATION			
35	Underground Storage			
36	Distribution Plant			
37	General Plant			
38	Total Accum. Depreciation	0	0	0
39	DEFERRED TAXES			
40	GAS INVENTORY			
41	WORKING CAPITAL			
42	GAIN ON SALE OF BUILDING			
43	TOTAL RATE BASE	($31)	($31)	$0

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AVISTA UTILITIES
CUSTOMER ADVANCES
AVERAGE OF MONTHLY AVERAGE SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010

Account Number	TOTAL	ELECTRIC		GAS	
		Washington	Idaho	Washington	Idaho
252100 CDAA	($85)	($36)	($24)	($16)	($9)
252100 ED	(1,137,008)	(278,556)	(858,452)		
252100 GD	(104,489)			(30,931)	(73,558)
TOTALS	($1,241,582)	($278,592)	($858,476)	($30,947)	($73,567)

AVISTA UTILITIES
ALLOCATION OF UNASSIGNED CUSTOMER ADVANCES
TWELVE MONTHS ENDED DECEMBER 31, 2010

	Distribution Plant	Percentage	Unassigned Advances Account 252100
WWP Elec			
WA	642,143,363	38.07%	(36)
ID	406,220,994	24.08%	(24)
WWP Gas			
WA	269,469,380	15.98%	(16)
ID	148,344,522	8.80%	(9)
WPNG Gas			
OR	220,477,278	13.07%	(13)
TOTAL	1,686,655,537	100.0%	**(98)**

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AVISTA UTILITIES
RATE BASE ADJUSTMENT - CUSTOMER ADVANCES
TWELVE MONTHS ENDED DECEMBER 31, 2010

CALCULATION OF AVERAGE OF MONTHLY AVERAGES:

PERIOD		TOTAL	ELECTRIC		GAS	
		Customer Advance Bal 252000	Wash 252000	Idaho 252000	Wash 252000	Idaho 252000
		CDAA				
Dec	2009	0				
Dec	2010	0				
TOTAL		0				
Divide by 2		÷2				
Beg/End Mo Avg		0				
Jan	2010	0				
Feb	2010	0				
Mar	2010	0				
Apr	2010	• (300)				
May	2010	0				
Jun	2010	0				
Jul	2010	0				
Aug	2010	0				
Sep	2010	0				
Oct	2010	• (874)				
Nov	2010	0				
TOTAL		(1,174)				
Divide by 12		÷12				
		(98)	See allocation of unassigned customer advances worksheet.			
Ave Monthly Average		(85)	(36)	(24)	(16)	(9)

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AVISTA UTILITIES
RATE BASE ADJUSTMENT - CUSTOMER ADVANCES
TWELVE MONTHS ENDED DECEMBER 31, 2010

CALCULATION OF AVERAGE OF MONTHLY AVERAGES:

PERIOD		TOTAL Customer Advance Bal 252000	ELECTRIC EDWA Wash 252000 WA	ELECTRIC EDID Idaho 252000 ID
Dec	2009	(1,168,940)	(249,618)	(919,322)
Dec	2010	(985,021)	(279,197)	(705,824)
TOTAL		(2,153,961)	(528,815)	(1,625,146)
Divide by 2		÷2	÷2	÷2
Beg/End Mo Avg		(1,076,981)	(264,408)	(812,573)
Jan	2010	(1,168,940)	(249,618)	(919,322)
Feb	2010	(1,166,033)	(248,618)	(917,415)
Mar	2010	(1,166,033)	(248,618)	(917,415)
Apr	2010	(1,209,257)	(292,762)	(916,495)
May	2010	(1,252,161)	(326,732)	(925,429)
Jun	2010	(1,199,927)	(300,662)	(899,265)
Jul	2010	(1,124,735)	(271,432)	(853,303)
Aug	2010	(1,125,915)	(271,432)	(854,483)
Sep	2010	(1,151,192)	(298,549)	(852,643)
Oct	2010	(1,025,017)	(297,759)	(727,258)
Nov	2010	(977,911)	(272,087)	(705,824)
TOTAL		(13,644,102)	(3,342,677)	(10,301,425)
Divide by 12		÷12	÷12	÷12
Ave Monthly Average		(1,137,009)	(278,556)	(858,452)

AVISTA UTILITIES
RATE BASE ADJUSTMENT - CUSTOMER ADVANCES
TWELVE MONTHS ENDED DECEMBER 31, 2010

CALCULATION OF AVERAGE OF MONTHLY AVERAGES:

PERIOD		TOTAL Customer Advance Bal 252000	GAS GDWA Wash 252000	GAS GDID Idaho 252000
Dec	2009	(111,392)	(37,834)	(73,558)
Dec	2010	(104,189)	(30,631)	(73,558)
TOTAL		(215,581)	(68,465)	(147,116)
Divide by 2		÷2	÷2	÷2
Beg/End Mo Avg		(107,791)	(34,233)	(73,558)
Jan	2010	(104,189)	(30,631)	(73,558)
Feb	2010	(104,189)	(30,631)	(73,558)
Mar	2010	(104,189)	(30,631)	(73,558)
Apr	2010	(104,189)	(30,631)	(73,558)
May	2010	(104,189)	(30,631)	(73,558)
Jun	2010	(104,189)	(30,631)	(73,558)
Jul	2010	(104,189)	(30,631)	(73,558)
Aug	2010	(104,189)	(30,631)	(73,558)
Sep	2010	(104,189)	(30,631)	(73,558)
Oct	2010	(104,189)	(30,631)	(73,558)
Nov	2010	(104,189)	(30,631)	(73,558)
TOTAL		(1,253,870)	(371,174)	(882,696)
Divide by 12		÷12	÷12	÷12
Ave Monthly Average		(104,489)	(30,931)	(73,558)

ELECTRIC UTILITY PLANT
For Twelve Months Ended December 31, 2010
Average of Monthly Averages Basis

Report ID: E-PLT-12A

Ref/Basis	Account	Description	SYSTEM Direct	SYSTEM Allocated	SYSTEM Total	WASHINGTON Direct	WASHINGTON Allocated	WASHINGTON Total	IDAHO Direct	IDAHO Allocated	IDAHO Total
		TRANSMISSION PLANT:									
1	350XXX	Land & Land Rights	0	16,676,907	16,676,907	0	10,866,673	10,866,673	0	5,810,234	5,810,234
1	352XXX	Structures & Improvements	0	16,116,575	16,116,575	0	10,501,560	10,501,560	0	5,615,015	5,615,015
1	353000	Station Equipment	0	182,974,786	182,974,786	0	119,226,371	119,226,371	0	63,748,415	63,748,415
1	354000	Towers & Fixtures	0	17,116,689	17,116,689	0	11,153,235	11,153,235	0	5,963,454	5,963,454
1	355000	Poles & Fixtures	0	133,036,655	133,036,655	0	86,686,684	86,686,684	0	46,349,971	46,349,971
1	356000	Overhead Conductors & Devices	0	106,866,660	106,866,660	0	69,634,316	69,634,316	0	37,232,344	37,232,344
1	357000	Underground Conduit	0	2,605,488	2,605,488	0	1,697,736	1,697,736	0	907,752	907,752
1	358000	Underground Conductors & Devices	0	2,330,072	2,330,072	0	1,518,275	1,518,275	0	811,797	811,797
1	359000	Roads & Trails	0	1,872,246	1,872,246	0	1,219,955	1,219,955	0	652,291	652,291
		TOTAL TRANSMISSION PLANT	0	479,596,078	479,596,078	0	312,504,805	312,504,805	0	167,091,273	167,091,273
		DISTRIBUTION PLANT:									
99	360200	Land & Land Rights	4,289,417	0	4,289,417	3,321,680	0	3,321,680	967,737	0	967,737
99	360400	Land Easements	368,650	0	368,650	58,252	0	58,252	310,398	0	310,398
99	361000	Structures & Improvements	14,148,491	0	14,148,491	9,662,293	0	9,662,293	4,486,198	0	4,486,198
99	362000	Station Equipment	94,365,153	0	94,365,153	60,487,489	0	60,487,489	33,877,664	0	33,877,664
99	364000	Poles, Towers, & Fixtures	221,392,882	0	221,392,882	134,249,552	0	134,249,552	87,143,330	0	87,143,330
99	365000	Overhead Conductors & Devices	144,096,725	0	144,096,725	85,951,738	0	85,951,738	58,144,987	0	58,144,987
99	366000	Underground Conduit	76,248,392	0	76,248,392	47,146,537	0	47,146,537	29,101,855	0	29,101,855
99	367000	Underground Conductors & Devices	126,218,425	0	126,218,425	80,927,238	0	80,927,238	45,291,187	0	45,291,187
99	368000	Line Transformers	173,898,591	0	173,898,591	113,462,415	0	113,462,415	60,436,176	0	60,436,176
99	369XXX	Services	117,572,663	0	117,572,663	73,032,506	0	73,032,506	44,540,157	0	44,540,157
99	370000	Meters	45,469,221	0	45,469,221	16,666,570	0	16,666,570	28,802,651	0	28,802,651
99	373XXX	Street Light & Signal Systems	30,295,747	0	30,295,747	17,177,093	0	17,177,093	13,118,654	0	13,118,654
99	374000	Asset Recovery Obligation (NOT PICKED UP)	0	0	0	0	0	0	0	0	0
		TOTAL DISTRIBUTION PLANT	1,048,364,357	0	1,048,364,357	642,143,363	0	642,143,363	406,220,994	0	406,220,994
		GENERAL PLANT: (From Report C-GPL)									
4	389XXX	Land & Land Rights	818,677	3,188,283	4,006,960	371,603	2,116,701	2,488,304	447,074	1,071,582	1,518,656
4	390XXX	Structures & Improvements	6,825,840	35,792,245	42,618,085	1,901,002	23,762,471	25,663,473	4,924,838	12,029,774	16,954,612
4	391XXX	Office Furniture & Equipment	0	27,254,333	27,254,333	0	18,094,152	18,094,152	0	9,160,181	9,160,181
4	392XXX	Transportation Equipment	10,645,479	6,262,591	16,908,070	7,567,411	4,157,734	11,725,145	3,078,068	2,104,857	5,182,925
4	393000	Stores Equipment	307,218	1,172,545	1,479,763	127,934	778,453	906,387	179,284	394,092	573,376
4	394000	Tools, Shop & Garage Equipment	1,739,702	4,691,776	6,431,478	1,305,617	3,114,870	4,420,487	434,085	1,576,906	2,010,991
4	395000	Laboratory Equipment	365,836	1,507,460	1,873,296	227,563	1,000,803	1,228,366	138,273	506,657	644,930
4	396XXX	Power Operated Equipment	22,582,722	9,323,074	31,905,796	14,647,638	6,189,589	20,837,227	7,935,084	3,133,485	11,068,569
4	397XXX	Communications Equipment	11,382,319	44,356,736	55,739,055	5,954,649	29,448,437	35,403,086	5,427,670	14,908,299	20,335,969
4	398000	Miscellaneous Equipment	5,446	344,491	349,937	1,350	228,708	230,058	4,096	115,783	119,879
99	399100	Asset Recovery Obligation (NOT PICKED UP)	0	0	0	0	0	0	0	0	0
		TOTAL GENERAL PLANT	54,673,239	133,893,534	188,566,773	32,104,767	88,891,918	120,996,685	22,568,472	45,001,616	67,570,088
		TOTAL PLANT IN SERVICE	1,103,690,186	1,800,771,424	2,904,461,610	674,900,720	1,175,387,868	1,850,288,588	428,789,466	625,383,556	1,054,173,022
99	107XXX	CONSTRUCTION WORK IN PROGRESS	0	0	0	0	0	0	0	0	0
		GROSS ELECTRIC PLANT	1,103,690,186	1,800,771,424	2,904,461,610	674,900,720	1,175,387,868	1,850,288,588	428,789,466	625,383,556	1,054,173,022

GAS UTILITY PLANT
For Twelve Months Ended December 31, 2010
Average of Monthly Averages Basis

Report ID: G-PLT-12A

Ref/Basis	Account	Description	SYSTEM Direct	SYSTEM Allocated	SYSTEM Total	WASHINGTON Direct	WASHINGTON Allocated	WASHINGTON Total	IDAHO Direct	IDAHO Allocated	IDAHO Total
		PLANT IN SERVICE									
		INTANGIBLE PLANT--SOFTWARE:									
		(from Report C-IPL)									
4	C-IPL	Misc Intangible Plt (303000)	872,591	40,859	913,450	704,141	27,996	732,137	168,450	12,863	181,313
4	C-IPL	Misc Intangible Plt-Mainframe Software (303100)	0	5,638,060	5,638,060	0	3,863,086	3,863,086	0	1,774,974	1,774,974
4	C-IPL	Misc Intangible Plant-PC Software (303110)	0	2,033,140	2,033,140	0	1,393,067	1,393,067	0	640,073	640,073
		TOTAL INTANGIBLE PLANT--SOFTWARE	872,591	7,712,059	8,584,650	704,141	5,284,149	5,988,290	168,450	2,427,910	2,596,360
		UNDERGROUND STORAGE PLANT:									
1	350XXX	Land & Land Rights	0	472,775	472,775	0	328,106	328,106	0	144,669	144,669
1	351XXX	Structures & Improvements	0	1,290,965	1,290,965	0	895,930	895,930	0	395,035	395,035
1	352XXX	Wells	0	12,823,225	12,823,225	0	8,899,318	8,899,318	0	3,923,907	3,923,907
1	353000	Lines	0	1,050,333	1,050,333	0	728,931	728,931	0	321,402	321,402
1	354000	Compressor Station Equipment	0	11,211,351	11,211,351	0	7,780,678	7,780,678	0	3,430,673	3,430,673
1	355000	Measuring & Regulating Equipment	0	173,784	173,784	0	120,606	120,606	0	53,178	53,178
1	356000	Purification Equipment	0	407,617	407,617	0	282,886	282,886	0	124,731	124,731
1	357000	Other Equipment	0	1,456,064	1,456,064	0	1,010,508	1,010,508	0	445,556	445,556
		TOTAL UNDERGROUND STORAGE PLANT	0	28,886,114	28,886,114	0	20,046,963	20,046,963	0	8,839,151	8,839,151
		DISTRIBUTION PLANT:									
6	374200	Land & Land Rights	84,970	0	84,970	60,300	0	60,300	24,670	0	24,670
6	374400	Land & Land Rights	64,233	0	64,233	1,098	0	1,098	63,135	0	63,135
6	375000	Structures & Improvements	630,163	22,254	652,417	443,137	15,537	458,674	187,026	6,717	193,743
6	376000	Mains	208,611,750	2,512,521	211,124,271	133,012,093	1,754,167	134,766,260	75,599,657	758,354	76,358,011
6	378000	Measuring & Reg Station Equip-General	4,671,791	57,440	4,729,231	2,899,315	40,103	2,939,418	1,772,476	17,337	1,789,813
6	379000	Measuring & Reg Station Equip-City Gate	5,922,347	60,967	5,983,314	1,771,844	42,565	1,814,409	4,150,503	18,402	4,168,905
6	380000	Services	135,106,481	0	135,106,481	89,131,217	0	89,131,217	45,975,264	0	45,975,264
6	381000	Meters	57,402,294	0	57,402,294	38,230,295	0	38,230,295	19,171,999	0	19,171,999
6	382000	Meter Installations	0	0	0	0	0	0	0	0	0
6	383000	House Regulators	0	0	0	0	0	0	0	0	0
6	384000	House Regulator Installations	0	0	0	0	0	0	0	0	0
6	385000	Industrial Measuring & Reg Sta Equip	2,666,691	0	2,666,691	2,067,709	0	2,067,709	598,982	0	598,982
6	387000	Other Equipment	0	0	0	0	0	0	0	0	0
		TOTAL DISTRIBUTION PLANT	415,160,720	2,653,182	417,813,902	267,617,008	1,852,372	269,469,380	147,543,712	800,810	148,344,522
		GENERAL PLANT: (From C-GPL)									
4	389XXX	Land & Land Rights	668,330	851,719	1,520,049	576,272	583,581	1,159,853	92,058	268,138	360,196
4	390XXX	Structures & Improvements	2,253,911	9,193,548	11,447,459	1,312,914	6,299,235	7,612,149	940,997	2,894,313	3,835,310
4	391XXX	Office Furniture & Equipment	0	7,201,580	7,201,580	0	4,934,379	4,934,379	0	2,267,201	2,267,201
4	392XXX	Transportation Equipment	4,642,712	1,199,159	5,841,871	3,421,417	821,640	4,243,057	1,221,295	377,519	1,598,814
4	393000	Stores Equipment	159,410	214,792	374,202	115,527	147,171	262,698	43,883	67,621	111,504
4	394000	Tools, Shop & Garage Equipment	1,465,625	1,958,399	3,424,024	1,008,925	1,341,856	2,350,781	456,700	616,543	1,073,243
4	395000	Laboratory Equipment	134,286	303,537	437,823	101,281	207,977	309,258	33,005	95,560	128,565
4	396XXX	Power Operated Equipment	3,782,816	610,899	4,393,715	2,850,515	418,576	3,269,091	932,301	192,323	1,124,624

GL Account Balance Ferc Account : '252000'

Accounting Year:2010

Ferc Acct	Service	Jurisdictio	Accountin	Beginning Balance	Monthly Activity	Ending Balance
252000	CD	AA	201001	0.00	0.00	0.00
			201002	0.00	0.00	0.00
			201003	0.00	0.00	0.00
			201004	0.00	-300.00	-300.00
			201005	-300.00	300.00	0.00
			201006	0.00	0.00	0.00
			201007	0.00	0.00	0.00
			201008	0.00	0.00	0.00
			201009	0.00	0.00	0.00
			201010	0.00	-874.25	-874.25
			201011	-874.25	874.25	0.00
			201012	0.00	0.00	0.00
		Sum		-1,174.25	0.00	-1,174.25
	ED	ID	201001	-919,322.21	0.00	-919,322.21
			201002	-919,322.21	1,907.00	-917,415.21
			201003	-917,415.21	0.00	-917,415.21
			201004	-917,415.21	920.00	-916,495.21
			201005	-916,495.21	-8,934.00	-925,429.21
			201006	-925,429.21	26,164.00	-899,265.21
			201007	-899,265.21	45,962.00	-853,303.21
			201008	-853,303.21	-1,180.00	-854,483.21
			201009	-854,483.21	1,840.00	-852,643.21
			201010	-852,643.21	125,384.73	-727,258.48
			201011	-727,258.48	21,434.94	-705,823.54
			201012	-705,823.54	0.00	-705,823.54
		Sum		-10,408,176.12	213,498.67	-10,194,677.45
	ED	WA	201001	-249,617.50	0.00	-249,617.50
			201002	-249,617.50	1,000.00	-248,617.50
			201003	-248,617.50	0.00	-248,617.50
			201004	-248,617.50	-44,144.00	-292,761.50
			201005	-292,761.50	-33,970.00	-326,731.50
			201006	-326,731.50	26,070.00	-300,661.50
			201007	-300,661.50	29,230.00	-271,431.50
			201008	-271,431.50	0.00	-271,431.50
			201009	-271,431.50	-27,117.00	-298,548.50
			201010	-298,548.50	790.00	-297,758.50
			201011	-297,758.50	25,672.00	-272,086.50
			201012	-272,086.50	-7,110.00	-279,196.50
		Sum		-3,327,881.00	-29,579.00	-3,357,460.00
	GD	ID	201001	-73,557.60	0.00	-73,557.60
			201002	-73,557.60	0.00	-73,557.60

		201003	-73,557.60	0.00	-73,557.60
		201004	-73,557.60	0.00	-73,557.60
		201005	-73,557.60	0.00	-73,557.60
		201006	-73,557.60	0.00	-73,557.60
		201007	-73,557.60	0.00	-73,557.60
		201008	-73,557.60	0.00	-73,557.60
		201009	-73,557.60	0.00	-73,557.60
		201010	-73,557.60	0.00	-73,557.60
		201011	-73,557.60	0.00	-73,557.60
		201012	-73,557.60	0.00	-73,557.60
	Sum		-882,691.20	0.00	-882,691.20
GD	WA	201001	-37,833.74	7,203.06	-30,630.68
		201002	-30,630.68	0.00	-30,630.68
		201003	-30,630.68	0.00	-30,630.68
		201004	-30,630.68	0.00	-30,630.68
		201005	-30,630.68	0.00	-30,630.68
		201006	-30,630.68	0.00	-30,630.68
		201007	-30,630.68	0.00	-30,630.68
		201008	-30,630.68	0.00	-30,630.68
		201009	-30,630.68	0.00	-30,630.68
		201010	-30,630.68	0.00	-30,630.68
		201011	-30,630.68	0.00	-30,630.68
		201012	-30,630.68	0.00	-30,630.68
	Sum		-374,771.22	7,203.06	-367,568.16
Total for 252000			-14,994,693.79	191,122.73	-14,803,571.06

GAS UTILITY PLANT For Twelve Months Ended December 31, 2010 Average of Monthly Average Basis	Report ID: OR-PLT-12A

Ref/Basis	Account	Description	********** OREGON ********** Direct	Allocated	Total
		PLANT IN SERVICE			
		INTANGIBLE PLANT:			
99	303000	Intangible Plant - Miscellaneous	410,126	0	410,126
99	C-IPL	Misc Intangible Plt (303000)	0	0	0
99	C-IPL	Misc Intangible Plt-Mainframe Software (303100)	2,474,489	0	2,474,489
99	C-IPL	Misc Intangible Plant-PC Software (303110)	868,654	0	868,654
		TOTAL INTANGIBLE PLANT	3,753,269	0	3,753,269
		UNDERGROUND STORAGE PLANT:			
99	350100	Land in Fee	117	0	117
99	351100	S & I - Wells	0	0	0
99	351200	S & I - Compress Station	1,044	0	1,044
99	351300	S & I - Meas/Regulating Station	0	0	0
99	351400	S & I - Office	10,203	0	10,203
99	352000	Wells	1,398,114	0	1,398,114
99	352100	Wells - Leases	0	0	0
99	353000	Lines	62,960	0	62,960
99	354000	Compressor Stn Equipment	2,871,393	0	2,871,393
99	355000	Meas & Regulating Equipment	0	0	0
99	356000	Meas & Regulating Equipment	0	0	0
99	357000	Other Equipment	4,893	0	4,893
		TOTAL UNDERGROUND STORAGE PLANT	4,348,724	0	4,348,724
		PRODUCTION PLANT:			
99	304000	Land & Land Rights	7,628	0	7,628
99	311XXX	LPG Equipment	0	0	0
		TOTAL PRODUCTION PLANT	7,628	0	7,628
		DISTRIBUTION PLANT:			
99	374200	Land & Land Rights	17,965	0	17,965
99	374400	Land Easements	91,993	0	91,993
99	375000	Structures & Improvements	284,130	0	284,130
99	376000	Mains	126,368,968	0	126,368,968
99	378000	Measuring & Reg Station Equip-General	2,730,682	0	2,730,682
99	379000	Measuring & Reg Station Equip-City Gate	1,388,141	0	1,388,141
99	380000	Services	56,823,745	0	56,823,745
99	381000	Meters	31,605,860	0	31,605,860
99	385000	Industrial Measuring & Reg Sta Equip	1,165,255	0	1,165,255
99	387000	Other Equipment	539	0	539
		TOTAL DISTRIBUTION PLANT	220,477,278	0	220,477,278

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AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

CUSTOMER DEPOSITS
RESTATING ADJUSTMENTS
GAS

Line No.	Description		System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense				
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses		0	0	
15	Depreciation				
16	Taxes		0		0
17	Total Distribution		0	0	0
18	Customer Accounting		3	3	
19	Customer Service & Information				
20	Sales				
	Administrative and General				
21	Operating Expenses		0	0	
22	Depreciation				
23	Taxes				
24	Total Admin. & General		0	0	0
25	Total Gas Expense		3	3	0
26	Operating Income before FIT		(3)	(3)	0
	Federal Income Taxes				
27	Current Accrual (at 35%)	35.0%	(1)	(1)	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		($2)	($2)	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant		(1,132)	(1,132)	
33	General Plant				
34	Total Plant in Service		(1,132)	(1,132)	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant		0	0	
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		($1,132)	($1,132)	$0

AVISTA UTILITIES
Washington Customer Deposits

Date	No. of Accounts	Deposits Held
12-30-2009	24,165	4,696,676.41
01-30-2010	24,259	4,679,739.66
02-28-2010	24,440	4,698,151.24
03-31-2010	24,628	4,702,411.06
04-30-2010	24,748	4,687,114.07
05-30-2010	24,550	4,593,493.29
06-30-2010	24,329	4,496,124.89
07-30-2010	24,220	4,443,429.99
08-28-2010	24,479	4,414,572.93
09-29-2010	24,567	4,387,455.30
10-28-2010	24,870	4,432,259.40
11-26-2010	25,057	4,483,797.51
12-30-2010	25,251	4,482,958.24

(Dec. 2009 + Dec. 2010) / 2	$4,589,817.33
AMA Deposits	$4,550,697.22

Allocate WA Deposits to Service:			**Int. Rate Per WAC for**	**Allocate to Service:**
WA Electric	75.13%	**$3,418,741.06**	0.26%	**$8,888.73**
WA Gas	24.87%	**1,131,956.16**	0.26%	**$2,943.09**
TOTAL		$4,550,697.22		$11,831.81

Allocation Factors:	**Sales (1)**	**Percent**
WA - Electric	$434,408,055	75.13%
WA - Gas	143,833,904	24.87%
TOTAL	$578,241,959	100.00%

(1) Sales to Ultimate Customers plus Transportation Revenue from E-OPS and G-OPS Results of Operations reports.

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WASHINGTON UTC UTILITIES AND TRANSPORTATION COMMISSION

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Interest rates on customer deposits held by utilities

As of January 1, 2011, the interest rate that **telephone and water companies** must pay on the deposits they hold for their customers is **.29%**. Telephone and water company rules use the rate as of November 15 of the previous year.

As of January 1, 2011, the interest rate that **gas, electric, and solid waste companies** must pay on the deposits they hold for their customers will be determined as of January 18, 2011. Gas, electric, and solid waste company rules use the rate as of January 15, 2011. Because January 15 fell on Saturday and January 17 was a holiday, the 2011 rate was determined as of January 18, 2011. The interest rate for 2011 that **gas, electric, and solid waste companies** must pay on the deposits they hold for their customers is **.26%**. ✓

UTC rules set the customer deposit interest rate at the level of the **1-year Treasury constant maturity**, as calculated by the U.S. Treasury and published in the Federal Reserve's Statistical Release H.15.

For more information, please contact Linda Anderson (360-664-1301).

PLAIN TALK

Staff contact: Linda Anderson
Document list:
020405 Documents | Schedule | Orders | All

ELECTRIC OPERATING STATEMENT	Report ID:
For Twelve Months Ended December 31, 2010	E-OPS-12A
Average of Monthly Averages Basis	

Ref/Basis	Account	Description	********** SYSTEM ********** Direct	Allocated	Total	********** WASHINGTON ********** Direct	Allocated	Total	********** IDAHO ********** Direct	Allocated	Total
		REVENUE									
		SALES OF ELECTRICITY:									
99	440000	Residential	298,043,691	0	298,043,691	197,442,213	0	197,442,213	100,601,478	0	100,601,478
99	442200	Commercial - Firm & Int.	266,393,126	0	266,393,126	183,685,391	0	183,685,391	82,707,735	0	82,707,735
1	442300	Industrial	114,433,959	0	114,433,959	50,464,011	0	50,464,011	63,969,948	0	63,969,948
99	444000	Public Street & Highway Lighting	6,702,211	0	6,702,211	4,452,118	0	4,452,118	2,250,093	0	2,250,093
99	499XXX	Unbilled Revenue	-2,232,531	0	-2,232,531	-2,425,955	0	-2,425,955	193,424	0	193,424
99	448000	Interdepartmental Revenue	999,779	0	999,779	790,277	0	790,277	209,502	0	209,502
		TOTAL SALES TO ULTIMATE CUSTOMERS	684,340,235	0	684,340,235	434,408,055	0	434,408,055	249,932,180	0	249,932,180
1	447XXX	Sales for Resale	0	256,319,131	256,319,131	0	167,017,546	167,017,546	0	89,301,585	89,301,585
		TOTAL SALES OF ELECTRICITY	684,340,235	256,319,131	940,659,366	434,408,055	167,017,546	601,425,601	249,932,180	89,301,585	339,233,765
		OTHER OPERATING REVENUE:									
99	451000	Miscellaneous Service Revenue	567,270	0	567,270	347,369	0	347,369	219,901	0	219,901
1	453000	Sales of Water & Water Power	0	281,752	281,752	0	183,590	183,590	0	98,162	98,162
1	454000	Rent from Electric Property	2,736,303	61,256	2,797,559	1,864,849	39,914	1,904,763	871,454	21,342	892,796
1	456XXX	Other Electric Revenues	147,364	125,500,835	125,648,199	101,052	81,776,344	81,877,396	46,312	43,724,491	43,770,803
		TOTAL OTHER OPERATING REVENUE	3,450,937	125,843,843	129,294,780	2,313,270	81,999,848	84,313,118	1,137,667	43,843,995	44,981,662
		TOTAL ELECTRIC REVENUE	687,791,172	382,162,974	1,069,954,146	436,721,325	249,017,394	685,738,719	251,069,847	133,145,580	384,215,427
		EXPENSE									
		STEAM POWER GENERATION EXPENSE:									
		OPERATION									
1	500000	Supervision & Engineering	0	536,766	536,766	0	349,757	349,757	0	187,009	187,009
1	501000	Fuel	0	28,352,582	28,352,582	0	18,474,542	18,474,542	0	9,878,040	9,878,040
1	502000	Steam Expense	0	4,265,708	4,265,708	0	2,779,535	2,779,535	0	1,486,173	1,486,173
1	505000	Electric Expense	0	838,347	838,347	0	546,267	546,267	0	292,080	292,080
1	506000	Miscellaneous Steam Power Generation Expense	96,641	2,372,214	2,468,855	-313,598	1,545,735	1,232,137	410,239	826,479	1,236,718
1	507000	Rent	0	15,498	15,498	0	10,098	10,098	0	5,400	5,400
		MAINTENANCE									
1	510000	Supervision & Engineering	0	501,359	501,359	0	326,686	326,686	0	174,673	174,673
1	511000	Structures	0	610,113	610,113	0	397,550	397,550	0	212,563	212,563
1	512000	Boiler Plant	0	4,899,998	4,899,998	0	3,192,839	3,192,839	0	1,707,159	1,707,159
1	513000	Electric Plant	0	645,697	645,697	0	420,736	420,736	0	224,961	224,961
1	514000	Miscellaneous Steam Plant	0	661,490	661,490	0	431,027	431,027	0	230,463	230,463
		TOTAL STEAM POWER GENERATION EXP	96,641	43,699,772	43,796,413	-313,598	28,474,772	28,161,174	410,239	15,225,000	15,635,239

GAS OPERATING STATEMENT
For Twelve Months Ended December 31, 2010
Average of Monthly Averages Basis

Report ID: G-OPS-12A

Ref/Basis	Account	Description	********** SYSTEM ********** Direct	Allocated	Total	********** WASHINGTON ********** Direct	Allocated	Total	********** IDAHO ********** Direct	Allocated	Total
		REVENUES									
		SALES OF GAS:									
99	480000	Residential	133,455,198	0	133,455,198	91,727,283	0	91,727,283	41,727,915	0	41,727,915
99	4812XX	Commercial - Firm & Interruptible	68,251,928	0	68,251,928	47,940,384	0	47,940,384	20,311,544	0	20,311,544
99	4813XX	Industrial-Firm	3,290,764	0	3,290,764	2,099,848	0	2,099,848	1,190,916	0	1,190,916
99	481400	Interruptible	0	0	0	0	0	0	0	0	0
99	499XXX	Unbilled Revenue	-1,804,160	0	-1,804,160	-1,417,397	0	-1,417,397	-386,763	0	-386,763
99	484000	Interdepartmental Revenue	272,844	0	272,844	238,359	0	238,359	34,485	0	34,485
		TOTAL SALES TO ULTIMATE CUSTOMERS	203,466,574	0	203,466,574	140,588,477	0	140,588,477	62,878,097	0	62,878,097
		OTHER OPERATING REVENUES:									
99	483000	Sales for Resale	157,676,953	0	157,676,953	109,008,703	0	109,008,703	48,668,250	0	48,668,250
99	488000	Miscellaneous Service Revenues	29,592	0	29,592	15,818	0	15,818	13,774	0	13,774
99	489300	Transportation For Others	3,699,103	0	3,699,103	3,245,427	0	3,245,427	453,676	0	453,676
99	493000	Rent from Gas Property	-237	0	-237	-297	0	-297	60	0	60
4	495000	Other Gas Revenues	8,920,149	70,908	8,991,057	6,183,812	48,585	6,232,397	2,736,337	22,323	2,758,660
		TOTAL OTHER OPERATING REVENUES	170,325,560	70,908	170,396,468	118,453,463	48,585	118,502,048	51,872,097	22,323	51,894,420
		TOTAL GAS REVENUES	373,792,134	70,908	373,863,042	259,041,940	48,585	259,090,525	114,750,194	22,323	114,772,517
		PRODUCTION EXPENSES:									
G-804	804/805	City Gate Purchases	278,159,078	0	278,159,078	192,776,382	0	192,776,382	85,382,696	0	85,382,696
6	808XXX	Net Natural Gas Storage Transactions	-3,877,785	0	-3,877,785	-2,619,007	0	-2,619,007	-1,258,778	0	-1,258,778
6	811000	Gas Used for Products Extraction	-1,014,362	0	-1,014,362	-703,553	0	-703,553	-310,809	0	-310,809
10	813000	Other Gas Expenses	0	1,153,914	1,153,914	0	779,492	779,492	0	374,422	374,422
99	813010	Gas Technology Institute (GTI) Expenses	31,143	0	31,143	22,075	0	22,075	9,068	0	9,068
		TOTAL PRODUCTION EXPENSES	273,298,074	1,153,914	274,451,988	189,475,897	779,492	190,255,389	83,822,177	374,422	84,196,599
		UNDERGROUND STORAGE EXPENSES:									
1	814000	Supervision & Engineering	0	844	844	0	586	586	0	258	258
1	824000	Other Expenses	0	276,628	276,628	0	191,980	191,980	0	84,648	84,648
1	837000	Other Equipment	0	269,851	269,851	0	187,277	187,277	0	82,574	82,574
		TOTAL UNDERGROUND STORAGE OP. EXP	0	547,323	547,323	0	379,843	379,843	0	167,480	167,480
G-ADP		Depreciation Expense	0	501,805	501,805	0	348,253	348,253	0	153,552	153,552
1	404X40	Amortization Expense	0	227	227	0	158	158	0	69	69
G-OTX		Taxes Other Than FIT	0	172,335	172,335	0	119,600	119,600	0	52,735	52,735
		TOTAL UNDERGROUND STORAGE EXP	0	1,221,690	1,221,690	0	847,854	847,854	0	373,836	373,836

Σ① = 143,833,904 Σ② 49,331,773

5

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

WEATHER NORMALIZATION
REVENUE AND GAS COST ADJUSTMENT
GAS

Line No.	Description		System	Washington	Idaho
	REVENUES				
1	Total General Business		$6,808	$6,808	
2	Total Transportation		$0	0	
3	Other Revenues		$0	0	
4	Total Gas Revenues		6,808	6,808	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases		4,718	4,718	
7	Purchased Gas Expense		0	0	
8	Net Nat. Gas Storage Trans		0	0	
9	Total Production		4,718	4,718	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses				
15	Depreciation				
16	Taxes	0.038381	261	261	0
17	Total Distribution		261	261	0
18	Customer Accounting	0.003617	25	25	
19	Customer Service & Information		0		
20	Sales				
	Administrative and General				
21	Operating Expenses	0.002000	14	14	
22	Depreciation		0		
23	Taxes				
24	Total Admin. & General		14	14	0
25	Total Gas Expense		5,018	5,018	0
26	Operating Income before FIT		1,790	1,790	0
	Federal Income Taxes				
27	Current Accrual (at 35%)		627	627	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		$1,163	$1,163	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$0	$0	$0

2010	Total	January	February	March	April	May	June	July	August	September	October	November	December
Normal DDH	6,655	1,105	908	774	547	327	142	35	34	185	548	882	1,168
Actual DDH	6,320	919	751	733	538	420	190	48	47	158	472	948	1,096
Unbilled DDH	335	186	157	41	9	-93	-48	-13	-13	27	76	-66	72
Rate Group													
WA Res Sched 101	4,893,460	2,628,148	2,217,229	578,895	114,947	-1,186,671	-612,035	0	0	0	975,305	-849,000	1,026,642
No of Cust	132,657	132,550	132,481	132,452	132,351	132,227	132,132	132,233	132,638	132,775	132,984	133,302	133,761
Usage/DDH		0.1066	0.1066	0.1066	0.0965	0.0965	0.0965	0.0000	0.0000	0.0000	0.0965	0.0965	0.1066
WA Com Sched 101	1,060,005	568,336	479,805	125,278	24,710	-254,655	-131,479	0	0	0	207,860	-181,164	221,314
No of Cust	11,906	11,894	11,896	11,894	11,927	11,895	11,899	11,900	11,900	11,901	11,881	11,924	11,965
Usage/DDH		0.2569	0.2569	0.2569	0.2302	0.2302	0.2302	0.0000	0.0000	0.0000	0.2302	0.2302	0.2569
WA Ind Sched 101	13,343	7,086	5,777	1,473	269	-2,711	-1,433	0	0	0	2,242	-1,947	2,587
No of Cust	84	88	85	83	85	83	85	84	84	85	84	84	83
Usage/DDH		0.4329	0.4329	0.4329	0.3512	0.3512	0.3512	0.0000	0.0000	0.0000	0.3512	0.3512	0.4329
WA Res Sched 111	173,301	95,121	80,290	20,968	4,418	-45,052	-23,459	0	0	0	36,489	-31,972	36,498
No of Cust	225	228	228	228	228	225	227	223	222	221	223	225	226
Usage/DDH		2.243	2.243	2.243	2.153	2.153	2.153	0	0	0	2.153	2.153	2.243
WA Com Sched 111	1,825,197	976,071	828,331	216,948	42,863	-440,344	-226,500	0	0	0	354,770	-308,851	381,909
No of Cust	2,042	2,040	2,051	2,057	2,066	2,054	2,047	2,030	2,024	2,022	2,025	2,030	2,062
Usage/DDH		2.5724	2.5724	2.5724	2.3052	2.3052	2.3052	0.0000	0.0000	0.0000	2.3052	2.3052	2.5724
WA Ind Sched 111	59,833	30,404	26,275	6,862	1,163	-12,013	-6,200	0	0	0	9,817	-8,525	12,050
No of Cust	43	42	43	43	43	43	43	43	43	43	43	43	43
Usage/DDH		3.892	3.892	3.892	3.004	3.004	3.004	0	0	0	3.004	3.004	3.892
WA Com Sched 121	99,031	53,822	43,538	10,875	2,101	-22,697	-11,715	0	0	0	18,548	-15,407	19,966
No of Cust	23	24	23	22	22	23	23	23	23	23	23	22	23
Usage/DDH		12.057	12.057	12.057	10.611	10.611	10.611	0	0	0	10.611	10.611	12.057
ID Res Sched 101	1,981,184	1,067,656	899,161	234,673	46,957	-485,270	-250,577	0	0	0	398,649	-347,068	417,003
No of Cust	65,648	65,601	65,453	65,414	65,464	65,470	65,500	65,532	65,640	65,712	65,814	65,980	66,191
Usage/DDH		0.0875	0.0875	0.0875	0.0797	0.0797	0.0797	0.0000	0.0000	0.0000	0.0797	0.0797	0.0875
ID Com Sched 101	560,774	306,387	258,756	67,464	14,093	-145,407	-74,998	0	0	0	118,747	-103,206	118,938
No of Cust	7,398	7,400	7,404	7,392	7,400	7,389	7,384	7,418	7,403	7,388	7,384	7,390	7,421
Usage/DDH		0.2226	0.2226	0.2226	0.2116	0.2116	0.2116	0.0000	0.0000	0.0000	0.2116	0.2116	0.2226
ID Ind Sched 101	9,888	5,463	4,611	1,222	255	-2,602	-1,343	0	0	0	2,189	-1,928	2,021
No of Cust	69	68	68	69	69	68	68	67	70	69	70	71	65
Usage/DDH		0.4319	0.4319	0.4319	0.4114	0.4114	0.4114	0.0000	0.0000	0.0000	0.4114	0.4114	0.4319
ID Res Sched 111	29,735	15,649	13,395	3,838	882	-7,393	-3,659	0	0	0	6,042	-5,247	6,228
No of Cust	74	71	72	79	90	73	70	71	72	72	73	73	73
Usage/DDH		1.185	1.185	1.185	1.089	1.089	1.089	0	0	0	1.089	1.089	1.185
ID Com Sched 111	592,070	307,801	262,797	69,125	12,510	-129,942	-67,205	0	0	0	107,062	-94,207	124,129
No of Cust	975	957	968	975	968	973	975	973	970	971	981	994	997
Usage/DDH		1.7292	1.7292	1.7292	1.4360	1.4360	1.4360	0.0000	0.0000	0.0000	1.4360	1.4360	1.7292
ID Ind Sched 111	51,907	29,055	24,525	6,405	1,435	-14,374	-7,419	0	0	0	10,278	-9,245	11,247
No of Cust	30	30	30	30	33	32	32	30	28	29	28	29	30
Usage/DDH		5.207	5.207	5.207	4.830	4.830	4.830	0	0	0	4.830	4.830	5.207

2010	Total	January	February	March	April	May	June	July	August	September	October	November	December
WA subtotal	8,124,170	4,358,988	3,681,245	961,299	190,471	-1,964,143	-1,012,821	0	0	0	1,605,031	-1,396,866	1,700,966
ID subtotal	3,225,558	1,732,011	1,463,245	382,727	76,132	-784,988	-405,201	0	0	0	642,967	-560,901	679,566
Summarize by Schedule													
WA 101	5,966,808	3,203,570	2,702,811	705,646	139,926	-1,444,037	-744,947	0	0	0	1,185,407	-1,032,111	1,250,543
WA 111	2,058,331	1,101,596	934,896	244,778	48,444	-497,409	-256,159	0	0	0	401,076	-349,348	430,457
WA 121	99,031	53,822	43,538	10,875	2,101	-22,697	-11,715	0	0	0	18,548	-15,407	19,966
ID 101	2,551,846	1,379,506	1,162,528	303,359	61,305	-633,279	-326,918	0	0	0	519,585	-452,202	537,962
ID 111	673,712	352,505	300,717	79,368	14,827	-151,709	-78,283	0	0	0	123,382	-108,699	141,604
WS weighted block Effective Rate by Month (Excluding prior deferral amortization Sch 155, decoupling surcharge Sch 159, and public purpose tariff rider Sch 191)													
WA 101	0.86036	0.86159	0.86159	0.86159	0.86159	0.86159	0.86159	0.86159	0.86159	0.86159	0.86159	0.83862	0.86979
WA 111	0.75548	0.75839	0.75839	0.75839	0.75839	0.75839	0.75839	0.75839	0.75839	0.75839	0.75839	0.73522	0.74662
WA 121	0.68968	0.69304	0.69304	0.69304	0.69304	0.69304	0.69304	0.69304	0.69304	0.69304	0.69304	0.66941	0.67636
ID 101	0.93408	0.92932	0.92932	0.92932	0.92932	0.92932	0.92932	0.92932	0.92932	0.92932	0.96306	0.94102	0.94102
ID 111	0.76268	0.76681	0.76681	0.76681	0.76681	0.76681	0.76681	0.76681	0.76681	0.76681	0.76499	0.74295	0.74295
Effective WACOG by Month													
WA 101	0.57869	0.58246	0.58246	0.58246	0.58246	0.58246	0.58246	0.58246	0.58246	0.58246	0.58246	0.55981	0.55981
WA 111	0.57592	0.57973	0.57973	0.57973	0.57973	0.57973	0.57973	0.57973	0.57973	0.57973	0.57973	0.55689	0.55689
WA 121	0.56049	0.56437	0.56437	0.56437	0.56437	0.56437	0.56437	0.56437	0.56437	0.56437	0.56437	0.54111	0.54111
ID 101	0.58072	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.56238	0.56238
ID 111	0.58072	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.58439	0.56238	0.56238
Weather Adjustment Revenue													
WA 101	5,174,905	2,760,164	2,328,715	607,978	120,559	-1,244,168	-641,839	0	0	0	1,021,335	-865,549	1,087,710
WA 111	1,564,045	835,439	709,016	185,637	36,739	-377,230	-194,268	0	0	0	304,172	-256,848	321,388
WA 121	68,664	37,301	30,174	7,537	1,456	-15,730	-8,119	0	0	0	12,855	-10,314	13,504
Total Revenue Adjustment	**6,807,614**												
ID 101	2,390,018	1,282,003	1,080,361	281,918	56,972	-588,519	-303,811	0	0	0	500,392	-425,531	506,233
ID 111	515,599	270,304	230,593	60,860	11,369	-116,332	-60,028	0	0	0	94,386	-80,758	105,205
Total Revenue Adjustment	**2,905,617**												
Weather Adjustment Gas Cost													
WA 101	3,470,478	1,865,951	1,574,279	411,011	81,501	-841,094	-433,902	0	0	0	690,452	-577,786	700,066
WA 111	1,191,423	638,628	541,987	141,905	28,084	-288,363	-148,503	0	0	0	232,516	-194,548	239,717
WA 121	55,785	30,376	24,572	6,138	1,186	-12,810	-6,612	0	0	0	10,468	-8,337	10,804
Total Gas Cost Adjustment	**4,717,686**												
ID 101	1,489,386	806,170	679,370	177,280	35,826	-370,082	-191,048	0	0	0	303,640	-254,309	302,539
ID 111	392,986	206,000	175,736	46,382	8,665	-88,657	-45,748	0	0	0	72,103	-61,130	79,635
Total Gas Cost Adjustment	**1,882,372**												

2010	Total	January	February	March	April	May	June	July	August	September	October	November	December

Weighted Block Rate Calculation

WA Schedule 111	2010 Block Usage		Baseload Usage	Percentage	WS Usage	Percentage	01-01-2010	11-01-2010	12-01-2010
Block 1	5,081,742		5,081,742	37.19%	0	0.00%	0.89142 ✓	0.86825 ✓	0.89960 ✓
Block 2	13,947,731		8,582,788	62.81%	5,364,943	16.12%	0.81545 ✓	0.79228 ✓	0.80455 ✓
Block 3	27,915,978		0	0.00%	27,915,978	83.88%	0.74742 ✓	0.72425 ✓	0.73549 ✓
	46,945,451		13,664,530	100.00%	33,280,921	100.00%	0.75839	0.73522	0.74662
	27,835	491	13,664,530						
WA Schedule 121									
Block 1	160,035		160,035	4.10%	0	0.00%	0.85841 ✓	0.83478 ✓	0.88114 ✓
Block 2	159,845		159,845	4.09%	0	0.00%	0.81137 ✓	0.78774 ✓	0.80322 ✓
Block 3	2,680,494		2,680,494	68.63%	0	0.00%	0.74218 ✓	0.71855 ✓	0.73271 ✓
Block 4	1,884,979		905,446	23.18%	979,533	52.17%	0.69872 ✓	0.67509 ✓	0.68842 ✓
Block 5	898139		0	0.00%	898,139	47.83%	0.68684 ✓	0.66321 ✓	0.66321 ✓
	5,783,492		3,905,820	100.00%	1,877,672	100.00%	0.69304	0.66941	0.67636
	324	12,055	3,905,820						
							11-01-2009	10-01-2010	11-01-2010
ID Schedule 111									
Block 1	2,410,029		2,410,029	26.37%	0	0.00%	0.91433	0.98307	0.96103
Block 2	6,128,987		6,128,987	67.06%	0	0.00%	0.85061	0.85069	0.82865
Block 3	8,332,651		600,604	6.57%	7,732,047	77.44%	0.77602	0.77608	0.75404
Block 4	2,251,914			0.00%	2,251,914	22.56%	0.73518	0.72692	0.70488
	19,123,581		9,139,620	100.00%	9,983,961	100.00%	0.76681	0.76499	0.74295
	12,964	705	9,139,620						

H4

Avista Corporation

WASHINGTON - NATURAL GAS RATE (Price) HISTORY **

** Most Recent Changes Are at The Top of Each Section

For Schedules 101 ,111, 121, 131, 146

* Denotes Sch 156 terminated when Sch 150 changed 6/1/92 but not officially until 9/1/94

Date of Change	USAGE	Base Rates	Adjustment For Sch 150		Adjustment For Sch 155		Subtotal	Adjustment For Sch 156		Adjustment For Sch 159		Adjustment For Sch 191		Total As Billed	
Schedule 101															
Basic Charge $6.00		.86979													
12-01-10	All	0.89276	8th	-0.02297	9th	-0.07872	13th	0.79107	0	16th	0.00490	5th	0.06142	12th	**$0.85739**	GRC
11-01-10	All	.83662 1.13798	7th	-0.02297	9th	-0.07872	13th	1.03629	-0.27639	15th	0.00490	5th	0.06114	11th	**$0.82594**	PGA+Decoup
04-01-10	All	1.13798	7th	0	8th	-0.14472	12th	0.99326	-0.27639	15th	0.00499	4th	0.06114	11th	**$0.78300**	Sch 191
01-01-10	All	.86159 1.13798	7th	0	8th	-0.14472	12th	0.99326	-0.27639	15th	0.00499	4th	0.04323	10th	**$0.76509**	GRC+Sch 191
11-01-09	All	1.13793	6th	0	8th	-0.14472	12th	0.99321	-0.27639	15th	0.00499	4th	0.04306	9th	**$0.76487**	PGA+Decoup
Schedule 111															
12-01-10	Min Chg =	$146.95	8th		9th		13th	$146.95		16th				12th	**$146.95**	GRC
	+ Therms used times	$0.18802		-0.02317		-$0.07891		0.08594	0		.89960		0.05809		**$0.14403**	
	200	0.92277		-0.02317		-$0.07891		0.82069	0		.80455		0.05809		**$0.87878**	
	201-1000	0.82772		-0.02317		-$0.07891		0.72564	0		.73549		0.05809		**$0.78373**	
	1001+	0.75866		-0.02317		-$0.07891		0.65658	0				0.05809		**$0.71467**	
11-01-10	Min Chg =	$140.68	7th		9th		13th	$140.68		15th				11th	**$140.68**	PGA
	+ Therms used times	$0.46450		-0.02317		-$0.07891		0.36242	-0.27648		.86825		0.05785		**$0.14379**	
	200	1.16790		-0.02317		-$0.07891		1.06582	-0.27648		.79228		0.05785		**$0.84719**	
	201-1000	1.09193		-0.02317		-$0.07891		0.98985	-0.27648		.72425		0.05785		**$0.77122**	
	1001+	1.02390		-0.02317		-$0.07891		0.92182	-0.27648				0.05785		**$0.70319**	
04-01-10	Min Chg =	$140.68	7th		8th		12th	$140.68		15th				11th	**$140.68**	
	+ Therms used times	$0.46450		0		-$0.14269		0.32181	-0.27648				0.05785		**$0.10318**	
	200	1.16790		0		-$0.14269		1.02521	-0.27648				0.05785		**$0.80658**	
	201-1000	1.09193		0		-$0.14269		0.94924	-0.27648				0.05785		**$0.73061**	
	1001+	1.02390		0		-$0.14269		0.88121	-0.27648				0.05785		**$0.66258**	
01-01-10	Min Chg =	$140.68	7th		8th		12th	$140.68		15th				10th	**$140.68**	
	+ Therms used times	$0.46450		0		-$0.14269		0.32181	-0.27648		.89142		0.0379		**$0.08323**	
	200	1.16790		0		-$0.14269		1.02521	-0.27648		.81545		0.0379		**$0.78663**	
	201-1000	1.09193		0		-$0.14269		0.94924	-0.27648		.74742		0.0379		**$0.71066**	
	1001+	1.02390		0		-$0.14269		0.88121	-0.27648				0.0379		**$0.64263**	
11-01-09	Min Chg =	$140.43	6th		8th		12th	$140.43		15th				9th	**$140.43**	
	+ Therms used times	$0.46450		0		-$0.14269		0.32181	-0.27648				0.03775		**$0.08308**	
	200	1.16665		0		-$0.14269		1.02396	-0.27648				0.03775		**$0.78523**	
	201-1000	1.08967		0		-$0.14269		0.94698	-0.27648				0.03775		**$0.70825**	
	1001+	1.02177		0		-$0.14269		0.87908	-0.27648				0.03775		**$0.64035**	

Date of Change	USAGE	Base Rates	Adjustment For Sch 150		Adjustment For Sch 155		Subtotal	Adjustment For Sch 156		Adjustment For Sch 159	Adjustment For Sch 191		Total As Billed	
Schedule 121														
12-01-10	Min Chg =	$365.64	8th				365.64						**$365.64**	GRC
	+ # Therms used times	$0.17349	-0.02363	9th	-0.07642	13th	0.07344	0	16th	.88114	0.05478	12th	**$0.12822**	
	1st 500	0.90477	-0.02363		-0.07642		0.80472	0		.80322	0.05478		**$0.85950**	
	501-1000	0.82685	-0.02363		-0.07642		0.72680	0		.73271	0.05478		**$0.78158**	
	1001-10,000	0.75634	-0.02363		-0.07642		0.65629	0		.68842	0.05478		**$0.71107**	
	10,001-25,000	0.71205	-0.02363		-0.07642		0.61200	0		.64324	0.05478		**$0.66678**	
	over 25,000	0.68684	-0.02363		-0.07642		0.58679	0			0.05478		**$0.64157**	
11-01-10	Min Chg =	$342.46	7th				342.46						**$342.46**	PGA
	+ # Therms used times	$0.45006	-0.02363	9th	-0.07642	13th	0.35001	-0.27657	15th	.83478	0.05456	11th	**$0.12800**	
	1st 500	1.13498	-0.02363		-0.07642		1.03493	-0.27657		.78774	0.05456		**$0.81292**	
	501-1000	1.08794	-0.02363		-0.07642		0.98789	-0.27657		.71855	0.05456		**$0.76588**	
	1001-10,000	1.01875	-0.02363		-0.07642		0.91870	-0.27657		.67509	0.05456		**$0.69669**	
	10,001-25,000	0.97529	-0.02363		-0.07642		0.87524	-0.27657		.63211	0.05456		**$0.65323**	
	over 25,000	0.96341	-0.02363		-0.07642		0.86336	-0.27657			0.05456		**$0.64135**	
04-01-10	Min Chg =	$342.46	7th				342.46						**$342.46**	DSM
	+ # Therms used times	$0.45006	0	8th	-0.13217	12th	0.31789	-0.27657	15th		0.05456	11th	**$0.09588**	
	1st 500	1.13498	0		-0.13217		1.00281	-0.27657			0.05456		**$0.78080**	
	501-1000	1.08794	0		-0.13217		0.95577	-0.27657			0.05456		**$0.73376**	
	1001-10,000	1.01875	0		-0.13217		0.88658	-0.27657			0.05456		**$0.66457**	
	10,001-25,000	0.97529	0		-0.13217		0.84312	-0.27657			0.05456		**$0.62111**	
	over 25,000	0.96341	0		-0.13217		0.83124	-0.27657			0.05456		**$0.60923**	
01-01-10	Min Chg =	$342.46	7th				342.46						**$342.46**	GRC
	+ # Therms used times	$0.45006	0	8th	-0.13217	12th	0.31789	-0.27657	15th	.85841	0.03537	10th	**$0.07669**	
	1st 500	1.13498	0		-0.13217		1.00281	-0.27657		.81137	0.03537		**$0.76161**	
	501-1000	1.08794	0		-0.13217		0.95577	-0.27657		.74218	0.03537		**$0.71457**	
	1001-10,000	1.01875	0		-0.13217		0.88658	-0.27657		.69872	0.03537		**$0.64538**	
	10,001-25,000	0.97529	0		-0.13217		0.84312	-0.27657		.68684	0.03537		**$0.60192**	
	over 25,000	0.96341	0		-0.13217		0.83124	-0.27657			0.03537		**$0.59004**	
11-01-09	Min Chg =	$342.46	6th				342.46						**$342.46**	PGA
	+ # Therms used times	$0.45006	0	8th	-0.13217	12th	0.31789	-0.27657	15th		0.03524	9th	**$0.07656**	
	1st 500	1.13498	0		-0.13217		1.00281	-0.27657			0.03524		**$0.76148**	
	501-1000	1.08612	0		-0.13217		0.95395	-0.27657			0.03524		**$0.71262**	
	1001-10,000	1.01704	0		-0.13217		0.88487	-0.27657			0.03524		**$0.64354**	
	10,001-25,000	0.97365	0		-0.13217		0.84148	-0.27657			0.03524		**$0.60015**	
	over 25,000	0.96179	0		-0.13217		0.82962	-0.27657			0.03524		**$0.58829**	

H7

Fifteenth Revision Sheet 156
Canceling
WN U-29 Fourteenth Revision Sheet 156

AVISTA CORPORATION
dba Avista Utilities

SCHEDULE 156

PURCHASE GAS COST ADJUSTMENT - WASHINGTON

APPLICABLE:

To Customers in the State of Washington where the Company has natural gas service available.

PURPOSE:

To pass through increases or decreases in natural gas costs to become effective as noted below. Additional gas cost changes are also shown on Schedule 150. The rate adjustments shown on this Schedule and Schedule 150 must be added together to determine the net gas cost change.

RATE:

(a) The rates of gas Schedule 101 is to be decreased by 27.639¢ per therm in all blocks of these rate schedules. (R)

(b) The rates of gas Schedules 111 and 112 are to be decreased by 27.648¢ per therm in all blocks. (R)

(c) The rates of gas Schedules 121 and 122 are to be decreased by 27.657¢ per therm in all blocks. (R)

(d) The rates of interruptible Schedules 131 and 132 are to be decreased by 27.633¢ per therm in all blocks. (R)

(e) The rates of transportation Schedule 146 are to be increased by 0.000¢ per therm in all blocks.

WEIGHTED AVERAGE GAS COST:

The above rate changes are based on the following weighted average cost of gas:

	Demand	Commodity	Total
Schedule 101	9.369¢ (I)	48.877¢ (R)	58.246¢ (R)
Schedule 111 & 112	9.096¢ (I)	48.877¢ (R)	57.973¢ (R)
Schedule 121 & 122	7.560¢ (I)	48.877¢ (R)	56.437¢ (R)
Schedule 131 & 132	5.759¢ (I)	48.877¢ (R)	54.636¢ (R)
Schedule 146	0.054¢	0.000¢	0.054¢

The above amounts do not include revenue sensitive items.

SPECIAL TERMS AND CONDITIONS:

The rates named herein are subject to increases as set forth in Tax Adjustment Schedule 158.

Issued September 14, 2009 Effective November 1, 2009

Issued by Avista Corporation
By Kelly Norwood , Vice-President, State & Federal Regulation

Ninth Revision Sheet 150
Canceling
WN U-29 Substitute Eighth Revision Sheet 150

AVISTA CORPORATION
dba Avista Utilities

SCHEDULE 150

PURCHASE GAS COST ADJUSTMENT - WASHINGTON

APPLICABLE:

To Customers in the State of Washington where Company has natural gas service available.

PURPOSE:

To pass through increases or decreases in natural gas costs to become effective as noted below. Additional gas cost changes are also shown on Schedule 156. The rate adjustments shown on this Schedule and Schedule 156 must be added together to determine the net gas cost change.

RATE:

(a) The rates of gas Schedule 101 is to be decreased by 2.297¢ per therm in all blocks of these rate schedules. (R)
(b) The rates of gas Schedules 111 and 112 are to be decreased by 2.317¢ per therm in all blocks. (R)
(c) The rates of gas Schedules 121 and 122 are to be decreased by 2.363¢ per therm in all blocks. (R)
(d) The rates of interruptible Schedules 131 and 132 are to be decreased by 2.468¢ per therm in all blocks. (R)
(e) The rates of transportation Schedule 146 are to be decreased by 0.000¢ per therm in all blocks.

WEIGHTED AVERAGE GAS COST:

The above rate changes are based on the following weighted average cost of gas as of the effective date shown below and supersede the rates shown on Schedule 156:

	Demand	Commodity	Total
Schedule 101	10.132¢ (I)	45.849¢ (R)	55.981¢ (R)
Schedule 111 & 112	9.840¢ (I)	45.849¢ (R)	55.689¢ (R)
Schedule 121/122	8.262¢ (I)	45.849¢ (R)	54.111¢ (R)
Schedule 131/132	6.363¢ (I)	45.849¢ (R)	52.212¢ (R)
Schedule 146	0.054¢	0.000¢	0.054¢

The above amounts do not include revenue sensitive items.

BALANCING ACCOUNT:

The Company will maintain a Purchase Gas Adjustment (PGA) Balancing Account whereby monthly entries into this Balancing Account will be made to reflect differences between the actual purchased gas costs collected from customers and the

Issued September 15, 2010 Effective November 1, 2010

Issued by Avista Corporation
By Kelly O. Norwood, Vice President, State and Federal Regulation

Weather Sensitivity Regression Summary for Jan 2000 to Dec 2009

Adj R^2	Dependent Variable	Shoulder Mo Heating Apr, May, Jun, Oct, Nov	Winter Mo Heating Dec, Jan, Feb, Mar	Usage/Cust Base Load	Usage/Cust 2009 Low	Durbin Watson Test Result
Washington Gas						
0.973	WR101	0.0965	0.1066	7	15	Corrected with AR(1)
0.98	WC101	0.2302	0.2569	0	18	Corrected with AR(1),(2),(3)
0.950	WI101	0.3512	0.4329	0	11	Corrected with AR(1)
0.971	WT101	0.1059	0.1192	7	15	Corrected with AR(1)
0.925	WR111	2.1527	2.2425	542	436	Corrected with AR(1)
0.976	WC111	2.3052	2.5724	463	493	Corrected with AR(1)
0.905	WI111	3.0035	3.8918	2,211	1,401	Corrected with AR(1),(2)
0.976	WT111	2.3420	2.5988	491	504	Corrected with AR(1)
0.881	WC121	10.6105	12.0566	12,055	8,625	Corrected with AR(1)
Idaho Gas						
0.985	IR101	0.0797	0.0875	13	14	Corrected with AR(1)
0.979	IC101	0.2116	0.2226	-8	14	Corrected with AR(1),(2),(3)
0.965	II101	0.4114	0.4319	-37	8	Corrected with AR(1),(2),(3)
0.981	IT101	0.0885	0.0995	13	14	Corrected with AR(1)
0.94	IR111	1.0889	1.1846	409	313	Corrected with AR(1)
0.969	IC111	1.4360	1.7292	667	666	Corrected with AR(1)
0.873	II111	4.8298	5.2072	2,102	1695	Corrected with AR(1)
0.968	IT111	1.4996	1.7904	705	676	Corrected with AR(1)

Dependent Variable Name Code

1st letter	*2nd letter*	*Numerical reference*
W = Washington Jurisdiction	R = Residential Class	Rate Schedule
I = Idaho Jurisdiction	C = Commercial Class	
	I = Industrial Class	
	T = Total Schedule	

Spokane AP Weather Station
Heating Degree Day History

		July	August	September	October	November	December	January	February	March	April	May	June	Heating Season Total
1	2009 - 2010	17	23	103	668	834	1,252	919	751	733	538	420	190	6,448
2	2008 - 2009	8	52	142	529	785	1,328	1,204	957	936	586	303	93	6,923
3	2007 - 2008	0	27	194	553	894	1,126	1,239	952	880	683	274	176	6,998
4	2006 - 2007	8	30	170	552	879	1,122	1,208	864	684	548	270	136	6,471
5	2005 - 2006	11	22	229	489	919	1,258	905	949	812	525	301	104	6,524
6	2004 - 2005	16	34	204	480	857	1,020	1,128	842	711	503	260	166	6,221
7	2003 - 2004	9	1	151	418	1,056	1,083	1,196	945	668	455	315	131	6,428
8	2002 - 2003	28	26	219	678	839	962	957	885	745	588	365	90	6,382
9	2001 - 2002	33	20	100	588	744	1,136	1,063	934	938	581	412	137	6,686
10	2000 - 2001	51	43	285	572	1,134	1,245	1,168	1,060	795	634	320	201	7,508
11	1999 - 2000	75	36	181	540	703	1,030	1,143	908	799	496	363	142	6,416
12	1998 - 1999	0	20	101	565	748	1,119	1,010	836	769	594	448	186	6,396
13	1997 - 1998	35	15	116	549	785	1,098	1,058	749	721	505	276	90	5,997
14	1996 - 1997	35	49	281	603	949	1,241	1,130	928	794	642	264	154	7,070
15	1995 - 1996	21	88	146	648	742	1,120	1,217	1,045	880	556	471	143	7,077
16	1994 - 1995	26	13	81	558	970	1,071	1,045	771	771	578	262	170	6,316
17	1993 - 1994	151	83	217	457	1,063	1,051	904	998	713	469	262	160	6,528
18	1992 - 1993	32	60	232	481	916	1,297	1,331	1,102	834	578	192	165	7,220
19	1991 - 1992	15	16	108	574	918	992	1,024	750	598	477	206	61	5,739
20	1990 - 1991	37	42	54	610	774	1,356	1,212	716	866	568	406	248	6,889
21	1989 - 1990	22	76	149	554	805	1,048	976	968	739	454	373	166	6,330
22	1988 - 1989	47	16	240	361	856	1,171	1,113	1,205	873	473	364	65	6,784
23	1987 - 1988	51	50	116	474	799	1,206	1,240	850	775	477	330	173	6,541
24	1986 - 1987	81	4	311	488	902	1,193	1,186	831	710	417	253	86	6,462
25	1985 - 1986	0	64	343	622	1,363	1,409	1,076	927	680	595	357	67	7,503
26	1984 - 1985	21	18	264	662	870	1,381	1,345	1,117	895	501	280	128	7,482
27	1983 - 1984	55	2	230	468	765	1,508	1,065	880	715	621	460	194	6,963
28	1982 - 1983	62	17	193	582	996	1,163	897	747	672	558	285	113	6,285
29	1981 - 1982	73	7	209	584	747	1,088	1,196	912	761	639	328	76	6,620
30	1980 - 1981	19	77	195	543	854	977	992	867	741	570	395	243	6,473
1981 - 2010 30-Year Average		35	34	185	548	882	1,168	1,105	908	774	547	327	142	6,655

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

Line No.	Description		ELIMINATE B & O TAXES GAS System	Washington	Idaho
	REVENUES				
1	Total General Business		($5,026)	($5,026)	
2	Total Transportation		(90)	(90)	
3	Other Revenues				
4	Total Gas Revenues		(5,116)	(5,116)	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense				
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses				
15	Depreciation				
16	Taxes		(5,112)	(5,112)	0
17	Total Distribution		(5,112)	(5,112)	0
18	Customer Accounting				
19	Customer Service & Information				
20	Sales				
	Administrative and General				
21	Operating Expenses		0		
22	Depreciation				
23	Taxes				
24	Total Admin. & General		0	0	0
25	Total Gas Expense		(5,112)	(5,112)	0
26	Operating Income before FIT		(4)	(4)	0
	Federal Income Taxes				
27	Current Accrual	35.0%	(1)	(1)	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		($3)	($3)	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$0	$0	$0

AVISTA UTILITIES
ELIMINATE B & O TAXES
TWELVE MONTHS ENDED DECEMBER 31, 2010
Gas

		Washington	Idaho
Expense per Account 408.12 *(Results Report G-OTX-12A)*	(1)	**5,112,214**	**1,129,625**
Excise Tax exemption for Tribal members on Tribal land per WAC 458-20-192	(1)	**(667)**	
B&O Taxes Collected through Schedule 158 and 158A		**5,115,914**	**1,130,779**
Net Impact on NOI Before FIT *(before ID SIT)*		**($4,367)**	**($1,154)**

For WA & ID this adjustment eliminates the impact of Schedule 158 and WA Sch 158A from both revenues & expense.

Σ(1) = 5,111,547

AVISTA UTILITIES
B & O TAX COLLECTED
TWELVE MONTHS ENDED DECEMBER 31, 2010
GAS

DESCRIPTION	CLASS	Schedule 158	Schedule 158A (1)	12ME 12/10 Total
WASHINGTON				
GENERAL BUSINESS				
Residential	1	3,140,061.41	-20.69	3,140,040.72
Firm - Commercial	21	1,851,564.01	-646.60	1,850,917.41
Interruptible - Commercial	22	27,457.96		27,457.96
Firm - Misc Industrial	31	22,183.09		22,183.09
Interruptible - Misc Industrial	41	0.00		0.00
PGA Adj Commercial Lg Cust	16	-14,485.83		-14,485.83
PGA Adj Industrial Lg Cust	17	-30.10		-30.10
Total General Business		5,026,750.54	-667.29	5,026,083.25
OTHER REVENUES				
-Gas Transportation - Commercial	91	65,761.86		65,761.86
-Gas Transportation - Industrial	92	24,068.85		24,068.85
Total Other Revenues		89,830.71	0.00	89,830.71
TOTAL		5,116,581.25	-667.29	5,115,913.96
(2) Reverse Interdepartmental	*80*	86.37		86.37

DESCRIPTION	CLASS	SCH	12ME 12/10	
IDAHO				
GENERAL BUSINESS				
Residential	1	158	719,340.78	
Commercial-Firm	21	158	394,988.69	
Commercial-Interruptible	22	158	2,972.43	
Industrial-Firm-Misc	31	158	6,620.30	
Industrial-Interruptible	41	158	0.00	
PGA Adj Commercial Lg Cust	16	158	-624.18	
PGA Adj Industrial Lg Cust	17	158	-67.16	
			1,123,230.86	
OTHER REVENUES				
-Gas Transportation - Commercial	91	158	7,547.74	
-Gas Transportation - Industrial	92	158	0.00	
Total Other Revenues			7,547.74	
TOTAL			1,130,778.60	
(2) Reverse Interdepartmental	*80*	*158*	*0.00*	
SYSTEM TOTAL			6,246,692.56	0.00

(1) Schedule 158A reflects refunded WA excise tax embedded in rates to tribal members on tribal land per WAC 458-20-192. This amount needs to be added back to the excise tax expense to offset the elimination of the refund.

(2) Interdepartmental revenues are not subject to B&O taxes and any entries in the revenue runs are due to errors in the revenue system and the amounts should be reversed. They are not included in the expense accrual.

source: Revenue Runs

Gas Revenue Meters Report by Location Twelve Months Ended for Report Date : '12/31/2010' , Revenue Class : '%'

Rate Schedule Num:158

State Cd	Ferc Acct	Revenue Class	Revenue Amt Period 201001	201002	201003	201004	201005	201006	201007	201008	201009	201010	201011	201012	12 Month Total
ID	480000	01	116,374.52	94,188.54	81,110.66	72,020.38	55,967.23	36,652.22	24,066.63	18,818.77	20,607.38	26,621.48	56,079.90	116,833.07	719,340.78
			-	-	-	-	-	-	-	-	-	-	(624.18)	-	(624.18)
	481200	16	-	-	-	-	-	-	-	-	-	-	28,668.89	64,148.72	394,988.69
		21	68,412.09	51,327.95	42,931.40	37,259.80	28,989.19	19,050.96	14,081.41	12,207.32	13,052.27	14,858.69	255.78	294.32	2,972.43
	481250	22	300.06	301.56	308.16	292.15	266.02	233.93	192.52	169.09	171.58	187.26	(67.16)	-	(67.16)
	481300	17	-	-	-	-	-	-	-	-	-	-	522.32	936.62	6,620.30
		31	938.71	773.20	667.79	507.70	427.29	347.09	455.65	346.88	353.73	343.32	573.62	811.83	7,547.74
	489300	91	1,113.59	711.58	681.61	621.39	595.37	572.62	569.24	415.30	430.79	450.80	85,409.17	183,024.56	1,130,778.60
			187,138.97	**147,302.83**	**125,699.62**	**110,701.42**	**86,245.10**	**56,856.82**	**39,365.45**	**31,957.36**	**34,615.75**	**42,461.55**			
WA	480000	01	517,069.67	402,526.12	359,662.37	322,294.03	235,036.76	163,999.03	110,638.71	88,475.98	88,872.83	116,554.69	230,902.40	504,028.82	3,140,061.41
			-	-	-	-	-	-	-	-	-	-	(14,485.83)	-	(14,485.83)
	481200	16	-	-	-	-	-	-	-	-	-	-	134,370.10	302,844.88	1,851,564.01
		21	301,148.09	233,499.47	204,026.57	185,003.53	133,418.52	95,854.32	68,181.10	58,884.06	58,879.78	75,453.59	1,929.10	3,260.00	27,457.96
	481250	22	3,833.70	3,024.02	2,704.85	2,708.55	2,714.13	1,963.45	1,609.22	1,201.29	1,031.58	1,478.07	(30.10)	-	(30.10)
	481300	17	-	-	-	-	-	-	-	-	-	-	1,571.18	3,956.67	22,183.09
		31	3,904.35	3,000.34	2,670.22	2,116.66	1,821.32	921.37	594.43	475.33	465.63	685.59	0.02	86.35	86.37
	484000	80	97.86	95.03	79.61	75.65	53.13	(401.28)	-	-	-	-	4,248.37	6,281.79	65,761.86
	489300	91	18,146.61	6,345.79	5,594.21	5,139.94	4,451.79	3,973.94	3,105.08	2,616.65	2,692.99	3,164.70	2,257.03	2,114.71	24,068.85
		92	1,773.58	1,809.95	1,942.80	2,110.93	2,297.18	1,891.82	2,110.65	1,945.24	2,048.30	1,766.66	**360,762.27**	**822,573.22**	**5,116,667.62**
			845,973.86	**650,300.72**	**576,680.63**	**519,449.29**	**379,792.83**	**268,202.65**	**186,239.19**	**153,598.55**	**153,991.11**	**199,103.30**			
Total			**1,033,112.83**	**797,603.55**	**702,380.25**	**630,150.71**	**466,037.93**	**325,059.47**	**225,604.64**	**185,555.91**	**188,606.86**	**241,564.85**	**446,171.44**	**1,005,597.78**	**6,247,446.22**

Gas Revenue Meters Report by Location Twelve Months Ended for Report Date : '12/31/2010' , Revenue Class : '%'

Rate Schedule Num:158A

			Revenue Amt											
		Period	201001	201002	201003	201004	201005	201006	201007	201008	201009	201010	201011	201012	Month Total
State Cde	Ferc Acct	Revenue Class													
WA	480000	01	-0.88	-0.99	-2.2	-2.94	-2.51	-0.75	-0.94	-0.85	-0.76	-1.06	-2.59	-4.22	**-20.69**
	481200	21	-66.98	-66.47	-62.93	-77.84	-51.96	-34.48	-27.16	-30.14	-26.99	-27.21	-52.08	-122.36	**-646.6**
Total			**-67.86**	**-67.46**	**-65.13**	**-80.78**	**-54.47**	**-35.23**	**-28.10**	**-30.99**	**-27.75**	**-28.27**	**-54.67**	**-126.58**	**-667.29**

Transaction Analysis Selection: Accounting Period : '2010%' , GI Ferc Account : '408120' , Statind Parameter 1 : 'DL'

Ferc Acct	Service	Jurisdiction	Transaction Amount	Electric Amt SUM	Gas North Amt SUM	Gas South Amt SUM
408120	ED	ID	3,011,831.21	3,011,831.21	0.00	0.00
		WA	14,849,283.13	14,849,283.13	0.00	0.00
			17,861,114.34	17,861,114.34	0.00	0.00
	GD	ID	1,129,624.77	0.00	1,129,624.77	0.00
		OR	3,584,582.99	0.00	0.00	3,584,582.99
		WA	5,112,214.33	0.00	5,112,214.33	0.00
			9,826,422.09	0.00	6,241,839.10	3,584,582.99
Total			**27,687,536.43**	**17,861,114.34**	**6,241,839.10**	**3,584,582.99**

J1

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

PROPERTY TAX
ADJUSTMENT
GAS

Line No.	Description	System	Washington	Idaho
	REVENUES			
1	Total General Business			
2	Total Transportation			
3	Other Revenues			
4	Total Gas Revenues	0	0	0
	EXPENSES			
5	Exploration & Development			
	Production			
6	City Gate Purchases			
7	Purchased Gas Expense			
8	Net Nat. Gas Storage Trans			
9	Total Production	0	0	0
	Underground Storage			
10	Operating Expenses			
11	Depreciation			
12	Taxes	1	1	0
13	Total Underground Storage	1	1	0
	Distribution			
14	Operating Expenses			
15	Depreciation			
16	Taxes	0	0	0
17	Total Distribution	0	0	0
18	Customer Accounting			
19	Customer Service & Information			
20	Sales			
	Administrative and General			
21	Operating Expenses			
22	Depreciation			
23	Taxes	1	1	0
24	Total Admin. & General	1	1	0
25	Total Gas Expense	2	2	0
26	Operating Income before FIT	(2)	(2)	0
	Federal Income Taxes			
27	Current Accrual (at 35%)	(1)	(1)	0
28	Amort ITC			
29	Deferred FIT			
30	NET OPERATING INCOME	($1)	($1)	$0
	RATE BASE			
	PLANT IN SERVICE			
31	Underground Storage			
32	Distribution Plant			
33	General Plant			
34	Total Plant in Service	0	0	0
	ACCUMULATED DEPRECIATION			
35	Underground Storage			
36	Distribution Plant			
37	General Plant			
38	Total Accum. Depreciation	0	0	0
39	DEFERRED TAXES			
40	GAS INVENTORY			
41	WORKING CAPITAL			
42	GAIN ON SALE OF BUILDING			
43	TOTAL RATE BASE	$0	$0	$0

AVISTA UTILITIES

Property Tax Adjustment-Gas
For the Twelve Months Ended December 31, 2010

		System	Washington	Idaho
Property Tax Adjustment				
Underground Storage		-5,928	-4,114	-1,814
Distribution		-78,850	-79,121	271
Administrative and General		-1,048	-718	-330
Idaho SIT	0.015093	28		28
Total expenses		-85,798	-83,953	-1,845
Operating income before FIT		85,798	83,953	1,845
FIT	0.350	30,030	29,384	646
Net operating income		55,768	54,569	1,199

J3

AVISTA UTILITIES

Property Tax Adjustment-Gas
For the Twelve Months Ended December 31, 2010

Functionalization based on Plant Balances at 12/31/2009

	System	Washington	Idaho
Underground Storage	-5,928	-5,944	16
Distribution	-78,850	-79,121	271
General	-1,048	-1,053	5
Total	-85,825	-86,118	293
Allocation Percentages			
Underground Storage		6.902%	5.630%
Distribution		91.875%	92.655%
General		1.223%	1.715%
Total		100.000%	100.000%

	Alloc.	System	Washington	Idaho
WA Property Tax Adjustment				
Underground Storage	1C	-5,944	-4,125	-1,819
Distribution	99	-79,121	-79,121	0
General	4	-1,053	-721	-332
Total		-86,118	-83,967	-2,151
ID Property Tax Adjustment				
Underground Storage	1C	16	11	5
Distribution	99	271	0	271
General	4	5	3	2
Total		292	14	278
Underground Storage Total		-5,928	-4,114	-1,814
Distribution Total		-78,850	-79,121	271
General Total		-1,048	-718	-330
Total Adjustment		-85,826	-83,953	-1,873
Allocation Notes				
System Contract Demand--SGS-1	1C	100.000%	69.400%	30.600%
Jurisdictional 4 Factor	4	100.000%	68.518%	31.482%
Direct	99	0.000%	0.000%	0.000%

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AVISTA UTILITIES

Property Tax Adjustment
For the Twelve Months Ended December 31, 2010

	Electric	Gas
Washington		
Current Period Expense	6,520,000	1,756,000
Accrual per Results by State (Situs)	6,156,264	1,842,118
Adjustment	363,736	(86,118)
Idaho		
Current Period Expense	3,830,000	803,000
Accrual per Results by State (Situs)	3,829,944	802,707
Adjustment	56	293
Montana		
Current Period Expense	6,615,000	
Accrual per Results by State (Situs)	6,611,032	
Adjustment	3,968	
Oregon		
Current Period Expense	8,000	
Cyote Springs Expense for 2010	1,843,000	
Subtotal Expense	1,851,000	
Accrual per Results by State (Situs)	1,848,307	
Adjustment	2,693	
Colstrip Indirect (Note 1)		
Current Period Expense	4,680	
Accrual per Results	3,129	
Adjustment	1,551	
Total	372,004	(85,825)
Remove Colstrip Indirect	(1,551)	
Total	370,453	-85,825
Total		
Current Period Expense	16,977,680	2,559,000
Amount reflected in results (E-OTX-12A & G-OTX-12A)	18,448,676	2,644,825
Adjustment	(1,470,996)	(85,825)

Note 1 This amount is related to property tax that we are paying to Pacificore for our portion of a indirect property tax. This amount does not fluctuate and is immaterial to the total property tax adjustment.

PROPERTY TAX ESTIMATES FOR 2011 - to Karen Schuh on February 10, 2011

SUMMARY:	Actual (Accrued OR) 2009	Actual /Estimate 2010	Estimate 2011
ELECTRIC:			
WASHINGTON	4,876	6,520	6,884
EST ADJ TO WASH			
IDAHO	3,190	3,830	4,167
MONTANA	6,164	6,615	7,008
OREGON - Transm line only	6	8	8
OREGON - Coyote Springs II	1,856	1,843	1,911
SUBTOTAL	16,092	18,816	19,978
GAS:			
WASHINGTON	1,433	1,756	1,854
IDAHO	722	803	842
OREGON	1,649	1,651	1,790
OTHER	0	0	0
SUBTOTAL	3,804	4,210	4,485
TOTAL EST TAX	19,896	23,026	24,463

K1

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

UNCOLLECTIBLE EXPENSE
GAS

Line No.	Description		System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense				
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses				
15	Depreciation				
16	Taxes		0		0
17	Total Distribution		0	0	0
18	Customer Accounting		(169)	(169)	0
19	Customer Service & Information				
20	Sales				
	Administrative and General				
21	Operating Expenses				
22	Depreciation				
23	Taxes				
24	Total Admin. & General		0	0	0
25	Total Gas Expense		(169)	(169)	0
26	Operating Income before FIT		169	169	0
	Federal Income Taxes				
27	Current Accrual	35.0%	59	59	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		$110	$110	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$0	$0	$0

K2

AVISTA UTILITIES
UNCOLLECTIBLES ADJUSTMENT
TWELVE MONTHS ENDED DECEMBER 31, 2010

CALCULATION OF ADJUSTMENT:

	SYSTEM	WASHINGTON	IDAHO
ELECTRIC			
Actual Net Write-offs (1)	1,987,677	1,571,627	416,050
Less:			
Accrual for Write-offs (2)	1,674,638	1,099,467 JSS - 02/10/11	575,171 JSS - 02/10/11
Equals			
Net Under (Over) Accrued	313,039	472,160	(159,121)
GAS			
Actual Net Write-offs (1)	625,697	520,250	105,447
Less:			
Accrual for Write-offs (2)	1,036,599	688,944 JSS - 02/10/11	347,655 JSS - 02/10/11
Equals			
Net Under (Over) Accrued	(410,902)	(168,694)	(242,208)

Notes:
(1) Actual Net Write-offs from calculation below, "Allocation of Write-offs to Services."

(2) Accrual for Write-offs from E-OPS and G-OPS Results of Operations reports, Account 904 totals.

ALLOCATION OF WRITE-OFFS TO SERVICES:

	Sales to Ultimate Customers (1) (a)	Percent (b)	Allocated Net Write-offs (2) (c)
WASHINGTON TOTALS			
Electric	434,408,055	75.130%	1,571,627
Gas	143,833,904	24.870%	520,250
Total	578,241,959	100.000%	2,091,877
IDAHO TOTALS			
Electric	249,932,180	79.780%	416,050
Gas	63,331,773	20.220%	105,447
Total	313,263,953	100.000%	521,497
Total Company	891,505,912		2,613,374

(1) Sales to Ultimate Customers plus Transportation Revenue from E-OPS and G-OPS Results of Operations reports.

(2) Allocated Write-offs from Account 144xxx Query.

	Acct 144 Sub	Amount	
Washington			
Write-Offs WA	200	3,587,507	JSS - 02/10/11
Reinstatements WA	600	(920,369)	JSS - 02/10/11
Recoveries WA	700	(575,261)	JSS - 02/10/11
		2,091,877	
Idaho			
Write-Offs ID	200	1,354,553	JSS - 02/10/11
Reinstatements ID	600	(408,706)	JSS - 02/10/11
Recoveries ID	700	(424,350)	JSS - 02/10/11
		521,497	
		2,613,374	(0) check

K3

GL Account Balance

Ferc Acct	Jurisdictic	Ferc Acct Desc	Accountin	Accountin	Beginning Balanc	Monthly Activity	Ending Balance
144200	ID	ACCUMULATED RETAIL WRITE-OFFS	2010	201001	21,029,791.93	77,023.04	21,106,814.97
		ACCUMULATED RETAIL WRITE-OFFS	2010	201002	21,106,814.97	93,523.04	21,200,338.01
		ACCUMULATED RETAIL WRITE-OFFS	2010	201003	21,200,338.01	97,228.00	21,297,566.01
		ACCUMULATED RETAIL WRITE-OFFS	2010	201004	21,297,566.01	135,507.03	21,433,073.04
		ACCUMULATED RETAIL WRITE-OFFS	2010	201005	21,433,073.04	158,328.90	21,591,401.94
		ACCUMULATED RETAIL WRITE-OFFS	2010	201006	21,591,401.94	159,089.55	21,750,491.49
		ACCUMULATED RETAIL WRITE-OFFS	2010	201007	21,750,491.49	138,031.14	21,888,522.63
		ACCUMULATED RETAIL WRITE-OFFS	2010	201008	21,888,522.63	135,678.19	22,024,200.82
		ACCUMULATED RETAIL WRITE-OFFS	2010	201009	22,024,200.82	102,610.25	22,126,811.07
		ACCUMULATED RETAIL WRITE-OFFS	2010	201010	22,126,811.07	103,392.96	22,230,204.03
		ACCUMULATED RETAIL WRITE-OFFS	2010	201011	22,230,204.03	91,793.83	22,321,997.86
		ACCUMULATED RETAIL WRITE-OFFS	2010	201012	22,321,997.86	62,347.20	22,384,345.06
	Total for ID				**260,001,213.80**	**1,354,553.13**	**261,355,766.93**
	WA	ACCUMULATED RETAIL WRITE-OFFS	2010	201001	44,724,812.75	239,246.75	44,964,059.50
		ACCUMULATED RETAIL WRITE-OFFS	2010	201002	44,964,059.50	240,984.45	45,205,043.95
		ACCUMULATED RETAIL WRITE-OFFS	2010	201003	45,205,043.95	262,539.32	45,467,583.27
		ACCUMULATED RETAIL WRITE-OFFS	2010	201004	45,467,583.27	357,426.44	45,825,009.71
		ACCUMULATED RETAIL WRITE-OFFS	2010	201005	45,825,009.71	352,793.53	46,177,803.24
		ACCUMULATED RETAIL WRITE-OFFS	2010	201006	46,177,803.24	352,018.15	46,529,821.39
		ACCUMULATED RETAIL WRITE-OFFS	2010	201007	46,529,821.39	306,697.69	46,836,519.08
		ACCUMULATED RETAIL WRITE-OFFS	2010	201008	46,836,519.08	313,653.74	47,150,172.82
		ACCUMULATED RETAIL WRITE-OFFS	2010	201009	47,150,172.82	294,963.61	47,445,136.43
		ACCUMULATED RETAIL WRITE-OFFS	2010	201010	47,445,136.43	318,443.83	47,763,580.26
		ACCUMULATED RETAIL WRITE-OFFS	2010	201011	47,763,580.26	283,900.60	48,047,480.86
		ACCUMULATED RETAIL WRITE-OFFS	2010	201012	48,047,480.86	264,838.48	48,312,319.34
	Total for WA				**556,137,023.26**	**3,587,506.59**	**559,724,529.85**
144600	ID	ACCUMULATED RETAIL REINSTATEME	2010	201001	(3,737,801.78)	(37,974.16)	(3,775,775.94)
		ACCUMULATED RETAIL REINSTATEME	2010	201002	(3,775,775.94)	(39,774.58)	(3,815,550.52)
		ACCUMULATED RETAIL REINSTATEME	2010	201003	(3,815,550.52)	(31,854.91)	(3,847,405.43)
		ACCUMULATED RETAIL REINSTATEME	2010	201004	(3,847,405.43)	(42,246.83)	(3,889,652.26)
		ACCUMULATED RETAIL REINSTATEME	2010	201005	(3,889,652.26)	(26,910.37)	(3,916,562.63)
		ACCUMULATED RETAIL REINSTATEME	2010	201006	(3,916,562.63)	(37,300.13)	(3,953,862.76)
		ACCUMULATED RETAIL REINSTATEME	2010	201007	(3,953,862.76)	(32,754.20)	(3,986,616.96)
		ACCUMULATED RETAIL REINSTATEME	2010	201008	(3,986,616.96)	(35,261.16)	(4,021,878.12)
		ACCUMULATED RETAIL REINSTATEME	2010	201009	(4,021,878.12)	(31,893.51)	(4,053,771.63)
		ACCUMULATED RETAIL REINSTATEME	2010	201010	(4,053,771.63)	(30,594.62)	(4,084,366.25)
		ACCUMULATED RETAIL REINSTATEME	2010	201011	(4,084,366.25)	(37,067.41)	(4,121,433.66)
		ACCUMULATED RETAIL REINSTATEME	2010	201012	(4,121,433.66)	(25,074.13)	(4,146,507.79)
	Total for ID				**(47,204,677.94)**	**(408,706.01)**	**(47,613,383.95)**
	WA	ACCUMULATED RETAIL REINSTATEME	2010	201001	(7,788,756.58)	(79,142.12)	(7,867,898.70)
		ACCUMULATED RETAIL REINSTATEME	2010	201002	(7,867,898.70)	(64,500.91)	(7,932,399.61)
		ACCUMULATED RETAIL REINSTATEME	2010	201003	(7,932,399.61)	(67,416.04)	(7,999,815.65)
		ACCUMULATED RETAIL REINSTATEME	2010	201004	(7,999,815.65)	(101,156.78)	(8,100,972.43)
		ACCUMULATED RETAIL REINSTATEME	2010	201005	(8,100,972.43)	(75,194.60)	(8,176,167.03)
		ACCUMULATED RETAIL REINSTATEME	2010	201006	(8,176,167.03)	(77,694.77)	(8,253,861.80)
		ACCUMULATED RETAIL REINSTATEME	2010	201007	(8,253,861.80)	(69,123.43)	(8,322,985.23)
		ACCUMULATED RETAIL REINSTATEME	2010	201008	(8,322,985.23)	(66,797.59)	(8,389,782.82)
		ACCUMULATED RETAIL REINSTATEME	2010	201009	(8,389,782.82)	(90,858.79)	(8,480,641.61)
		ACCUMULATED RETAIL REINSTATEME	2010	201010	(8,480,641.61)	(82,021.47)	(8,562,663.08)
		ACCUMULATED RETAIL REINSTATEME	2010	201011	(8,562,663.08)	(86,617.26)	(8,649,280.34)
		ACCUMULATED RETAIL REINSTATEME	2010	201012	(8,649,280.34)	(59,844.76)	(8,709,125.10)
	Total for WA				**(98,525,224.88)**	**(920,368.52)**	**(99,445,593.40)**

K4

GL Account Balance

Ferc Acct	Jurisdictic	Ferc Acct Desc	Accountin	Accountin	Beginning Balanc	Monthly Activity	Ending Balance
144700	ID	ACCUMULATED RETAIL RECOVERIES	2010	201001	(3,372,309.06)	(13,988.65)	(3,386,297.71)
		ACCUMULATED RETAIL RECOVERIES	2010	201002	(3,386,297.71)	(30,412.58)	(3,416,710.29)
		ACCUMULATED RETAIL RECOVERIES	2010	201003	(3,416,710.29)	(25,690.69)	(3,442,400.98)
		ACCUMULATED RETAIL RECOVERIES	2010	201004	(3,442,400.98)	(200,910.46)	(3,643,311.44)
		ACCUMULATED RETAIL RECOVERIES	2010	201005	(3,643,311.44)	(15,818.37)	(3,659,129.81)
		ACCUMULATED RETAIL RECOVERIES	2010	201006	(3,659,129.81)	(18,147.74)	(3,677,277.55)
		ACCUMULATED RETAIL RECOVERIES	2010	201007	(3,677,277.55)	(20,782.66)	(3,698,060.21)
		ACCUMULATED RETAIL RECOVERIES	2010	201008	(3,698,060.21)	(18,816.44)	(3,716,876.65)
		ACCUMULATED RETAIL RECOVERIES	2010	201009	(3,716,876.65)	(25,439.76)	(3,742,316.41)
		ACCUMULATED RETAIL RECOVERIES	2010	201010	(3,742,316.41)	(21,931.14)	(3,764,247.55)
		ACCUMULATED RETAIL RECOVERIES	2010	201011	(3,764,247.55)	(15,003.12)	(3,779,250.67)
		ACCUMULATED RETAIL RECOVERIES	2010	201012	(3,779,250.67)	(17,408.71)	(3,796,659.38)
	Total for ID				**(43,298,188.33)**	**(424,350.32)**	**(43,722,538.65)**
	WA	ACCUMULATED RETAIL RECOVERIES	2010	201001	(7,119,721.30)	(37,258.82)	(7,156,980.12)
		ACCUMULATED RETAIL RECOVERIES	2010	201002	(7,156,980.12)	(66,177.68)	(7,223,157.80)
		ACCUMULATED RETAIL RECOVERIES	2010	201003	(7,223,157.80)	(40,525.71)	(7,263,683.51)
		ACCUMULATED RETAIL RECOVERIES	2010	201004	(7,263,683.51)	(46,539.37)	(7,310,222.88)
		ACCUMULATED RETAIL RECOVERIES	2010	201005	(7,310,222.88)	(34,141.02)	(7,344,363.90)
		ACCUMULATED RETAIL RECOVERIES	2010	201006	(7,344,363.90)	(44,048.60)	(7,388,412.50)
		ACCUMULATED RETAIL RECOVERIES	2010	201007	(7,388,412.50)	(45,147.91)	(7,433,560.41)
		ACCUMULATED RETAIL RECOVERIES	2010	201008	(7,433,560.41)	(41,421.27)	(7,474,981.68)
		ACCUMULATED RETAIL RECOVERIES	2010	201009	(7,474,981.68)	(96,313.75)	(7,571,295.43)
		ACCUMULATED RETAIL RECOVERIES	2010	201010	(7,571,295.43)	(46,513.85)	(7,617,809.28)
		ACCUMULATED RETAIL RECOVERIES	2010	201011	(7,617,809.28)	(37,001.34)	(7,654,810.62)
		ACCUMULATED RETAIL RECOVERIES	2010	201012	(7,654,810.62)	(40,171.31)	(7,694,981.93)
	Total for WA				**(88,558,999.43)**	**(575,260.63)**	**(89,134,260.06)**

K5

							Revised
							JSS 02/10/11
Twelve Month Period	TWELVE MONTHS ENDED DECEMBER 31, 2010						
Company Name	AVISTA UTILITIES						
Commission Fees (2)							No Change - JSS 02/10/11
	WA	0.002000	(2) WUTC fees rate per Regulatory Fee Calculation Schedule, Annual Report Year 2010 (2011 report not prepared until 4/2011)				
	ID	0.002039	(2) IPUC fees rate per Regulatory Fee Calculation; IPUC letter dated 4/23/2010				JSS 02/10/11
Federal Income Tax Rate		35.00%					
	WA EL	WA GAS	ID EL	ID GAS	(Sales to Ultimate Customers plus Transportation Revenue		JSS 02/10/11
Sales to Ultimate Customers	434,408,055	143,833,904	249,932,180	63,331,773	from E-OPS and G-OPS Results of Operations reports)		
Washington Excise Tax	WA EL	WA GAS	Nominal Rate - from backup to Combined Excise Tax Return				No Change - JSS 02/11/11
	0.038730	0.038520					
	Per Catherine these don't change often and she doesn't anticipate these changing next year.						
Idaho Income Tax Rate***			0.076000				No Change - JSS 02/10/11 (per dan loutzenhiser)
% Net Income attributable to Idaho***			0.199333	*** From 2009 Form 42 - Idaho Corporation Income Tax (unaudited) Form 42 is filed each year in October for the previous year.			JSS 02/10/11 (per dan loutzenhiser)
	(completed - JSS 02/10/11)						

ELECTRIC OPERATING STATEMENT
For Twelve Months Ended December 31, 2010
Average of Monthly Averages Basis

Report ID: E-OPS-12A

Ref/Basis	Account	Description	SYSTEM Direct	SYSTEM Allocated	SYSTEM Total	WASHINGTON Direct	WASHINGTON Allocated	WASHINGTON Total	IDAHO Direct	IDAHO Allocated	IDAHO Total
		REVENUE									
		SALES OF ELECTRICITY:									
99	440000	Residential	298,043,691	0	298,043,691	197,442,213	0	197,442,213	100,601,478	0	100,601,478
99	442200	Commercial - Firm & Int.	266,393,126	0	266,393,126	183,685,391	0	183,685,391	82,707,735	0	82,707,735
1	442300	Industrial	114,433,959	0	114,433,959	50,464,011	0	50,464,011	63,969,948	0	63,969,948
99	444000	Public Street & Highway Lighting	6,702,211	0	6,702,211	4,452,118	0	4,452,118	2,250,093	0	2,250,093
99	499XXX	Unbilled Revenue	-2,232,531	0	-2,232,531	-2,425,955	0	-2,425,955	193,424	0	193,424
99	448000	Interdepartmental Revenue	999,779	0	999,779	790,277	0	790,277	209,502	0	209,502
		TOTAL SALES TO ULTIMATE CUSTOMERS	684,340,235	0	684,340,235	434,408,055	0	434,408,055	249,932,180	0	249,932,180
1	447XXX	Sales for Resale	0	256,319,131	256,319,131	0	167,017,546	167,017,546	0	89,301,585	89,301,585
		TOTAL SALES OF ELECTRICITY	684,340,235	256,319,131	940,659,366	434,408,055	167,017,546	601,425,601	249,932,180	89,301,585	339,233,765
		OTHER OPERATING REVENUE:									
99	451000	Miscellaneous Service Revenue	567,270	0	567,270	347,369	0	347,369	219,901	0	219,901
1	453000	Sales of Water & Water Power	0	281,752	281,752	0	183,590	183,590	0	98,162	98,162
1	454000	Rent from Electric Property	2,736,303	61,256	2,797,559	1,864,849	39,914	1,904,763	871,454	21,342	892,796
1	456XXX	Other Electric Revenues	147,364	125,500,835	125,648,199	101,052	81,776,344	81,877,396	46,312	43,724,491	43,770,803
		TOTAL OTHER OPERATING REVENUE	3,450,937	125,843,843	129,294,780	2,313,270	81,999,848	84,313,118	1,137,667	43,843,995	44,981,662
		TOTAL ELECTRIC REVENUE	687,791,172	382,162,974	1,069,954,146	436,721,325	249,017,394	685,738,719	251,069,847	133,145,580	384,215,427
		EXPENSE									
		STEAM POWER GENERATION EXPENSE:									
		OPERATION									
1	500000	Supervision & Engineering	0	536,766	536,766	0	349,757	349,757	0	187,009	187,009
1	501000	Fuel	0	28,352,582	28,352,582	0	18,474,542	18,474,542	0	9,878,040	9,878,040
1	502000	Steam Expense	0	4,265,708	4,265,708	0	2,779,535	2,779,535	0	1,486,173	1,486,173
1	505000	Electric Expense	0	838,347	838,347	0	546,267	546,267	0	292,080	292,080
1	506000	Miscellaneous Steam Power Generation Expense	96,641	2,372,214	2,468,855	-313,598	1,545,735	1,232,137	410,239	826,479	1,236,718
1	507000	Rent	0	15,498	15,498	0	10,098	10,098	0	5,400	5,400
		MAINTENANCE									
1	510000	Supervision & Engineering	0	501,359	501,359	0	326,686	326,686	0	174,673	174,673
1	511000	Structures	0	610,113	610,113	0	397,550	397,550	0	212,563	212,563
1	512000	Boiler Plant	0	4,899,998	4,899,998	0	3,192,839	3,192,839	0	1,707,159	1,707,159
1	513000	Electric Plant	0	645,697	645,697	0	420,736	420,736	0	224,961	224,961
1	514000	Miscellaneous Steam Plant	0	661,490	661,490	0	431,027	431,027	0	230,463	230,463
		TOTAL STEAM POWER GENERATION EXP	96,641	43,699,772	43,796,413	-313,598	28,474,772	28,161,174	410,239	15,225,000	15,635,239

ELECTRIC OPERATING STATEMENT
For Twelve Months Ended December 31, 2010
Average of Monthly Averages Basis

Report ID: E-OPS-12A

Ref/Basis	Account	Description	SYSTEM Direct	SYSTEM Allocated	SYSTEM Total	WASHINGTON Direct	WASHINGTON Allocated	WASHINGTON Total	IDAHO Direct	IDAHO Allocated	IDAHO Total
		DISTRIBUTION EXPENSES:									
		OPERATION:									
3	580000	Supervision & Engineering	324,231	1,170,906	1,495,137	156,798	793,020	949,818	167,433	377,886	545,319
3	582000	Station Expense	699,361	15,658	715,019	448,880	10,605	459,485	250,481	5,053	255,534
3	583000	Overhead Line Expense	860,042	542,946	1,402,988	604,417	367,721	972,138	255,625	175,225	430,850
3	584000	Underground Line Expense	581,319	0	581,319	359,740	0	359,740	221,579	0	221,579
3	585000	Street Light & Signal System Operation Expense	226,744	0	226,744	44,496	0	44,496	182,248	0	182,248
3	586000	Meter Expense	1,773,002	0	1,773,002	1,549,164	0	1,549,164	223,838	0	223,838
3	587000	Customer Installations Expense	779,181	11,289	790,470	383,678	7,646	391,324	395,503	3,643	399,146
3	588000	Miscellaneous Distribution Expense	3,824,689	2,602,103	6,426,792	2,889,413	1,762,326	4,651,739	935,276	839,777	1,775,053
3	589000	Rent	26,362	268,427	294,789	25,901	181,798	207,699	461	86,629	87,090
		MAINTENANCE:									
3	590000	Supervision & Engineering	449,511	812,059	1,261,570	282,527	549,983	832,510	166,984	262,076	429,060
3	591000	Structures	396,786	0	396,786	244,208	0	244,208	152,578	0	152,578
3	592000	Station Equipment	668,502	116,569	785,071	503,060	78,949	582,009	165,442	37,620	203,062
3	593000	Overhead Lines	7,946,513	2,219	7,948,732	5,096,557	1,503	5,098,060	2,849,956	716	2,850,672
3	594000	Underground Lines	845,853	0	845,853	568,495	0	568,495	277,358	0	277,358
3	595000	Line Transformers	794,656	300,240	1,094,896	457,159	203,344	660,503	337,497	96,896	434,393
3	596000	Street Light & Signal System Maintenance Exp	652,322	0	652,322	439,422	0	439,422	212,900	0	212,900
3	597000	Meters	138,938	0	138,938	114,732	0	114,732	24,206	0	24,206
3	598000	Miscellaneous Distribution Expense	215,999	54,916	270,915	192,212	37,193	229,405	23,787	17,723	41,510
		TOTAL DISTRIBUTION OPERATING EXP	21,204,011	5,897,332	27,101,343	14,360,859	3,994,088	18,354,947	6,843,152	1,903,244	8,746,396
99	403X50	Depreciation Expense--Distribution Plant	28,354,128	5,150	28,359,278	18,061,113	3,488	18,064,601	10,293,015	1,662	10,294,677
E-OTX		Taxes Other Than FIT--Distribution	40,216,991	0	40,216,991	34,748,992	0	34,748,992	5,467,999	0	5,467,999
		TOTAL DISTRIBUTION EXPENSES	89,775,130	5,902,482	95,677,612	67,170,964	3,997,576	71,168,540	22,604,166	1,904,906	24,509,072
		CUSTOMER ACCOUNTS EXPENSES:									
2	901000	Supervision	0	592,956	592,956	0	389,299	389,299	0	203,657	203,657
2	902000	Meter Reading Expenses	2,623,335	115,975	2,739,310	2,225,908	76,142	2,302,050	397,427	39,833	437,260
E-903	903XXX	Customer Records & Collection Expenses	1,704,724	6,093,852	7,798,576	1,145,992	3,993,986	5,139,978	558,732	2,099,866	2,658,598
2	904000	Uncollectible Accounts	0	1,674,638	1,674,638	0	1,099,467	1,099,467	0	575,171	575,171
2	905000	Misc Customer Accounts	0	131,019	131,019	0	86,019	86,019	0	45,000	45,000
		TOTAL CUSTOMER ACCOUNTS EXPENSES	4,328,059	8,608,440	12,936,499	3,371,900	5,644,913	9,016,813	956,159	2,963,527	3,919,686
		CUSTOMER SERVICE & INFO EXPENSES:									
E-908	908XXX	Customer Assistance Expenses	27,475,681	495,451	27,971,132	19,885,616	325,283	20,210,899	7,590,065	170,168	7,760,233
2	909000	Advertising	32,734	842,097	874,831	24,544	552,870	577,414	8,190	289,227	297,417
2	910000	Misc Customer Service & Info Exp	0	168,978	168,978	0	110,941	110,941	0	58,037	58,037
		TOTAL CUSTOMER SERVICE & INFO EXP	27,508,415	1,506,526	29,014,941	19,910,160	989,094	20,899,254	7,598,255	517,432	8,115,687

RESULTS OF OPERATIONS

AVISTA UTILITIES

GAS OPERATING STATEMENT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis			Report ID: G-OPS-12A									
			********** SYSTEM **********			********** WASHINGTON **********			********** IDAHO **********		
Ref/Basis	Account	Description	Direct	Allocated	Total	Direct	Allocated	Total	Direct	Allocated	Total
		REVENUES									
		SALES OF GAS:									
99	480000	Residential	133,455,198	0	133,455,198	91,727,283	0	91,727,283	41,727,915	0	41,727,915
99	4812XX	Commercial - Firm & Interruptible	68,251,928	0	68,251,928	47,940,384	0	47,940,384	20,311,544	0	20,311,544
99	4813XX	Industrial-Firm	3,290,764	0	3,290,764	2,099,848	0	2,099,848	1,190,916	0	1,190,916
99	481400	Interruptible	0	0	0	0	0	0	0	0	0
99	499XXX	Unbilled Revenue	-1,804,160	0	-1,804,160	-1,417,397	0	-1,417,397	-386,763	0	-386,763
99	484000	Interdepartmental Revenue	272,844	0	272,844	238,359	0	238,359	34,485	0	34,485
		TOTAL SALES TO ULTIMATE CUSTOMERS	203,466,574	0	203,466,574	140,588,477	0	140,588,477	62,878,097	0	62,878,097
		OTHER OPERATING REVENUES:									
99	483000	Sales for Resale	157,676,953	0	157,676,953	109,008,703	0	109,008,703	48,668,250	0	48,668,250
99	488000	Miscellaneous Service Revenues	29,592	0	29,592	15,818	0	15,818	13,774	0	13,774
99	489300	Transportation For Others	3,699,103	0	3,699,103	3,245,427	0	3,245,427	453,676	0	453,676
99	493000	Rent from Gas Property	-237	0	-237	-297	0	-297	60	0	60
4	495000	Other Gas Revenues	8,920,149	70,908	8,991,057	6,183,812	48,585	6,232,397	2,736,337	22,323	2,758,660
		TOTAL OTHER OPERATING REVENUES	170,325,560	70,908	170,396,468	118,453,463	48,585	118,502,048	51,872,097	22,323	51,894,420
		TOTAL GAS REVENUES	373,792,134	70,908	373,863,042	259,041,940	48,585	259,090,525	114,750,194	22,323	114,772,517
		PRODUCTION EXPENSES:									
G-804	804/805	City Gate Purchases	278,159,078	0	278,159,078	192,776,382	0	192,776,382	85,382,696	0	85,382,696
6	808XXX	Net Natural Gas Storage Transactions	-3,877,785	0	-3,877,785	-2,619,007	0	-2,619,007	-1,258,778	0	-1,258,778
6	811000	Gas Used for Products Extraction	-1,014,362	0	-1,014,362	-703,553	0	-703,553	-310,809	0	-310,809
10	813000	Other Gas Expenses	0	1,153,914	1,153,914	0	779,492	779,492	0	374,422	374,422
99	813010	Gas Technology Institute (GTI) Expenses	31,143	0	31,143	22,075	0	22,075	9,068	0	9,068
		TOTAL PRODUCTION EXPENSES	273,298,074	1,153,914	274,451,988	189,475,897	779,492	190,255,389	83,822,177	374,422	84,196,599
		UNDERGROUND STORAGE EXPENSES:									
1	814000	Supervision & Engineering	0	844	844	0	586	586	0	258	258
1	824000	Other Expenses	0	276,628	276,628	0	191,980	191,980	0	84,648	84,648
1	837000	Other Equipment	0	269,851	269,851	0	187,277	187,277	0	82,574	82,574
		TOTAL UNDERGROUND STORAGE OP. EXP	0	547,323	547,323	0	379,843	379,843	0	167,480	167,480
G-ADP		Depreciation Expense	0	501,805	501,805	0	348,253	348,253	0	153,552	153,552
1	404X40	Amortization Expense	0	227	227	0	158	158	0	69	69
G-OTX		Taxes Other Than FIT	0	172,335	172,335	0	119,600	119,600	0	52,735	52,735
		TOTAL UNDERGROUND STORAGE EXP	0	1,221,690	1,221,690	0	847,854	847,854	0	373,836	373,836

GAS OPERATING STATEMENT For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis			Report ID: G-OPS-12A	********** SYSTEM **********			********** WASHINGTON **********			********** IDAHO **********		
Ref/Basis	Account	Description		Direct	Allocated	Total	Direct	Allocated	Total	Direct	Allocated	Total
		DISTRIBUTION EXPENSES:										
		OPERATION										
3	870000	Supervision & Engineering		164,847	547,961	712,808	98,356	364,186	462,542	66,491	183,775	250,266
3	871000	Distribution Load Dispatching		0	0	0	0	0	0	0	0	0
3	874000	Mains & Services Expenses		2,012,717	129,901	2,142,618	1,454,161	86,335	1,540,496	558,556	43,566	602,122
3	875000	Measuring & Reg Sta Exp-General		103,792	0	103,792	65,968	0	65,968	37,824	0	37,824
3	876000	Measuring & Reg Sta Exp-Industrial		13,516	0	13,516	8,042	0	8,042	5,474	0	5,474
3	877000	Measuring & Reg Sta Exp-City Gate		163,288	0	163,288	64,917	0	64,917	98,371	0	98,371
3	878000	Meter & House Regulator Expenses		880,947	0	880,947	657,924	0	657,924	223,023	0	223,023
3	879000	Customer Installation Expenses		1,314,409	80,007	1,394,416	722,737	53,174	775,911	591,672	26,833	618,505
3	880000	Other Expenses		950,498	693,682	1,644,180	675,737	461,035	1,136,772	274,761	232,647	507,408
3	881000	Rents		60	24,470	24,530	60	16,263	16,323	0	8,207	8,207
		MAINTENANCE										
3	885000	Supervision & Engineering		141,854	75	141,929	52,637	50	52,687	89,217	25	89,242
3	887000	Mains		1,542,454	1,531	1,543,985	1,014,148	1,018	1,015,166	528,306	513	528,819
3	889000	Measuring & Reg Sta Exp-General		233,193	40	233,233	123,556	27	123,583	109,637	13	109,650
3	890000	Measuring & Reg Sta Exp-Industrial		108,965	26,751	135,716	51,718	17,779	69,497	57,247	8,972	66,219
3	891000	Measuring & Reg Sta Exp-City Gate		104,020	115	104,135	57,974	76	58,050	46,046	39	46,085
3	892000	Services		633,272	552,023	1,185,295	487,817	366,886	854,703	145,455	185,137	330,592
3	893000	Meters & House Regulators		336,942	611,730	948,672	249,403	406,568	655,971	87,539	205,162	292,701
3	894000	Other Equipment		1,519	219,162	220,681	1,201	145,659	146,860	318	73,503	73,821
		TOTAL DISTRIBUTION OPERATING EXP		8,706,293	2,887,448	11,593,741	5,786,356	1,919,056	7,705,412	2,919,937	968,392	3,888,329
G-ADP		Depreciation		9,753,043	62,328	9,815,371	6,326,988	43,516	6,370,504	3,426,055	18,812	3,444,867
G-OTX		Taxes Other Than FIT		13,920,762	0	13,920,762	12,248,601	0	12,248,601	1,672,161	0	1,672,161
		TOTAL DISTRIBUTION EXPENSES		32,380,098	2,949,776	35,329,874	24,361,945	1,962,572	26,324,517	8,018,153	987,204	9,005,357
		CUSTOMER ACCOUNTS EXPENSES:										
2	901000	Supervision		0	367,039	367,039	0	243,941	243,941	0	123,098	123,098
2	902000	Meter Reading Expenses		1,546,477	71,790	1,618,267	1,351,032	47,713	1,398,745	195,445	24,077	219,522
G-903	903XXX	Customer Records & Collection Expenses		896,198	3,619,346	4,515,544	624,420	2,404,598	3,029,018	271,778	1,214,748	1,486,526
2	904000	Uncollectible Accounts		0	1,036,599	1,036,599	0	688,944	688,944	0	347,655	347,655
2	905000	Misc Customer Accounts		0	81,102	81,102	0	53,902	53,902	0	27,200	27,200
		TOTAL CUSTOMER ACCOUNTS EXPENSES		2,442,675	5,175,876	7,618,551	1,975,452	3,439,098	5,414,550	467,223	1,736,778	2,204,001
		CUSTOMER SERVICE & INFO EXPENSES:										
2	908XXX	Customer Assistance Expenses		11,660,739	306,781	11,967,520	8,818,221	203,893	9,022,114	2,842,518	102,888	2,945,406
2	909000	Advertising		65	570,756	570,821	65	379,336	379,401	0	191,420	191,420
2	910000	Misc Customer Service & Info Exp		0	104,597	104,597	0	69,517	69,517	0	35,080	35,080
		TOTAL CUSTOMER SERVICE & INFO EXP		11,660,804	982,134	12,642,938	8,818,286	652,746	9,471,032	2,842,518	329,388	3,171,906

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

REGULATORY EXPENSE ADJUSTMENT
GAS

Line No.	Description		System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense				
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses				
15	Depreciation				
16	Taxes		0		0
17	Total Distribution		0	0	0
18	Customer Accounting				
19	Customer Service & Information				
20	Sales				
	Administrative and General				
21	Operating Expenses		(133)	(133)	0
22	Depreciation				
23	Taxes				
24	Total Admin. & General		(133)	(133)	0
25	Total Gas Expense		(133)	(133)	0
26	Operating Income before FIT		133	133	0
	Federal Income Taxes				
27	Current Accrual	35.0%	47	47	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		$86	$86	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$0	$0	$0

L2

Avista Utilities
Calculation of Regulatory Expense Adjustment - Gas
Twelve Months Ended December 31, 2010

	System	Washington	Idaho
Revised Expense: (1)			
WUTC	287,649	287,649	
IPUC	129,162		129,162
TOTAL REVISED EXP	416,811	287,649	129,162
Less Accrual: (2)			
WUTC	421,053	421,053	
IPUC	170,468		170,468
TOTAL ACCRUAL	591,521	421,053	170,468
Adjustment	(174,710)	(133,404)	(41,306)

NOTES:
(1) Source of revised WUTC and IPUC fees are shown on the following pages.
(2) See attached schedules for accrual figures.

Avista Utilities
WUTC and IPUC Filing Fees Adjustment
Twelve Months Ended December 31, 2010

	WUTC AND IPUC FEES		
	Total	**Washington**	**Idaho**
Gas Revenues: (1)			
Sales to Ultimate Consumers:			
(499) Unbilled	(1,804,160)	(1,417,397)	(386,763)
(480) Residential	133,455,198	91,727,283	41,727,915
(481) Commercial / Industrial	71,542,692	50,040,232	21,502,460
(484) Interdepartmental	272,844	238,359	34,485
Total Sales to Ultimate Consumers	203,466,574	140,588,477	62,878,097
Other Operating Revenues:			
(488) Misc Service Revenues	29,592	15,818	13,774
(489) Revenue From Gas Transport	3,699,103	3,245,427	453,676
(493) Rent From Gas Property	(237)	(297)	60
Total Other Operating Revenues	3,728,458	3,260,948	467,510
Total Gas Subject to Fees	207,195,032	143,849,425	63,345,607
Fee Calculation			
First $50,000 @ .001 (Washington)		0.001000	
Fee Rate (2)		0.002000	0.002039
REGULATORY FEES	**416,811**	**287,649**	**129,162**

- Gas includes: Acct 1489, Gas Transportation and Acct 1484, Interdepartmental Revenues.

Notes:
(1) Figures from Results report G-OPS-12A
(2) Rate from 2010 Commission Fees letters/orders:

Project Transaction Detail for Accounting Period Parameter 1 : '2010%' , Project Number Parameter 1 : '02805035'

Service:GD	Jurisdiction:WA

Accounting Period	Ava Jet	Project Number	Ferc Acct	Transaction Amt SUM
201001	102-MISC A	02805035	928000	36,167.00
201001	NSJ009 - T	02805035	928000	-900.00
201002	102-MISC A	02805035	928000	35,267.00
201003	102-MISC A	02805035	928000	35,267.00
201004	102-MISC A	02805035	928000	35,028.00
201005	102-MISC A	02805035	928000	35,028.00
201006	102-MISC A	02805035	928000	35,028.00
201007	102-MISC A	02805035	928000	35,028.00
201008	102-MISC A	02805035	928000	35,028.00
201009	102-MISC A	02805035	928000	35,028.00
201010	102-MISC A	02805035	928000	35,028.00
201011	102-MISC A	02805035	928000	35,028.00
201012	102-MISC A	02805035	928000	35,027.53
				421,052.53

Project Transaction Detail for Accounting Period Parameter 1 : '2010%' , Project Number Parameter 1 : '03805014'

Service:GD	Jurisdiction:ID

Accounting Period	Ava Jet	Project Number	Ferc Acct	Transaction Amt SUM
201001	102-MISC A	03805014	928000	18,617.00
201001	NSJ009 - T	03805014	928000	-6,609.00
201002	102-MISC A	03805014	928000	12,008.00
201003	102-MISC A	03805014	928000	12,008.00
201004	102-MISC A	03805014	928000	12,008.00
201005	102-MISC A	03805014	928000	15,304.51
201006	102-MISC A	03805014	928000	15,304.51
201007	102-MISC A	03805014	928000	15,304.51
201008	102-MISC A	03805014	928000	15,304.51
201009	102-MISC A	03805014	928000	15,304.51
201010	102-MISC A	03805014	928000	15,304.51
201011	102-MISC A	03805014	928000	15,304.51
201012	102-MISC A	03805014	928000	15,304.50
				170,468.07

M1

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

INJURIES AND DAMAGES GAS

Line No.	Description	System	Washington	Idaho
	REVENUES			
1	Total General Business			
2	Total Transportation			
3	Other Revenues			
4	Total Gas Revenues	0	0	0
	EXPENSES			
5	Exploration & Development			
	Production			
6	City Gate Purchases			
7	Purchased Gas Expense			
8	Net Nat. Gas Storage Trans			
9	Total Production	0	0	0
	Underground Storage			
10	Operating Expenses			
11	Depreciation			
12	Taxes			
13	Total Underground Storage	0	0	0
	Distribution			
14	Operating Expenses			
15	Depreciation			
16	Taxes	0		0
17	Total Distribution	0	0	0
18	Customer Accounting			
19	Customer Service & Information			
20	Sales			
	Administrative and General			
21	Operating Expenses	(164)	(164)	0
22	Depreciation			
23	Taxes			
24	Total Admin. & General	(164)	(164)	0
25	Total Gas Expense	(164)	(164)	0
26	Operating Income before FIT	164	164	0
	Federal Income Taxes			
27	Current Accrual (at 35%)	57	57	0
28	Amort ITC			
29	Deferred FIT			
30	NET OPERATING INCOME	$107	$107	$0
	RATE BASE			
	PLANT IN SERVICE			
31	Underground Storage			
32	Distribution Plant			
33	General Plant			
34	Total Plant in Service	0	0	0
	ACCUMULATED DEPRECIATION			
35	Underground Storage			
36	Distribution Plant			
37	General Plant			
38	Total Accum. Depreciation	0	0	0
39	DEFERRED TAXES			
40	GAS INVENTORY			
41	WORKING CAPITAL			
42	GAIN ON SALE OF BUILDING			
43	TOTAL RATE BASE	$0	$0	$0

M2

Avista Utilities
Gas System
Injuries and Damages Adjustment
Account 925
Twelve Months Ended December 31, 2010

		System	Washington	Idaho
Accrual per Results		0	0	0
Directly Assigned		287,668	200,648	87,019
Allocated (4)		287,668	200,648	87,019
Total				
Revised Annual Accrual-Direct		75,019	36,318	38,701
Increase (Decrease) in Expense		(212,648)	(164,330)	(48,318)
Idaho SIT	@ 0.015093	729	0	729
Operating Income Before FIT		211,919	164,330	47,589
FIT Expense @ 35%		74,172	57,516	16,656
Net Operating Income		137,747	106,814	30,933
Allocation Note 4: Jurisdictional Four Factor		100.000%	69.750%	30.250%

• Changes in Dec.

M3

-ta Utilities
ries and Damages Adjustment
Twelve Months Ended December 31, 2010

Six Year Average Injuries and Damages Payments

Year	Electric			Gas		
	Washington	Idaho	Total	Washington	Idaho	Total
2004	58,871	291,950	350,821	22,292	13,964	36,256
2005	127,808	55,027	182,835	17,372	8,033	25,405
2006	645,996	223,631	869,627	24,876	7,844	32,720
2007	815,064	67,456	882,520	12,656	119,316	131,972
2008	48,274	43,309	91,583	66,083	70,493	136,576
2009	338,526	74,222	412,748	74,628	12,556	87,184
2010	491,252	48,250	539,501	1,045,712	8,936	1,054,648
6 yr Avg	**339,090**	**125,932**	**465,022**	**36,318**	**38,701**	**75,019**

Payments from Account 228210 by Service and State

nsaction Analysis Selection: Accounting Period : '2010%' , GI Ferc Account : '228210, 228200' , Statind Parameter 1 : 'DL'

Ferc Acct	Ferc Acct Desc	Service	Jurisdiction	Transaction Amount
228200	ACCUM PROV FOR INJURY & DAMAGE	ED	AN	-2,216,976.44
		GD	AN	-411,647.58
			OR	-9,360.67
				-2,637,984.69
228210	PAYMENT/REFUND INJURY & DAMAGE	ED	ID	48,249.85
			WA	491,251.59
		GD	ID	8,936.05
			WA	1,045,711.53
			OR	9,360.67
		ZZ	ZZ	0.00
				1,603,509.69
Total				**-1,034,475.00**

M5

nsaction Analysis Selection: Accounting Period : '2010%' , GI Ferc Account : '925100, 228200, 228210' , Statind Parameter 1 : 'DL'

.ic Acct:925100 Ava Jet:208-DC PAY

Ferc Acct Desc	Service	Jurisdictior	Transaction Desc	Electric Amt SUM	Gas North Amt SUM	Gas South Amt SUM	Transaction Amount
INJURIES & DAMAGES NON PB	ED	AN	WAID Electric - Provision for	2,216,976.44	0.00	0.00	2,216,976.44
	GD	AA	WAID Gas - Provision for Major	0.00	287,667.56	123,980.02	411,647.58
		OR	OR Gas - Provision for Major/M	0.00	0.00	9,360.67	9,360.67
Total				2,216,976.44	287,667.56	133,340.69	2,637,984.69

N1

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

FEDERAL
INCOME TAX
GAS

Line No.	Description	System	Washington	Idaho
	REVENUES			
1	Total General Business			
2	Total Transportation			
3	Other Revenues			
4	Total Gas Revenues	0	0	0
	EXPENSES			
5	Exploration & Development			
	Production			
6	City Gate Purchases			
7	Purchased Gas Expense			
8	Net Nat. Gas Storage Trans			
9	Total Production	0	0	0
	Underground Storage			
10	Operating Expenses			
11	Depreciation			
12	Taxes			
13	Total Underground Storage	0	0	0
	Distribution			
14	Operating Expenses			
15	Depreciation			
16	Taxes	0		0
17	Total Distribution	0	0	0
18	Customer Accounting			
19	Customer Service & Information			
20	Sales			
	Administrative and General			
21	Operating Expenses			
22	Depreciation			
23	Taxes			
24	Total Admin. & General	0	0	0
25	Total Gas Expense	0	0	0
26	Operating Income before FIT	0	0	0
	Federal Income Taxes			
27	Current Accrual (at 35%)	149	149	
28	Deferred FIT	(160)	(160)	
29	Amort ITC			
30	NET OPERATING INCOME	$11	$11	$0
	RATE BASE			
	PLANT IN SERVICE			
31	Underground Storage			
32	Distribution Plant			
33	General Plant			
34	Total Plant in Service	0	0	0
	ACCUMULATED DEPRECIATION			
35	Underground Storage			
36	Distribution Plant			
37	General Plant			
38	Total Accum. Depreciation	0	0	0
39	DEFERRED TAXES			
40	GAS INVENTORY			
41	WORKING CAPITAL			
42	GAIN ON SALE OF BUILDING			
43	TOTAL RATE BASE	$0	$0	$0

N2

AVISTA UTILITIES
Gas FIT Adjustment
For the Twelve Months Ended December 31, 2010

	System	Washington	Idaho
Taxable NOI per Results (Per G-FIT-12A)	(26,111,273)	(19,742,127)	(6,369,146)
Schedule M Reallocations and Adjustments			
(1) **Injuries and Damages**			
Elim Orig Sch M	643,000	427,351	215,649
Reallocated Taxable NOI	(25,468,273)	(19,314,776)	(6,153,497)
FIT Normal Accrual per Results (Per G-FIT-12A)	(9,138,945)	(6,909,744)	(2,229,201)
Adjusted FIT Normal Accrual	(8,913,896)	(6,760,172)	(2,153,724)
Current FIT Adjustment	**225,049**	**149,572** ✓	**75,477**

	System	Washington	Idaho
Deferred FIT Adjustment			
(1) **Injuries and Damages**			
Elim Orig Alloc	(225,050)	(151,893)	(73,157)
(2) **FAS 87**			
Record DFIT adjustment	(12,447)	(8,528)	(3,919)
Reallocated Taxable NOI	(237,497)	(160,421)	(77,076)
Total Deferred FIT Adjustment	**(237,497)**	**(160,421)** ✓	**(77,076)**
Effective Tax Rate Test			
Net Operating Income Before FIT	21,646,942	12,272,033	9,374,909
Less: Allocated Interest Charges	9,349,028	6,005,788	3,343,240
	12,297,914	6,266,245	6,031,669
Current FIT per ROO	(9,138,945)	(6,909,744)	(2,229,201)
Deferred FIT per ROO	14,453,110	9,753,698	4,699,412
Adjustment to FIT	(12,448)	(10,849)	(1,599)
Adjusted FIT Expense	5,301,717	2,833,105	2,468,612
Effective Tax Rate	43.11%	45.21%	40.93%
Net FIT/DFIT Adj	**(12,448)**	**(10,849)** ✓	**(1,599)**

FIT Adjustments and Reallocations
Gas System
For the Twelve Months Ended December 31, 2010

(1) **Injuries and Damages**

Reverse Schedule M and Deferred Tax amounts for actual payment and accrual so that tax expense reflects the accrued level of injuries & damages expense which is adjusted in Injuries & Damages Adjustment.

	AMOUNT
Sch M	($643,000)
DFIT	$225,050

		Allocation
Sch M	($643,000)	# 2
WA	(427,351)	66.462%
ID	(215,649)	33.538%

		Allocation
DFIT	$225,050	# 14
WA	151,893	67.493%
ID	73,157	32.507%

(2) **FAS 87**

Adjust DFIT to match utility Schedule M.

	AMOUNT
Sch M	($699,239)
DFIT @ 35%	$244,734
DFIT recorded	$257,181
DFIT Adjustment	($12,447)

	Adjustment	Allocation
DFIT	($12,447)	# 4
WA	(8,528)	68.518%
ID	(3,919)	31.482%

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

Line No.	Description		NET GAINS & LOSSES GAS System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases		0		
7	Purchased Gas Expense		0		
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses		0	0	0
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses		0	0	0
15	Depreciation		(4)	(4)	
16	Taxes		0		0
17	Total Distribution		(4)	(4)	0
18	Customer Accounting		0	0	0
19	Customer Service & Information		0	0	0
20	Sales		0	0	0
	Administrative and General				
21	Operating Expenses		0		
22	Depreciation				
23	Taxes				
24	Total Admin. & General		0	0	0
25	Total Gas Expense		(4)	(4)	0
26	Operating Income before FIT		4	4	0
	Federal Income Taxes				
27	Current Accrual	35.0%	1	1	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		$3	$3	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$0	$0	$0

AVISTA UTILITIES
AMORTIZATION OF GAINS/LOSSES ON SALES OF REAL PROPERTY
For the Year Ended December 31, 2010

ELECTRIC

		AMORTIZATION PERIOD													
Year	Gain(Loss)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
1998	0	0	0	0	0	0	0	0	0	0	0					0
1999	435,627		43,563	43,563	43,563	43,563	43,563	43,563	43,563	43,563	43,563	43,563				435,630
2000	24,577			2,458	2,458	2,458	2,458	2,458	2,458	2,458	2,458	2,458	2,458			24,580
2001	9,684				968	968	968	968	968	968	968	968	968	968		9,680
2002	108,034					10,803	10,803	10,803	10,803	10,803	10,803	10,803	10,803	10,803	10,803	108,030
2003	(116,425)						(11,643)	(11,643)	(11,643)	(11,643)	(11,643)	(11,643)	(11,643)	(11,643)	(11,643)	(104,787)
2004	110,176							11,018	11,018	11,018	11,018	11,018	11,018	11,018	11,018	88,144
2005	244,184								24,418	24,418	24,418	24,418	24,418	24,418	24,418	170,926
2006	65,410									6,541	6,541	6,541	6,541	6,541	6,541	39,246
2007	166,676										16,668	16,668	16,668	16,668	16,668	83,340
2008	172,857											17,286	17,286	17,286	17,286	69,144
2009	35,772												3,577	3,577	3,577	10,731
2010	9,908													991	991	1,982
Total	1,220,800	0	43,563	46,021	46,989	57,792	46,149	57,167	81,585	88,126	104,794	**122,080**	82,094	80,627	79,659	923,933

GAS

		AMORTIZATION PERIOD														
Year	Gain(Loss)	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	TOTAL
1998	0	0	0	0	0	0	0	0	0	0	0					0
1999	94,593		9,459	9,459	9,459	9,459	9,459	9,459	9,459	9,459	9,459	9,459				94,590
2000	7,096			710	710	710	710	710	710	710	710	710	710			7,100
2001	3,918				392	392	392	392	392	392	392	392	392	392		3,920
2002	25,315					2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	2,532	25,320
2003	(2,137)						(214)	(214)	(214)	(214)	(214)	(214)	(214)	(214)	(214)	(1,926)
2004	61							6	6	6	6	6	6	6	6	48
2005	625								63	63	63	63	63	63	63	441
2006	99									10	10	10	10	10	10	60
2007	25										3	3	3	3	3	15
2008	3,452											345	345	345	345	1,380
2009	1,496												150	150	150	345
2010	266													27	27	345
Total	133,047	0	9,459	10,169	10,561	13,093	12,879	12,885	12,948	12,958	12,961	**13,306**	3,997	3,314	2,745	130,948

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Updated by JSS 4/21/2011

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Avista Utilities
Property Dispositions
12 Months Ended December 31, 2010

	Description	Gain (Loss)	Svc/ Juris Alloc	Total Electric	WA Electric	ID Electric	North Gas	WA Gas	ID Gas		OR Gas	TOTAL
1	Miscellaneous Parts	3,198	7	2,309	1,533	776	622	426	196		268	3,198
			4									
2	NU Structures	(1,200)	7	(866)	(575)	(291)	(233)	(160)	(73)		(100)	(1,200)
			4									
4	Colstrip Land Sale	4,477	ED	4,477	2,917	1,016						4,477
			1									
5	Colstrip Land Sale	3,395	ED	3,395	2,212	771						3,395
			1									
6	Colstrip Land Sale	5,864	ED	5,864	3,821	1,331						5,864
			1									
7	Idaho Dist Land	3	ED			3						0
			ID									
	Total Gain	16,937		15,178	9,908	3,606	388	266	122	0	167	15,734
	Total Loss	($1,200)										
	Klamath Falls	122,376.84										
	Centrailia	$260,581										
	Net Gain	398,695	GL Balance 421100 &421200									
	Net Gain for Amortization	**398,695**		**15,178**	**9,908**	**3,606**	**388**	**266**	**122**	**0**	**167**	**15,734**
	Service allocators:											
	ED (Electric Direct)						19.437%				8.370%	
	7 (4-Factor, Common All Services)	100.000%		72.193%			21.055%					
	9 (4-Factor, Common Electric and Gas North)	100.000%		78.945%								
	Jurisdictional allocators:											
	1 (Production/Transmission Ratio)			100.000%	65.160%	34.840%						
	4 (Jurisdictional 4-Factor)			100.000%	66.390%	33.610%	100.000%	68.518%	31.482%			

Note 1 : These generators were obtained during the energy crisis and were recently sold. We did not allocate because the Wartsila unit is being accounted for elseware. The LM2500 is being accounted for as a non utility asset and is not used in useful. Therefore, we did not include this as part of our amortization schedule.

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AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

Line No.	Description		ELIMINATE A/R EXPENSES GAS System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense				
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses				
15	Depreciation				
16	Taxes		0		0
17	Total Distribution		0	0	0
18	Customer Accounting		(38)	(38)	0
19	Customer Service & Information				
20	Sales				
	Administrative and General				
21	Operating Expenses				
22	Depreciation				
23	Taxes				
24	Total Admin. & General		0	0	0
25	Total Gas Expense		(38)	(38)	0
26	Operating Income before FIT		38	38	0
	Federal Income Taxes				
27	Current Accrual	35.0%	13	13	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		$25	$25	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$0	$0	$0

P2

AVISTA UTILITIES
ACCOUNTS RECEIVABLE EXPENSE ELIMINATION
TWELVE MONTHS ENDED December 31, 2010

		Washington ELECTRIC	Washington GAS
Eliminate Expense			
(1) Accounts Receivable Sold - Program Fees	Account 903920	-214,091 •	-37,319 •
(1) Accounts Receivable Sold - Maturity Yield Fees	Account 903930	-2,798 •	-488 •
Total Expense Adjustment		-216,889	-37,807

(1) Source: Results of Operations Reports E-903-12A & G-903-12A

ALLOCATION OF CUSTOMER ACCOUNTING EXPENSES--ACCOUNT 903 For Twelve Months Ended December 31, 2010 Average of Monthly Averages Basis	Report ID: E-903-12A

			********** SYSTEM **********			********** WASHINGTON **********			********** IDAHO **********		
Ref/Basis	Account	Description	Direct	Allocated	Total	Direct	Allocated	Total	Direct	Allocated	Total
2	903000	Customer Records and Collections	1,704,724	5,753,030	7,457,754	1,145,992	3,777,094	4,923,086	558,732	1,975,936	2,534,668
12	903920	A/R Sold - Program Fees	0	336,425	336,425	0	214,094	214,094	0	122,331	122,331
12	903930	A/R Sold - Maturity Yield Fee	0	4,397	4,397	0	2,798	2,798	0	1,599	1,599
		TOTAL ACCOUNT 903	1,704,724	6,093,852	7,798,576	1,145,992	3,993,986	5,139,978	558,732	2,099,866	2,658,598

ALLOCATION RATIOS:

E-ALL	2	Number of Customers	100.000%	65.654%	34.346%
E-ALL	12	Net Electric Plant	100.000%	63.638%	36.362%

ALLOCATION OF ACCOUNT 903
For Twelve Months Ended December 31, 2010
Average of Monthly Averages Basis

Report ID: G-903-12A

Ref/Basis	Account	Description	********** SYSTEM ********** Direct	Allocated	Total	********** WASHINGTON ********** Direct	Allocated	Total	********** IDAHO ********** Direct	Allocated	Total
2	903000	Customer Records & Collections	896,198	3,561,120	4,457,318	624,420	2,366,792	2,991,212	271,778	1,194,328	1,466,106
12	903920	Accts Rec Sold - Program Fees	0	57,475	57,475	0	37,318	37,318	0	20,157	20,157
12	903930	Accts Rec Sold - Maturity Yield Fees	0	751	751	0	488	488	0	263	263
		Total Account 903	896,198	3,619,346	4,515,544	624,420	2,404,598	3,029,018	271,778	1,214,748	1,486,526

ALLOCATION RATIOS:

G-ALL	2	Number of Customers	100.000%	66.462%	33.538%
G-ALL	12	Net Gas Plant	100.000%	64.929%	35.071%

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AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

OFFICE SPACE CHARGES
TO SUBSIDIARIES
GAS

Line No.	Description		System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense				
8	Net Nat. Gas Storage Trans				
9	Total Production		0	0	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses				
15	Depreciation				
16	Taxes		0		
17	Total Distribution		0	0	0
18	Customer Accounting				
19	Customer Service & Information				
20	Sales				
	Administrative and General				
21	Operating Expenses		(2)	(2)	
22	Depreciation				
23	Taxes				
24	Total Admin. & General		(2)	(2)	0
25	Total Gas Expense		(2)	(2)	0
26	Operating Income before FIT		2	2	0
	Federal Income Taxes				
27	Current Accrual	35.0%	1	1	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		$1	$1	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$0	$0	$0

Q2

AVISTA UTILITIES
ALLOCATION OF OFFICE SPACE CHARGES
TO SUBSIDIARIES
For The Twelve Months Ended December 31, 2010

	TOTAL	ELECTRIC	GAS	WPNG
Total Company Allocation to Subsidiaries --	$ 12,196	$8,805	$2,371	$1,021
Per utility 4 factor note 7 *	100.000%	72.193%	19.437%	8.370%
Per jurisdictional 4 factor note 4 * (WA portion only).		66.390%	68.518%	
Allocation to WA by service	$7,470	$5,845	$1,624	

* See Results of Operations Report E-ALL-12A and G-ALL-12A

Q3

Avista Utilities

Subsidiary Office Space Analysis:
Office Space Charges for Employees
Charging Time to Subsidiary Projects
For The Twelve Months Ended December 31, 2010

Total hours charged			5,442.94
(Excluding Executive Officers)			
Hours charged			**3,923.78**
FTEs	1.89	a	
Standard office space	100	b	square feet
	$14.07	c	Office Space Cost / per sq ft.
Furniture/Phones/Computer	$2,484	d	Annual Cost/Workstation
	$ 7,340		a*b*c+ a*d
(Executive Officers)			
Hours charged			**1,519.16**
FTEs	0.73	a	
Average Executive Square footage	296	b	square feet
	$14.07	c	Office Space Cost / per sq ft.
Furniture/Phones/Computer	$2,484	d	Annual Cost/Workstation
	$ 4,856		a*b*c+ a*d
	$ 12,196		**All Employees**

Notes:
Office space rate is $13.67, developed by Facilities, plus $0.40 for copier expense - total is $14.07
Approximate annual incremental costs for furniture, phone and personal computer is $2,484 per workstation.

Q4

Transaction Detail Selection: Accounting Period : '2010%' , Organization : '%' , Project Number : '%' , MAC : '343'

Summary Exp Category:Labor

Ferc Acct	Mac	Accounting Period	Expenditure Organization	Expenditure Category	Project Number	Project Desc	Transaction Amount	Transaction Qty SUM
			C07 Total				192.30	5.00
			C54 Total				36,093.39	685.00
			D54 Total				43,858.96	1,840.00
			E01 Total				217,593.10	1,519.16
			E14 Total				15,468.92	415.00
			F54 Total				2,188.57	104.00
			J01 Total				2,046.04	32.00
			J54 Total				19,070.84	370.00
			M54 Total				2,244.51	102.00
			V08 Total				45.46	2.00
			X08 Total				1,020.87	27.00
			Y01 Total				12,756.75	331.20
			Y54 Total				3,810.56	92.80
			Z89 Total				(5,214.58)	(82.22)
			Grand Total				351,175.69	5,442.94

R1

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

RESTATE WASHINGTON
EXCISE TAXES
GAS

Line No.	Description	System	Washington	Idaho
	REVENUES			
1	Total General Business			
2	Total Transportation			
3	Other Revenues			
4	Total Gas Revenues	0	0	0
	EXPENSES			
5	Exploration & Development			
	Production			
6	City Gate Purchases			
7	Purchased Gas Expense			
8	Net Nat. Gas Storage Trans			
9	Total Production	0	0	0
	Underground Storage			
10	Operating Expenses			
11	Depreciation			
12	Taxes			
13	Total Underground Storage	0	0	0
	Distribution			
14	Operating Expenses			
15	Depreciation			
16	Taxes	(96)	(96)	0
17	Total Distribution	(96)	(96)	0
18	Customer Accounting			
19	Customer Service & Information			
20	Sales			
	Administrative and General			
21	Operating Expenses			
22	Depreciation			
23	Taxes			
24	Total Admin. & General	0	0	0
25	Total Gas Expense	(96)	(96)	0
26	Operating Income before FIT	96	96	0
	Federal Income Taxes			
27	Current Accrual (at 35%)	34	34	0
28	Amort ITC			
29	Deferred FIT			
30	NET OPERATING INCOME	62	62	0
	RATE BASE			
	PLANT IN SERVICE			
31	Underground Storage			
32	Distribution Plant			
33	General Plant			
34	Total Plant in Service	0	0	0
	ACCUMULATED DEPRECIATION			
35	Underground Storage			
36	Distribution Plant			
37	General Plant			
38	Total Accum. Depreciation	0	0	0
39	DEFERRED TAXES			
40	GAS INVENTORY			
41	WORKING CAPITAL			
42	GAIN ON SALE OF BUILDING			
43	TOTAL RATE BASE	0	0	0

R2

Avista Utilities

Restate Public Utility Excise Tax to Actual
TWELVE MONTHS ENDED December 31, 2010

* Actual Payments:	Electric	Gas
Jan-10	1,755,691.57	906,580.14
Feb-10	1,587,891.75	702,304.24
Mar-10	1,437,857.45	623,177.54
Apr-10	1,410,118.43	564,478.10
May-10	1,308,831.96	409,407.37
Jun-10	1,263,588.21	292,281.75
Jul-10	1,216,318.08	189,495.96
Aug-10	1,392,720.81	146,811.67
Sep-10	1,267,943.72	124,107.71
Oct-10	1,236,115.75	214,008.89
Nov-10	1,126,174.34	285,757.33
Dec-10	1,705,106.61	889,066.87
Total Actual Payments	$16,708,358.68	$5,347,477.56
Deduct Washington State Excise Tax amount reflected in results	16,815,159.22	5,443,940.74
Add Back Timing Difference (1)	$0	$0
Adjustment of Washington State Excise Tax	**($106,801)**	**($96,463)**

* Source: Combined Monthly Excise Tax Return Lines 52 (Electric), 53 (Gas),
(these values now incorporate LIHEAP tax credit and Renewable energy credits as assigned to service).

(1)			
	LIHEAP Tax credit assigned to service	(325,989.60)	(217,326.40)
	LIHEAP Tax credit benefit to acct 908610	325,989.60	217,326.40
		0.00	0.00

FIRST HALF 2010			YTD Totals	First Half Totals	SUMMARY	JAN 2010	FEB 2010	MARCH 2010	APRIL 2010	MAY 2010	JUNE 2010
STATE PUBLIC UTILITY TAX											
52. Power - Electricity Addendum											
Gross Amount			228,943,356.20	0.00	228,943,356.20	45,794,455.41	41,397,830.80	37,717,244.65	36,842,241.99	34,345,203.82	33,365,047.42
Deductions			3,178,022.83	0.00	3,178,022.83	462,888.93	398,818.34	592,084.64	433,297.17	551,453.25	739,480.50
Taxable Amount			225,765,333.38	0.00	225,765,333.38	45,331,566.48	40,999,012.45	37,125,160.01	36,408,944.82	33,793,750.57	32,625,566.92
Tax Due @	**0.03873**		**8,743,891.36**	**0.00**	**8,743,891.36**	**1,755,691.57**	**1,587,891.75**	**1,437,857.45**	**1,410,118.43**	**1,308,831.96**	**1,263,588.21**
Renewable Energy Credi			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60% Allocated LIHEAP Credi			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Electricity Tax			8,743,891.36	0.00	8,743,891.36	1,755,691.57	1,587,891.75	1,437,857.45	1,410,118.43	1,308,831.96	1,263,588.21
53. Gas Distribution Addendum											
Gross Amount			90,881,044.78	0.00	90,881,044.78	23,549,401.42	18,242,241.14	16,192,271.68	14,658,765.76	10,642,205.81	7,596,158.98
Deductions			65,127.49	0.00	65,127.49	14,091.51	10,043.94	14,246.11	4,609.39	13,769.50	8,367.04
Taxable Amount			90,815,917.29	0.00	90,815,917.29	23,535,309.91	18,232,197.20	16,178,025.57	14,654,156.37	10,628,436.31	7,587,791.94
Tax Due @	**0.03852**		**3,498,229.13**	**0.00**	**3,498,229.13**	**906,580.14**	**702,304.24**	**623,177.54**	**564,478.10**	**409,407.37**	**292,281.75**
40% Allocated LIHEAP Credi			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Gas Tax			3,498,229.13	0.00	3,498,229.13	906,580.14	702,304.24	623,177.54	564,478.10	409,407.37	292,281.75
22. Total Local Sales Tax GL# 241200 CD WA			584.26	0.00	584.26	51.50	43.64	61.51	194.65	78.03	154.91
25. Total Local Use Tax GL# 236500 ZZ ZZ			97,916.22	0.00	97,916.22	11,877.10	8,162.58	27,681.35	26,224.32	9,869.83	14,101.03
29. **Tax Due**			12,684,888.04	0.00	12,686,375.60	2,713,685.41	2,326,751.66	2,184,119.25	2,086,945.64	1,768,006.61	1,626,955.03
33. **Miscellaneous**			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31. **Amount you owe**			**12,684,888.04**	**0.00**	**12,686,375.60**	**2,713,685.41**	**2,326,751.66**	**2,184,119.25**	**2,086,945.64**	**1,768,006.61**	**1,626,955.03**
Local City & County Sales Tax			98,500.47	0.00	98,500.47	11,928.61	8,206.22	27,742.87	26,418.97	9,947.86	14,255.94
Commuter Trip Reductior			(1,136.18)	0.00	(1,136.18)	0.00	0.00	(1,136.18)	0.00	0.00	0.00
Credit Memo #1632185 - Clarkston sales tax					(78.62)					0.00	(78.62)
Credit Memo #1579746 - Interest					(1.34)				0.00	(1.34)	
State of Washington Excise Tax			12,586,387.57	0.00	12,587,875.13	2,701,756.81	2,318,545.44	2,156,376.38	2,060,526.67	1,758,058.75	1,612,699.09
Total Tax Due			12,683,751.86	0.00	12,685,159.46	2,713,685.41	2,326,751.66	2,182,983.07	2,086,945.64	1,768,006.61	1,626,875.07

R3

STATE OF WASHINGTON
COMBINED EXCISE TAX RETURN

SECOND HALF 2010			YTD Totals	First Half Totals	SUMMARY	JULY 2010	AUG 2010	SEPT 2010	OCT 2010	NOV 2010	DEC 2010
SECOND HALF 2010			**YTD Totals**	**First Half Totals**	**SUMMARY**	**JULY 2010**	**AUG 2010**	**SEPT 2010**	**OCT 2010**	**NOV 2010**	**DEC 2010**
STATE PUBLIC UTILITY TAX											
52. Power - Electricity Addendum											
	Gross Amount		447,808,210.09	228,943,354.51	218,864,855.57	33,336,480.92	38,220,592.79	35,396,230.77	32,930,471.14	34,196,549.83	45,022,694.84
	Deductions		5,898,367.29	1,348,894.22	4,549,473.07	1,149,847.65	585,181.14	624,202.80	559,753.07	633,267.62	997,220.79
	Taxable Amount		441,909,842.80	227,594,460.29	214,315,382.50	32,186,633.27	37,635,411.65	34,772,027.97	32,370,718.07	33,563,282.21	44,025,474.05
	Tax Due @	**0.03873**	**17,115,168.21**	**8,814,733.45**	**8,300,434.76**	**1,246,588.31**	**1,457,619.49**	**1,346,720.64**	**1,253,717.91**	**1,299,905.92**	**1,705,106.61**
	Renewable Energy Credit		(39,289.97)	0.00	(39,289.97)	0.00	(29,988.39)	0.00	(1,085.97)	(8,215.61)	0.00
	60% Allocated LIHEAP Credit		(325,989.60)	0.00	(325,989.60)	(30,270.23)	(34,910.29)	(78,776.92)	(16,516.19)	(165,515.97)	0.00
	Total Electricity		16,749,888.64	8,814,733.45	7,935,155.19	1,216,318.08	1,392,720.81	1,267,943.72	1,236,115.75	1,126,174.34	1,705,106.61
53. Gas Distribution Addendum											
	Gross Amount		144,609,994.91	90,881,044.79	53,728,950.12	5,447,091.81	4,417,919.08	4,586,664.96	5,845,846.22	10,291,896.09	23,139,531.96
	Deductions		144,679.23	65,127.49	79,551.74	3,786.89	2,415.73	1,367.53	4,213.75	8,891.89	58,875.95
	Taxable Amount		144,465,315.68	90,815,917.30	53,649,398.38	5,443,304.92	4,415,503.35	4,585,297.43	5,841,632.47	10,283,004.20	23,080,656.01
	Tax Due @	**0.03852**	**5,564,803.96**	**3,498,229.13**	**2,066,574.83**	**209,676.11**	**170,085.19**	**176,625.66**	**225,019.68**	**396,101.32**	**889,066.87**
	40% Allocated LIHEAP Credit		(217,326.40)	0.00	(217,326.40)	(20,180.15)	(23,273.52)	(52,517.95)	(11,010.79)	(110,343.99)	0.00
	Total Gas		5,347,477.56	3,498,229.13	1,849,248.43	189,495.96	146,811.67	124,107.71	214,008.89	285,757.33	889,066.87
22. Total Local Sales Tax GL# 241200 CD WA			2,174.91	584.29	1,590.62	131.66	116.69	263.05	796.07	120.65	162.50
25. Total Local Use Tax GL# 236500 ZZ ZZ			205,249.16	97,916.20	107,332.96	18,625.75	18,255.91	14,148.44	12,293.41	31,921.96	12,087.49
29. **Tax Due**			23,591,951.07	12,755,730.15	10,836,220.91	1,532,223.19	1,705,338.12	1,587,888.04	1,540,478.82	1,836,374.70	2,646,705.03
33. **Miscellaneous**			(582,605.97)	0.00	(582,605.97)	(50,450.38)	(88,172.20)	(131,294.87)	(28,612.95)	(284,075.57)	0.00
31. **Amount you owe**			**23,009,345.10**	**12,755,730.15**	**10,253,614.94**	**1,481,772.81**	**1,617,165.92**	**1,456,593.17**	**1,511,865.87**	**1,552,299.13**	**2,646,705.03**
Local City & County Sales Tax			207,424.08	98,500.49	108,923.59	18,757.41	18,372.61	14,411.49	13,089.49	32,042.60	12,249.99
Commuter Trip Reduction			(1,136.18)	(1,136.18)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Credit Memo #1632185 - Clarkston sales tax			(78.62)	(78.62)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Credit Memo - Interest			(101.06)	(1.34)	(99.72)	0.00	(99.72)	0.00	0.00	0.00	0.00
State of Washington Excise Tax			22,801,921.02	12,657,229.66	10,144,691.36	1,463,015.40	1,598,793.32	1,442,181.67	1,498,776.39	1,520,256.53	2,634,455.04
Total Tax Due			**23,008,029.24**	**12,754,514.01**	**10,253,515.22**	**1,481,772.81**	**1,617,066.20**	**1,456,593.17**	**1,511,865.87**	**1,552,299.13**	**2,646,705.03**

Transaction Analysis Selection: Accounting Period : '2010%' , Gl Ferc Account : '408110' , Statind Parameter 1 : 'DL'

Ferc Acct	Service	Jurisdictic	Transaction Desc	Transaction Amoun	Electric Amt SUM	Gas North Amt SUM	Gas South Amt SUM
408110	ED	WA	2005 WA Excise tax accrual yea	102,921.36	102,921.36	-	-
			Accrual Correction to Feb JET5	(1,324.61)	(1,324.61)	-	-
				101,596.75	101,596.75	-	-
			WA Electric Excise LIHEAP Tax	(325,989.60)	(325,989.60)	-	-
				(325,989.60)	(325,989.60)	-	-
			WA Electric Excise Tax Current	17,131,914.85	17,131,914.85	-	-
			WA Electric Excise Tax True Up	(92,362.78)	(92,362.78)	-	-
				17,039,552.07	17,039,552.07	-	-
			WA Natural gas "Other" April 2	(39.11)	(39.11)	-	-
			WA Natural gas "Other" August	3.80	3.80	-	-
			WA Natural gas "Other" Dec 200	49.85	49.85	-	-
			WA Natural gas "Other" Dec 201	1,000.00	1,000.00	-	-
			WA Natural gas "Other" Estimat	1,321.40	1,321.40	-	-
			WA Natural gas "Other" Feb 201	1,153.79	1,153.79	-	-
			WA Natural gas "Other" Jan 201	1,324.61	1,324.61	-	-
			WA Natural gas "Other" June 20	215.70	215.70	-	-
			WA Natural gas "Other" March 2	835.56	835.56	-	-
			WA Natural gas "Other" May 201	18.95	18.95	-	-
			WA Natural gas "Other" Nov 201	367.47	367.47	-	-
			WA Natural gas "Other" Oct 201	144.47	144.47	-	-
			WA Natural gas "Other" Septemb	21.00	21.00	-	-
				6,417.49	6,417.49	-	-
	Total for ED 408110			**16,821,576.71**	**16,821,576.71**	-	-
	GD	WA	2005 WA Excise tax accrual yea	95,303.87	-	95,303.87	-
				95,303.87	-	95,303.87	-
			WA Gas Excise LIHEAP Tax Credi	(217,326.40)	-	(217,326.40)	-
			WA Gas Excise Tax Current Mont	5,573,386.15	-	5,573,386.15	-
			WA Gas Excise Tax True Up Apri	(580.16)	-	(580.16)	-
			WA Gas Excise Tax True Up Augu	329.66	-	329.66	-
			WA Gas Excise Tax True Up Dece	(2,328.68)	-	(2,328.68)	-
			WA Gas Excise Tax True Up Febr	(1,069.81)	-	(1,069.81)	-
			WA Gas Excise Tax True Up Janu	(1,334.68)	-	(1,334.68)	-
			WA Gas Excise Tax True Up July	233.08	-	233.08	-
			WA Gas Excise Tax True Up June	(11.94)	-	(11.94)	-
			WA Gas Excise Tax True Up Marc	(906.85)	-	(906.85)	-

Transaction Analysis Selection: Accounting Period : '2010%' , Gl Ferc Account : '908610' , Statind Parameter 1 : 'DL'

Ferc Acct	Service	Jurisdictior	Transaction Desc	Transaction Amount	Electric Amt SUM	Gas North Amt SUM
908610	ED	WA	Aug 2010 LIHEAP credit from St	30,270.23	30,270.23	-
			August 2010 LIHEAP credit from	34,910.29	34,910.29	-
			Nov 2010 LIHEAP credit from St	165,515.97	165,515.97	-
			Sept 2010 LIHEAP credit from S	95,293.11	95,293.11	-
	GD	WA	Aug 2010 LIHEAP credit from St	20,180.15	-	20,180.15
			August 2010 LIHEAP credit from	23,273.52	-	23,273.52
			Nov 2010 LIHEAP credit from St	110,343.99	-	110,343.99
			Sept 2010 LIHEAP credit from S	63,528.74	-	63,528.74
Total				543,316.00	325,989.60	217,326.40

R 6

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

MISCELLANEOUS
RESTATING ADJUSTMENTS
GAS

Line No.	Description		System	Washington	Idaho
	REVENUES				
1	Total General Business				
2	Total Transportation				
3	Other Revenues				
4	Total Gas Revenues		0	0	0
	EXPENSES				
5	Exploration & Development				
	Production				
6	City Gate Purchases				
7	Purchased Gas Expense		(1)	(1)	
8	Net Nat. Gas Storage Trans				
9	Total Production		(1)	(1)	0
	Underground Storage				
10	Operating Expenses				
11	Depreciation				
12	Taxes				
13	Total Underground Storage		0	0	0
	Distribution				
14	Operating Expenses		(9)	(9)	
15	Depreciation				
16	Taxes		0		0
17	Total Distribution		(9)	(9)	0
18	Customer Accounting		(2)	(2)	
19	Customer Service & Information		34	34	
20	Sales		0	0	
	Administrative and General				
21	Operating Expenses		(78)	(78)	
22	Depreciation				
23	Taxes				
24	Total Admin. & General		(78)	(78)	0
25	Total Gas Expense		(56)	(56)	0
26	Operating Income before FIT		56	56	0
	Federal Income Taxes				
27	Current Accrual (at 35%)	35.0%	20	20	0
28	Amort ITC				
29	Deferred FIT				
30	NET OPERATING INCOME		$36	$36	$0
	RATE BASE				
	PLANT IN SERVICE				
31	Underground Storage				
32	Distribution Plant				
33	General Plant				
34	Total Plant in Service		0	0	0
	ACCUMULATED DEPRECIATION				
35	Underground Storage				
36	Distribution Plant				
37	General Plant				
38	Total Accum. Depreciation		0	0	0
39	DEFERRED TAXES				
40	GAS INVENTORY				
41	WORKING CAPITAL				
42	GAIN ON SALE OF BUILDING				
43	TOTAL RATE BASE		$0	$0	$0

S2

Avista Utilities
Miscellaneous Restating Adjustments
12/31/2010

		WA Electric	WA Gas	Account
Misc. Restating Adjustments:				
BOD Meeting Expenses		(19,737)	(5,484)	930.2
BOD Fees	@ 10%'	(58,037)	(16,127)	930.2
Buck-A-Block Elimination *			(2,312)	912
LIRAP Labor Elimination		23,431		920
Non-Utility		(136,517)	(41,348)	901-935, 501-588, 813-880
Reclassifications - Removed		(16,208)	(1,754)	902-935
Reclassifications		11,647	(10,066)	930.2, 923, 921, 909, 903
Reclassification - Advertising		(46,410)	34,987	930.2, 910, 909, 903
Plane Removal		(4,445)	(3,212)	931, 930.2, 928, 926.1, 921, 920
Plane Reclassifications		(46,085)	(10,498)	931, 930.2, 928, 926.1, 921, 920
Total Misc. Restating Adjustments		**(292,362)**	**(55,815)**	

* Electric Buck-A-Block removed in Electric Revenue Normalization Adj., Gas Buck-A-Block removed here in Misc. Restating adj.

* See electric workpapers Section "ab" for detail workpapers.

WA - GAS

Account	Board Mtg Costs	Brd Fees	Buck-A-Block	Non-Util Remove	Reclass Remove	Reclassifications	Reclass Adv	Non-Utility Plane Remove	Reclass Plane	Total	Account	Amount	Category
935000				(2,269.53)	(427.53)					(2,697.06)	935000	(77,426.98)	A&G
931000					-				(11,660.24)	(11,660.24)	931000		
930200	(5,484.00)	(16,127.00)		(27,498.53)	(65.40)	(64.96)	(955.93)	(414.85)	1,280.83	(49,329.83)	930200		
930100				(31.58)						(31.58)	930100		
928000				(149.47)					2,453.41	2,303.94	928000		
926100				(20.94)	(25.25)				(374.76)	(420.95)	926100		
925100					(16.78)					(16.78)	925100		
923000					(122.38)	(7,307.83)				(7,430.21)	923000		
922000										-	922000		
921000				(1,530.77)	(714.05)	(943.47)		(820.38)	(444.68)	(4,453.35)	921000		
920000			(2,312.00)						(1,378.92)	(3,690.92)	920000		
912000				(129.78)						(129.78)	912000	(129.78)	Sales
910000							11,165.28			11,165.28	910000	33,802.63	Cust Ser & Info
909000				(1,374.67)		(1,316.23)	25,901.01			23,210.12	909000		
908000				(572.77)						(572.77)	908000		
905000				(392.82)						(392.82)	905000	(2,481.13)	Cus Accts
904000					(210.45)					(210.45)	904000		
903000					(7.51)	(433.77)	(1,123.83)			(1,565.11)	903000		
902000				(30.28)	(164.49)					(194.78)	902000		
901000				(117.98)						(117.98)	901000		
880000								(1,977.24)		(1,977.24)	880000	(1,977.24)	Dist Oper
870000				(6,646.20)						(6,646.20)	870000	(6,646.20)	
813000				(582.76)					(373.28)	(956.04)	813000	(956.04)	Pur Gas Exp
	(5,484.00)	(16,127.00)	(2,312.00)	(41,348.08)	(1,753.83)	(10,066.26)	34,986.54	(3,212.47)	(10,497.64)	(55,814.74)		(55,814.74)	

T1

AVISTA UTILITIES
GAS ADJUSTMENT SUMMARY
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000'S OF DOLLARS)

RESTATE
DEBT INTEREST
GAS

Line No.	Description	System	Washington	Idaho
	REVENUES			
1	Total General Business			
2	Total Transportation			
3	Other Revenues			
4	Total Gas Revenues	0	0	0
	EXPENSES			
5	Exploration & Development			
	Production			
6	City Gate Purchases			
7	Purchased Gas Expense			
8	Net Nat. Gas Storage Trans			
9	Total Production	0	0	0
	Underground Storage			
10	Operating Expenses			
11	Depreciation			
12	Taxes			
13	Total Underground Storage	0	0	0
	Distribution			
14	Operating Expenses			
15	Depreciation			
16	Taxes	0		0
17	Total Distribution	0	0	0
18	Customer Accounting			
19	Customer Service & Information			
20	Sales			
	Administrative and General			
21	Operating Expenses			
22	Depreciation			
23	Taxes			
24	Total Admin. & General	0	0	0
25	Total Gas Expense	0	0	0
26	Operating Income before FIT	0	0	0
	Federal Income Taxes			
27	Current Accrual (at 35%)	28	28	0
28	Amort ITC			
29	Deferred FIT			
30	NET OPERATING INCOME	($28)	($28)	$0
	RATE BASE			
	PLANT IN SERVICE			
31	Underground Storage			
32	Distribution Plant			
33	General Plant			
34	Total Plant in Service	0	0	0
	ACCUMULATED DEPRECIATION			
35	Underground Storage			
36	Distribution Plant			
37	General Plant			
38	Total Accum. Depreciation	0	0	0
39	DEFERRED TAXES			
40	GAS INVENTORY			
41	WORKING CAPITAL			
42	GAIN ON SALE OF BUILDING			
43	TOTAL RATE BASE	$0	$0	$0

T2

AVISTA UTILITIES
Restate Debt Interest
Washington - Gas
TWELVE MONTHS ENDED DECEMBER 31, 2010
(000's)

	Adjustment Description	Rate Base Adjustments
b	Per Results Report	$214,663
c	Deferred FIT Rate Base	(36,762)
d	Deferred Gain on Office Building	(44)
e	Gas Inventory	10,226
f	Customer Advances	(31)
g	Customer Deposits	(1,132)
h	Weather Normalize Revenue & Gas Cost Adjust	0
i	Eliminate B & O Taxes	0
j	Property Tax	0
k	Uncollectible Expense	0
l	Regulatory Expense Adjustment	0
m	Injuries and Damages	0
n	FIT	0
o	Net Gains/losses	0
p	Eliminate A/R Expenses	0
q	Office Space Charges to Subs	0
r	Restate Excise Taxes	0
s	Misc Restating Adjustments	0
t	Restate Debt Interest	0
	Total Restated Rate Base	$186,920

Weighted Average Cost of Debt	3.17%
Restated Debt Interest	$5,925
Actual Interest (G-FIT-12A)	$6,006
Increase (Decrease) in Interest Expense	($81)
FIT Rate	x 0.350
Increase (Decrease) in FIT	$28

T3

AVISTA UTILITIES
Cost of Capital
Washington - Electric/Gas System

Component	Capital Structure	Cost	ProForma Weighted Cost	
Total Debt	53.50%	5.93%	3.17%	
				WA wtd debt
Pref Trust	0.00%	0.00%	0.00%	3.17%
Common	46.50%	10.20%	4.74%	
Total	100.00%		7.91%	

CF

AVISTA UTILITIES
CALCULATION OF CONVERSION FACTOR: WASHINGTON GAS
TWELVE MONTHS ENDED DECEMBER 31, 2010

Revenues		1.000000
Expense:		
Uncollectibles (1)		0.003617
Commission Fees (2)		0.002000
Washington Excise Tax (3)		0.038381
Franchise Fees (4)		0.000000
Total Expense		0.043998
Net Operating Income Before FIT		0.956002
Federal Income Tax @	35.00%	0.334601
REVENUE CONVERSION FACTOR		0.621402

NOTES:

(1) Calculation of Effective Uncollectible Rate:

Net Write-Offs *	520,250	
Divided by:		
Sales to Ultimate Customers + Transport **	143,833,904	
EFFECTIVE RATE		0.003617

* From Uncollectible Adjustment Workpapers.
** From Results of Operations Report G-OPS-12A.

(2) WUTC fees rate per Regulatory Fee Calculation Schedule, Annual Report Year 2010 (2011 report not prepared until 4/2011)

(3) Calculation of Effective Washington Excise Tax :

Nominal Rate *		0.038520	
Multiplied by			
Uncollectibles Factor:			
Revenue	1.000000		
Less: Effective Uncoll Rate	0.003617	0.996383	
EFFECTIVE RATE			0.038381

* From Combined Excise Tax Return.

(4) Calculation of Franchise Fee Rate:

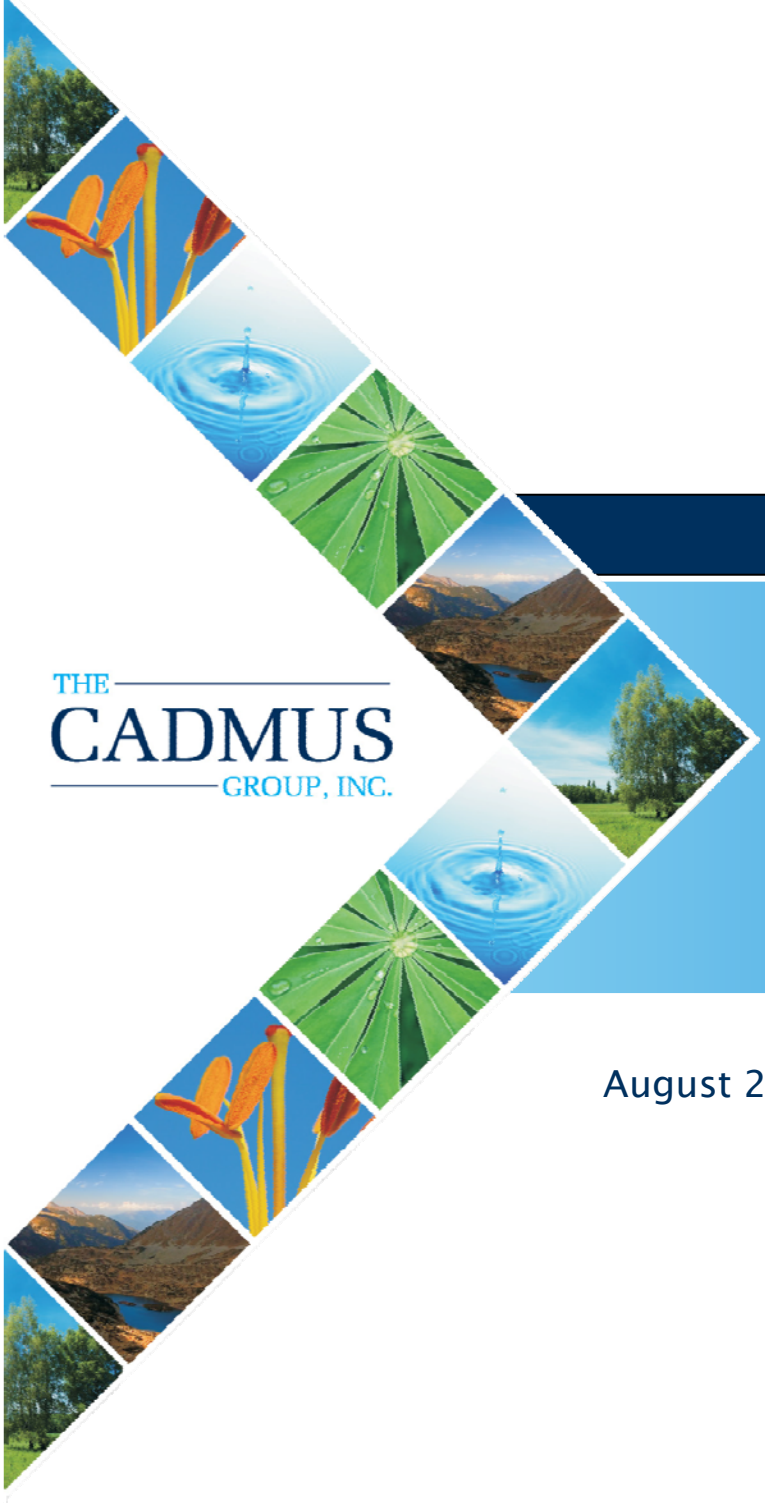
Total Fees Paid (Millwood/Spokane) *	0	
Divided by:		
Sales to Ultimate Customers + Transport **	143,833,904	
EFFECTIVE RATE		0.000000

* From Excise/Franchise Tax Adjustment Workpapers.
** From Results of Operations Report G-OPS-12A.

EXHIBIT 4

CADMUS
INDEPENDENT VERIFICATION REPORT
FOR AVISTA'S NATURAL GAS DSM SAVINGS

YEAR ENDED DECEMBER 31, 2010



THE CADMUS GROUP, INC.

Avista 2010 Multi-Sector Gas Impact Evaluation Report

August 2, 2011

Prepared by:

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Prepared for:

Avista Corporation

Prepared by:

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August 2, 2011

Date Signature

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Table of Contents

Portfolio Executive Summary

The Cadmus Group, Inc. was contracted by Avista Corporation to complete process and impact evaluations of the 2010 and 2011 gas and electric demand-side management (DSM) programs. This report only presents our impact findings for the PY 2010 gas portfolio. A process evaluation report is due to Avista in September 2011.

Evaluation Activities

For each of the three sectors—residential, non-residential, and low-income—we employed a variety of evaluation methods and activities. These are shown in Table 1-1.

Table 1-1. 2010 Gas Programs Evaluation Activities

Sector	Program	Document/ Database Review	Metering	Verification Site Visit	Survey	Billing Analysis	Modeling
Residential	ENERGY STAR Products	✓		✓	✓		
	Heating and Cooling Efficiency	✓		✓	✓	✓	
	Weatherization/Shell	✓		✓	✓		
	Water Heater Efficiency	✓		✓	✓		
	ENERGY STAR Homes	✓		✓			✓
Non-Residential	Prescriptive Programs	✓		✓	✓		
	Site-Specific	✓	✓	✓	✓	✓	✓
	Energy Smart Grocer	✓		✓			
Low-Income	Low-Income Programs	✓			✓	✓	

Key Findings and Conclusions

Residential

The major residential program conclusions are:

- Overall, residential gas program customers responded well to the programs and often installed several measures within the same program year.
- Avista's program and tracking databases were sufficient for evaluation purposes, providing adequate contact information, measure and savings information, and the database review confirmed that the information was reliable and accurate.
- The great majority of measures were determined to meet program qualification standards.
- The billing analysis performed to calculate average annual gas savings for furnaces produced interesting and conclusive results. The subsequent electric savings report will further inspect the interaction of gas furnaces and electric heat pumps to determine the overall energy usage of the home for heating.

Non-Residential

The Cadmus team successfully evaluated 104 of 453 measures installed through the program, representing 65 percent of reported savings.

In general, Cadmus determined that Avista implemented the programs well. Gross *ex post* evaluated savings achieved 76 percent of IRP program savings *goal* (892,886 compared to 1,172,269 therms). The overall portfolio achieved a 113 percent realization rate (comparing gross *ex post* evaluated savings at 892,886 therms to gross *ex ante* reported savings at 791,983 therms).

Cadmus developed a number of additional conclusions:

- The evaluation process was complicated due to some limitations in Avista's database extract. Cadmus could have streamlined the sampling process with the addition of site addresses and contact information. Measure-level data for each project, such as specific measure type and quantity, would have improved the range and depth of our evaluation activities.
- Cadmus is unable to reliably estimate interactive savings (e.g., between HVAC and lighting) impacts through the data available in Avista's current database extracts.

Low-Income

Overall, gross savings for program participants from the billing analysis averaged 123 therms in Idaho, 104 in Washington, and 112 across both states. This is approximately 15 percent energy savings for participants in both Washington and Idaho relative to their pre-participation annual consumption.

By comparing the estimated model savings to the expected savings, we calculated realization rates of 60 percent in Idaho, 30 in Washington, and 38 overall. The average expected savings provided by Avista appeared particularly high for Washington participants (46 percent of pre-usage), which accounts for the lower realization rate. Several other factors may have contributed to the low results:

- High saturation of alternative heating sources (e.g., wood, fuel oil, portable electric heaters) not accounted for when developing expected savings estimates.
- Different approaches in developing expected savings estimates are not accounting for pre-weatherization annual consumption, square footage, or measure interaction.

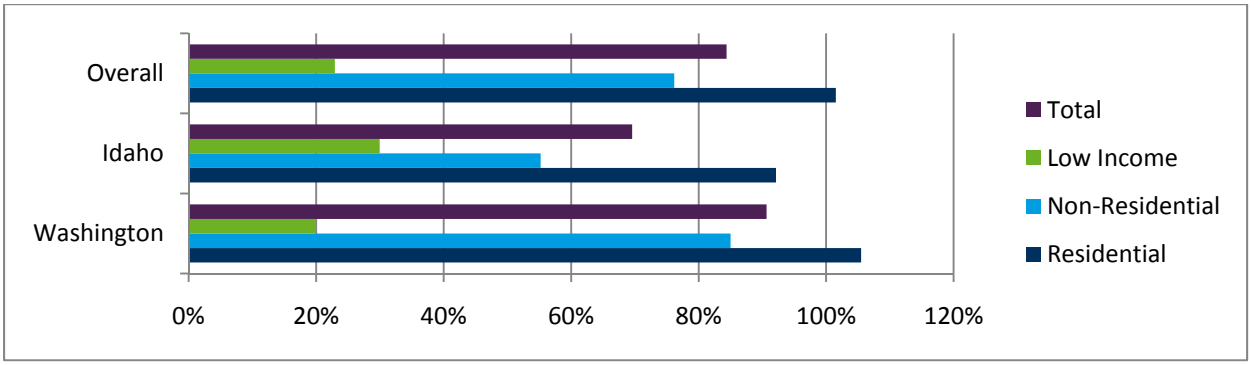
There were some homes not included in the billing analysis because they were converted from electric to gas heating.

Overall sector realization rate was 23% compared to the program goal.

Savings Results

Figure 1 displays the portfolio achieved gross savings relative to reported goals by sector, state, and overall. The residential sector exceeded goals in Washington and overall. The portfolio overall achieved 84% of the stated goals.

Figure 1. Gross Achieved Savings Percentages of IRP Goals



The following four tables show sector-level gross and net savings values and realization rates compared to reported savings and IRP goals. Net savings were estimated using results of a recent study conducted by Cadmus for Avista.

Table 1-2. Reported and Gross Verified Savings by State and Sector

Sector	Washington			Idaho			Total		
	Reported Savings	Gross Verified Savings	Real-ization Rate	Reported Savings	Gross Verified Savings	Real-ization Rate	Reported Savings	Gross Verified Savings	Real-ization Rate
Residential	823,926	683,313	83%	303,069	251,757	83%	1,126,995	935,070	83%
Non-Residential	611,681	700,883	115%	180,302	192,003	106%	791,983	892,886	113%
Low-Income	45,990	14,049	31%	15,286	8,886	58%	61,276	22,937	37%
Total	1,481,597	1,398,245	94%	498,657	452,646	91%	1,980,254	1,850,893	93%

Table 1-3. Reported and Net Verified Savings by State and Sector

Sector	Washington			Idaho			Total		
	Reported Savings	Net Verified Savings	Real-ization Rate	Reported Savings	Net Verified Savings	Real-ization Rate	Reported Savings	Net Verified Savings	Real-ization Rate
Residential	823,926	425,336	52%	303,069	155,630	51%	1,126,995	580,966	52%
Non-Residential	611,681	524,358	86%	180,302	147,986	82%	791,983	672,344	85%
Low-Income	45,990	14,049	31%	15,286	8,886	58%	61,276	22,937	37%
Total	1,481,597	963,743	65%	498,657	312,502	63%	1,980,254	1,276,247	64%

Table 1-4. IRP Goals and Gross Verified Savings by State and Sector

Sector	Washington			Idaho			Total		
	Savings Goal	Gross Achieved	Achiev-ement Rate	Savings Goal	Gross Achieved	Achiev-ement Rate	Savings Goal	Gross Achieved	Achiev-ement Rate
Residential	647,788	683,313	105%	273,281	251,757	92%	921,069	935,070	102%

Non-Residential	824,457	700,883	85%	347,812	192,003	55%	1,172,269	892,886	76%
Low-Income	70,330	14,049	20%	29,670	8,886	30%	100,000	22,937	23%
Total	1,542,575	1,398,245	91%	650,763	452,646	70%	2,193,338	1,850,893	84%

Table 1-5. IRP Goals and Net Verified Savings by State and Sector

Sector	Washington			Idaho			Total		
	Savings Goal	Net Achieved	Achieve-ment Rate	Savings Goal	Net Achieved	Achieve-ment Rate	Savings Goal	Net Achieved	Achieve-ment Rate
Residential	647,788	425,336	66%	273,281	155,630	57%	921,069	580,966	63%
Non-Residential	824,457	524,358	64%	347,812	147,986	43%	1,172,269	672,344	57%
Low-Income	70,330	14,049	20%	29,670	8,886	30%	100,000	22,937	23%
Total	1,542,575	963,743	62%	650,763	312,502	48%	2,193,338	1,276,247	58%

In summary, using gross savings as the primary measure, the 2010 gas portfolio achieved a realization rate of 93 (Table 2) percent from reported savings, and an 84 percent achievement rate from the IRP goals (Table 4). The non-residential sector had the highest realization rate of 113 percent from reported savings (Table 2), but the residential sector had the highest achievement rate of 102 percent of Avista stated goals (Table 4). Washington overall had consistently higher realization rates from reported savings and achievement rates from goals in comparison to Idaho. The low-income sector was the exception to this overall conclusion, with both realization rates and achievement rates higher in Idaho than Washington.

Recommendations and Further Analysis

Residential

The majority of our recommendations center around increasing measure level detail capture on the applications and inclusion in the databases. Some of this information includes:

- List energy factors, or at least model numbers, for appliances
- Include baseline information, such as for insulation
- Request square footage, particularly for ENERGY STAR homes

- The interaction of gas furnaces and heat pumps on both savings and incentive structure will be revisited in both the electric report and the 2010 process report. Residential heat pumps, many homes with a gas furnace as well, are currently undergoing a metering study and those data will provide important information to assist the Heating and Cooling Efficiency program going forward.

Non-Residential

Cadmus recommends that Avista continue to offer incentives for measure installation through the evaluated programs. We have the following recommendations for potentially improving program energy savings impacts and evaluability:

- While Avista's databases house the information necessary to streamline evaluation, such as site addresses, site contact information, and measure-level details, a simpler extraction process could help improve the process.
- Avista may want to consider providing incentives for demand controlled ventilation, refrigerated warehouses, and steam trap replacements through the Site Specific program.
- Avista should consider revising the methods for calculating and tracking HVAC/lighting interactive effects.

Low-Income

Our suggestions for enhancements that could help improve program impact results include:

- Standardize Expected Savings Calculations. Standardizing expected savings calculations across both states will help avoid discrepancies in realization rates.
- Account for Additional Factors in Savings Calculations. Accounting for pre-period annual consumption, square footage, and interaction effects will help create a more robust savings estimate and avoid over-estimates that may occur through a prescriptive application of deemed estimates.
- Track Alternative Heating Sources. Collecting information on a customer's primary heating usage at the time of weatherization will allow for more reasonable estimates in cases where, despite being a gas customer, gas is used as a secondary heating source.
- Include High-Use Customers in Program Targeting. Targeting high-use customers may help to achieve higher energy savings and aid overly burdened customers with usage higher than average customers.

1 2010 Residential Gas Impact Report

Executive Summary

Avista's residential gas demand-side management (DSM) programs claimed savings of 1,126,990 therms during the 2010 program year. This report explains the methods undertaken to qualify and verify these savings and the adjustments made to the final savings values. The Avista 2010 DSM residential gas programs included ENERGY STAR® Products, ENERGY STAR® Homes, Heating and Cooling Efficiency, Water Heating, and Weatherization measures. Cadmus reviewed every prescriptive measure in Avista's DSM programs to create a TRM.

Evaluation Methodology

For each of the programs we employed a variety of evaluation methods and activities. These are shown in Table 1-1.

Table 1-1. 2010 Gas Programs Evaluation Activities

Sector	Program	Document/ Database Review	Verification Site Visit	Survey	Billing Analysis	Modeling
Residential	ENERGY STAR Products	✓	✓	✓		
	Heating and Cooling Efficiency	✓	✓	✓	✓	
	Weatherization/Shell	✓	✓	✓		
	Water Heater Efficiency	✓	✓	✓		
	ENERGY STAR Homes	✓	✓			✓

Energy Savings

Cadmus adjusted the claimed savings associated with each measure to reflect our TRM updates. This resulted in significant changes in savings for all programs except ENERGY STAR Homes (which was not listed in the most recent version of the TRM). Most of the changes were due to updated baseline and measure levels of efficiency as a result of changes in federal and ENERGY STAR standards.

A billing analysis for gas furnaces was completed on a total of 1,714 sites with efficient gas furnace installations. As can be seen in Table 1-2, the results of the billing analysis model had a large effect on furnace measures savings, which impacted the overall savings for the Heating and Cooling Efficiency program and for the entire gas portfolio (furnaces have the largest share of savings).

Table 1-2. Furnace Billing Model and Reported Savings

Group	N	Model Savings (Therms)	Avista Reported Savings	Realization Rate
Idaho	586	100	123	81%
Washington	1,128	105	124	85%
Overall	1,714	103	124	83%

The aggregated adjusted gross savings and resulting realization rates for each program are shown in Table 1-3. Overall, the residential gas programs achieved an adjusted gross realization rate of 84 percent.

Table 1-3. Reported and Adjusted Gross Savings

Program Name	Reported Savings (Therms)	Adjusted Gross (Therms)	Total Realization Rates
ENERGY STAR Products	44,400	60,878	137%
Heating and Cooling Efficiency	483,882	408,015	84%
Weatherization/Shell	553,876	434,960	79%
Water Heater Efficiency	12,010	7,511	63%
ENERGY STAR Homes	32,822	34,146	104%
Total	1,126,990	945,510	84%

Table 1-4. Reported and Adjusted Gross Savings by State

Program Name	Washington			Idaho		
	Reported Savings (Therms)	Adjusted Gross (Therms)	Realization Rates	Reported Savings (Therms)	Adjusted Gross (Therms)	Realization Rates
ENERGY STAR Products	32,377	44,599	138%	12,028	16,282	135%
Heating and Cooling Efficiency	324,228	273,371	84%	159,654	134,644	84%
Weatherization/Shell	432,891	340,397	79%	120,985	94,563	78%
Water Heater Efficiency	9,049	5,701	63%	2,961	1,810	61%
ENERGY STAR Homes	25,381	26,423	104%	7,441	7,724	104%
Total	823,926	690,491	84%	303,069	255,023	84%

In order to produce applicable results and findings that could be used for evaluating the residential gas programs, we chose a sample of 230 records for surveys and 68 measures for on-site verification, and used that sample to calculate qualification and verification. We chose these sample sizes to ensure industry standard levels of confidence and precision within and across programs.

We first analyzed the collected data to determine the number of measures with verified installs. Out of 230 surveys, we verified a total of 305 measures, as some participants had more than one measure. Cadmus determined measure characteristics to ensure that all qualifications were met. We analyzed application records for qualification either by visual inspection during our site visits or by conducting online database searches of model numbers when applicable. Table 1-5 shows the final verified adjusted gross savings and verified savings rates after we applied verification to each programs' savings, followed by state level savings tables. The overall realization rate for all the residential programs was 83 percent after application of the verification rates. Tables are also provided to break out Washington and Idaho savings.

Table 1-5. Avista 2010 DSM Programs Total Gross Gas Savings

Program	Measure Count	Adjusted Gross (Therms)	Verification Rate	Verified Savings (Therms)	Overall Realized Savings Rate
ENERGY STAR Products	5,876	60,878	96%	58,475	132%
Heating and Cooling Efficiency	3,934	408,015	98%	400,317	83%
Weatherization/Shell	5,667	434,960	100%	434,960	79%
Water Heater Efficiency	774	7,511	95%	7,170	60%
ENERGY STAR Homes	168	34,146	100%	34,146	104%
Total	16,419	945,510	98%	935,068	83%

Table 1-6. Avista 2010 DSM Programs Total Gross Gas Savings - Washington

Program	Measure Count	Adjusted Gross (Therms)	Verification Rate	Verified Savings (Therms)	Overall Realized Savings Rate
ENERGY STAR Products	4,269	44,599	96%	42,815	132%
Heating and Cooling Efficiency	2,636	273,371	98%	267,904	83%
Weatherization/Shell	4,426	340,397	100%	340,397	79%
Water Heater Efficiency	603	5,701	95%	5,416	60%
ENERGY STAR Homes	130	26,423	100%	26,423	104%
Total	12,064	690,491	98%	682,955	83%

Table 1-7. Avista 2010 DSM Programs Total Gross Gas Savings - Idaho

Program	Measure Count	Adjusted Gross (Therms)	Verification Rate	Verified Savings (Therms)	Overall Realized Savings Rate
ENERGY STAR Products	1,608	16,282	96%	15,631	130%
Heating and Cooling Efficiency	1,298	134,644	98%	131,951	83%
Weatherization/Shell	1,241	94,563	100%	94,563	78%
Water Heater Efficiency	171	1,810	95%	1,720	58%
ENERGY STAR Homes	38	7,724	100%	7,724	104%
Total	4,356	255,023	98%	251,588	83%

We verified that a total of 935,068 therms have been saved through the installation of 16,419 measures during PY 2010 of the gas DSM programs.

Net-to-gross values per program were computed in a previous Cadmus study in 2011. Table 1-8 shows the net savings per program.

Table 1-8. Total Program Gross and Net Verified Savings and Realization Rates

Program	Reported Savings (Therms)	NTG Ratio	Net Verified (Therms)	Net Realization Rate
ENERGY STAR Products	44,400	52%	30,408	68%
Heating and Cooling Efficiency	483,882	61%	244,193	50%
Weatherization/Shell	553,876	63.8%	277,505	50%
Water Heater Efficiency	12,010	52%	3,728	31%
ENERGY STAR Homes	32,822	73.6%	25,131	77%
Total	1,126,990	N/A	580,965	52%

1.1 Introduction

The Avista PY 2010 DSM residential gas programs included ENERGY STAR Products, ENERGY STAR Homes, Heating and Cooling Efficiency, Water Heating, and Weatherization. The electric savings associated with these programs will be reported in the Q2 2012 electric programs savings report.

We designed our impact evaluation to verify reported program participation and energy savings. For the evaluation, we utilized data collected and reported in the program tracking database, online application forms, on-site visits, phone surveys, and applicable deemed values we developed for the Avista TRM.[1]

Throughout the impact evaluation, Cadmus documented program achievements, validated savings, and identified items that should be investigated further, such as potential discrepancies in calculation assumptions and methodology.

1.2 Methodology

1.2.1 Sampling

We chose a statistically significant sample for the surveys and site visits separately, based on industry standard levels of confidence and precision. The following subsections describe the methods we employed to select a sufficient sample.

1.2.1.1 Survey Sampling

Cadmus determined sample sizes for participant surveys based on the desired confidence and precision levels for the derived verification rates. A 90 percent confidence level ensured that the findings adequately represent the larger population, and a 10 percent precision level ensured an error margin of 10 percent or less. The 90 percent confidence interval and 10 percent precision (90/10) are generally accepted as the industry standard. Table 1-9 shows our sample size goals and completions for participant surveys across the various programs.

[1] Cadmus created a TRM in the first quarter of 2011 for use in deemed measure savings.

Table 1-9. Participant Survey Sample Sizes for Residential 2010 Gas Savings Programs

Program	Sample Size	Surveys Completed
ENERGY STAR Products	70	73
Heating and Cooling Efficiency	70	72
Weatherization and Shell	70	70
Water Heater Efficiency	20	20
Total Residential Gas Surveys	230	235

Cadmus determined that the smaller sample size for the Water Heater Efficiency program (with a consequential higher margin of error) was appropriate, given the program's relatively small size within the portfolio.

Cadmus also determined that no impact-related participant surveys were necessary for the ENERGY STAR Homes program or the Home Audit Pilot program. Although the ENERGY STAR Homes program produces gas savings, the evaluation examines these homes through methods other than survey-based verification. Savings that are attributable to the Home Audit Pilot program appear in the other residential programs, and therefore do not need to be verified separately.

1.2.1.2 Site Visit Sampling

Avista provided Cadmus with the final FY 2010 database extract, which we used to revise the initially proposed sample distribution based on the final program populations and energy savings.

Our final proposed set of site visit verifications by measure is shown in Table 1-10.

Table 1-10. Gas Measure Level Site Visit Goals and Completes

Measure	Proposed Site Visits	Completed Site Visits
ENERGY STAR Home	5	4
High-Efficiency Boiler	4	2
High-Efficiency Furnace	27	32
Insulation – Ceiling/Attic	8	7
Insulation – Wall	8	5
Insulation – Floor	0	1
Windows	16	14
ENERGY STAR Clothes Washer	0	3
High-Efficiency Water Heater - 50 gallon	0	1
High-Efficiency Water Heater - Tankless	0	1
Total	68	70

Cadmus attempted to verify savings for every incented measure at each site, regardless of whether it achieved gas or electric savings. As noted previously, Cadmus will report electric measure savings in 2012.

1.2.2 Data Collection and Analysis

1.2.2.1 Document Reviews

Cadmus completed document reviews for our sample to ensure that each measure met all program specifications and that rebate amounts were properly calculated. This involved a careful review of rebate applications and invoices. We found all model numbers in online databases and matched the measure characteristics to what was claimed in the invoice and application.

1.2.2.2 Surveys

Cadmus contracted with market-research firm Discovery Research Group (DRG) to conduct surveys with participants of the four gas-saving programs with the greatest impact: ENERGY STAR Products, Heating and Cooling Efficiency, Weatherization, and Water Heater Efficiency.

To minimize response bias, DRG called customers during various hours of the day and evening, as well as on weekends, and made multiple attempts to contact individual participants. Cadmus monitored survey phone calls to ensure accuracy, professionalism, and objectivity. DRG delivered response data to Cadmus in Microsoft Excel® format, and Cadmus conducted analysis using SAS. We analyzed the survey data at the program level, rather than at the measure level, and in order to ensure accuracy, we included a random and proportional distribution of measures in each program-level sample.

1.2.2.3 Site Visits

Cadmus randomly selected a sample of the participant population and performed site visits to verify measure installation and record measure characteristics. This on-site verification of measures included a visual inspection of the measure(s), verifying documentation, ensuring that the unit is still operable, recording make and model information, recording home characteristics, and determining program qualification. Specific details on our verification and analysis activities for each measure are included in the Program Results and Findings section below.

1.2.2.4 Database Analysis

We analyzed the database to make sure that savings for measures were accurate and to check for any duplications or deletions. The analysis revealed that the database does not exhibit any systematic problems and that it accurately reflects the information provided by the applicant. We did not find any inaccuracies on the part of the applicant through our verification and qualification analysis during the documentation review.

1.2.2.5 Engineering Analysis

Cadmus reviewed every prescriptive measure in Avista's DSM programs to create a TRM. Avista's DSM prescriptive measure information was listed in a MS Excel spreadsheet with deemed savings values. According to Avista, the savings numbers required a detailed review and updating where necessary.

Cadmus' review required:

- In depth knowledge and understanding of the specifics of each measure to ensure that the appropriate baseline was used and that savings calculations reflect the best possible *ex ante* value for the region;

- Engineer coordination to ensure consistency in inputs and calculations and to ensure that the most up-to-date sources were referenced;
- Knowledge and understanding of federal minimum codes and standards; and
- Detailed review of the engineering calculations Avista used.

Ultimately, Cadmus provided recommendations for every measure and included source references, engineering algorithms, and inputs for algorithms.

Cadmus reviewers examined savings methodologies from the Regional Technical Forum (RTF) that are applicable for gas savings, as well as Northwest Power Planning 6th Plan savings. Reviewers also assessed other TRMs and engineering studies from the Northwest and around the country when applicable. Reviewers also interviewed our internal industry experts for each technology type. For certain measures, engineering modeling was necessary to validate savings estimates.

Cadmus completed our review at the end of March 2011, and presented the findings to Avista on April 6. The Implementation Team program managers and engineers reviewed the TRM document and held a meeting on April 26 to discuss the findings and address questions. One final review meeting was held on May 12, 2011.

1.2.3 Billing Analysis

Cadmus conducted a statistical billing analysis to determine the adjusted gross savings and realization rates for the gas furnace measures installed through the residential Heating and Cooling Efficiency gas rebate program in PY 2010.

To estimate the furnace energy savings due to the program, Cadmus used a pre and post-installation combined Conditional Savings Analysis (CSA) and Princeton Score Keeping Method (PRISM) approach using monthly billing data. We calculated model savings estimates for Idaho, Washington, and for the states in combination.

1.2.3.1 Billing Analysis Methodology

Avista provided Cadmus with monthly billing data for all the furnace participants from January 2008 through April 2011. Avista also provided us with a measure detail file that contains participation and measure data for the furnace participants, including all additional gas and electric measures installed in conjunction with the gas furnaces. The participant information included customer details, account numbers, type of measure installed, rebate amounts, measure installation costs, measure installation dates, and deemed savings per measure.

The first step Cadmus performed was to match up the furnace measure information with the gas furnace billing data. We obtained daily average temperature weather data from 2008 to 2011 for the 10 National Oceanic and Atmospheric Administration (NOAA) weather stations that represent all the zip codes in Avista's Washington and Idaho service territories. From the daily temperatures, we determined base 65 heating degree days (HDDs) for each station. Using a zip code mapping for all of the U.S. weather stations, we determined the nearest station for each zip code. We then matched the billing data periods with the HDDs from the associated station.

In order to prevent bias from the differing reading cycles in assigning the pre and post periods, and to simplify the analysis, we allocated the therm billing usage and the associated matched HDDs to calendar months. Since the latest available billing data were in April 2011, and the furnaces were installed in 2010, we defined the analysis *pre* period as 2009, before any participation installations occurred. We defined the *post* period as the months following the installation date.

Due to post-period data limitations (with the available data only extending through April 2011), most participants had fewer than the standard 12 months of pre- and post-installation billing data months. For this reason, we paired the pre and post months used in the billing analysis. For example, if a customer installed measures in August 2010, we defined the post-period as September 2010 through April 2011, while the pre-period was the corresponding months from September 2009 through April 2010. This ensured that we used the same months in both the pre and post periods, in order to prevent bias from using mismatched months.

Furthermore, for Washington participants, we were able to perform automated queries on a realty website (www.zillow.com) to obtain the square footage of homes by address.

1.2.3.2 Data Screening

General Screens

We performed the following screens to remove accounts that could possibly skew our furnace savings estimation.

- **Furnace participants that installed other gas measures.** To accurately isolate gas furnace savings, participants installing additional measures were excluded from the analysis. [2]
- **Customers that indicated unit numbers in the address.** These could potentially indicate furnace installations that occurred in apartments.
- **Accounts with fewer than three paired months (90 days) of billing data in either the pre or post period**. This screen also excluded customers that moved between the pre and post periods, since there would not be sufficient pre-month data for analysis. It is unlikely that the household characteristics and furnace usage behavior of the previous tenants would match that of the current tenant who installed the furnace.

PRISM Modeling Screens

The second step in our screening process was to run PRISM models for the pre and post billing data. We used these models to obtain weather-normalized pre and post annual usage for each account, and to provide an alternate check of the furnace savings obtained from the CSA model.

For each participant home, we estimated a heating model in both the pre and post periods to weather-normalize raw billing data.

[2] For the 654 furnace participants that installed other measures, the expected savings from the new furnace was 110 therms. The expected savings from the other measures is nearly as high as for the furnace installs. As a result, the model would have difficulty disaggregating the impacts from a furnace from another measure that affects the space heating usage.

The PRISM model specification we used was:

$$ADC_{it} = \alpha_i + \beta_1 AVGHDD_{it} + \varepsilon_{it}$$

Where for each customer 'i' and calendar month 't':

ADC_{it}	=	the average daily therm consumption in the post program period
α_i	=	the participant intercept; represents the average daily therm base load
β_1	=	the model space heating slope
$AVGHDD_{it}$	=	the base 65 average daily HDDs for the specific location
ε_{it}	=	the error term

From the model above, we computed the weather-normalized annual consumption (NAC) as follows:

$$NAC_i = \alpha_i * 365 + \beta_1 LRHDD_i + \varepsilon_i$$

Where for each customer 'i':

NAC_i	=	the normalized annual therm consumption
α_i	=	the intercept that is the average daily or base load for each participant; represents the average daily base load from the model
$\alpha_i * 365$	=	the annual base load therm usage (non-weather sensitive)
β_1	=	the heating slope; in effect, this is the usage per heating degree from the model above
$LRHDD_i$	=	the annual, long-term HDDs of a typical month year (TMY2) in the 1971-2000 series from NOAA, based on home location[3]
$\beta_1 * LRHDD_i$	=	the weather-normalized annual weather sensitive (heating) usage, also known as HEATNAC
ε_i	=	the error term

Once we ran the models, we applied the following first set of screens on the PRISM model output to remove participant from the furnace billing analysis:

- **Accounts with a PRISM model r-squared of less than 0.75.** These indicate a bad fit of the monthly gas usage and the actual HDDs, which is unexpected when a furnace is used in both the pre and post periods.
- **Accounts with a HEATNAC of less than 100 therms in either the pre or post period**. If the annual heating usage is that low, the heating system was likely not used at all, and gas

[3] In billing analysis we typically use 30 year normal heating degree averages to weather normalize the usage. The latest 30 year series available for this analysis was the TMY2 (1971-2000) series from NOAA/NCDC. We also ran the billing analysis using the 15 year TMY3 (1991-2005) heating degree days and the overall savings were not very different (5% lower).

was probably only used for backup secondary heating. This screen also removed accounts with negative heating slopes from the analysis, since it is unlikely that the usage would have decreased in the heating months.

- **Accounts where the post-weather-normalized (POSTNAC) usage was more than 70 percent of the pre-weather-normalized (PRENAC) usage**. Such large changes could indicate property vacancies when adding or removing "other" gas equipment, such as pools or spas, that are unrelated to the furnace installation.
- **Accounts where the pre-period base load was 0 and the post-period base load was greater than 0.** Since the base load indicates the usage that occurs in non-winter and shoulder months, this outcome suggests that a gas water heater, gas dryer, or gas range was added to the participant home. In this situation, the additional base load usage in the post period is not related to the furnace installation.
- **Accounts with negative intercepts, and hence negative base load,** were included in the analysis but truncated to 0. These negative intercepts typically occur in homes with gas space heating and without gas water heating. The base load for these homes is expected to be 0, thus we set the base load to 0.

Once we placed these screens on the data, there were 1,714 participants remaining that we used in the CSA model outlined below to determine the overall savings.

Table 1-11 summarizes the account attrition from the various screens listed above.

Table 1-11. Furnace Account Attrition

Screen	Number Remaining	Percent Remaining	Number Dropped	Percent Dropped
Original	3,800	100%	0	0%
Accounts that Installed Other Measures	3,146	83%	654	17%
Insufficient Pre/Post Months or Moved During Pre or Post	2,437	64%	709	19%
PRISM Screens: Low R-Squared, Low Heating Usage	1,942	51%	495	13%
Changed Usage Between Pre and Post Period (> 70%)	1,918	50%	24	1%
Added Base Load	1,741	46%	177	5%
Multifamily (Unit Number Present)	1,714	45%	27	1%
Final Analysis Group	1,714	45%	2,086	55%

1.2.3.3 CSA Modeling Approach

To estimate furnace energy savings from this program, we used a pre-post CSA fixed-effects modeling method that uses pooled monthly time-series (panel) billing data. The fixed-effects modeling approach corrects for differences between the pre- and post-installation weather conditions, as well as for differences in usage consumption between participants with the inclusion of a separate intercept for each participant. Our modeling approach ensures that model savings estimates will not be skewed by any unusually high usage or low usage participants. We used the following model specification to determine the state-level furnace savings

$$ADC_{it} = \alpha_i + \beta_1 AVGHDD_{it} + \beta_2 POST\_ID_i * AVGHDD_{it} + \beta_3 POST\_WA_i * AVGHDD_{it} + \beta_{4..14} M_t + \varepsilon_{it}$$

Where for participant 'i' and monthly billing period 't':

ADC_{it} = the average daily therm consumption during the pre- or post-program period

α_i = the average daily therm base load intercept for each participant (this is part of the fixed effects specification)

$AVGHDD_{it}$ = the average daily base 65 HDDs based on home location

β_2 = the therm savings per HDD for the efficient furnace measure in Idaho

$POST\_ID_i$ = an indicator variable that is 1 in the post-period (after the furnace installation) for Idaho participants, and 0 in the pre-weatherization period

$POST\_ID_i * AVGHDD_{it}$ = an interaction between the post indicator ($POST\_ID_i$) and the HDDs ($AVGHDD_{it}$)

β_3 = the therm savings per HDD for the efficient furnace measure in Washington

$POST\_WA_i$ = an indicator variable that is 1 in the post-period (after the furnace installation) for Washington participants, and 0 in the pre-weatherization period

$POST\_WA_i * AVGHDD_{it}$ = an interaction between the Washington post indicator ($POST\_WA_i$) and the HDDs ($AVGHDD_{it}$)

M_t = an array of bill month dummy variables (Feb, Mar, …, Dec), 0 otherwise[4]

ε_{it} = the modeling estimation error

The model above estimates the savings per heating degree for Idaho and Washington respectively with β_2 and β_3. In order to obtain the actual annual savings under normal weather conditions, we applied the 1971-2000 TMY2 normal HDDs from NOAA.

The per-HDD modeling approach resolves much of the potential bias from customers where predominantly winter month data were available. Since furnaces have seasonality to their usage, a per heating degree savings allows for allocating savings across all the calendar months, as well as being based on the HDDs. Using just a post-period indicator would have had a predominance of the winter months, resulting in savings being biased upwards.

[4] We excluded one of the dummy variables from the independent variables, otherwise the 12 monthly indicators would form perfect co-linearity with the intercepts. We excluded January, thus the intercepts include the seasonality from January.

1.2.4 Measure Qualification Rates

Cadmus considered a measure as qualified if it met the various requirements in its category, such as being ENERGY STAR certified or meeting the minimum efficiency standards for the program. We conducted online database searches of the model numbers when applicable, and noted the necessary qualifying characteristics to ensure that all qualifications were met.

The only non-qualified measure we found (out of the entire site visit verification sample) was a wall insulation project. The installed foam board insulation is listed on the invoice as R-9.4, but program qualification requires a minimum increase of R-10. Since all of the existing insulation was removed prior to installation, the final R-value does not meet the qualifying criterion, but results in a qualification rate of 96 percent. All other measures had qualification rates of 100 percent, and the total qualification rate for all residential gas programs was 99 percent.

1.2.5 Verification Rates

Cadmus determined verification rates for each program, but not for each measure. We administered verification site visits and surveys, where applicable. This verification included checking that the correct measure was tracked in the database, the correct quantity was accounted for, and that the unit was still in place and operable. We gave equal weight to the site visit and survey observations.

1.3 Program Results and Findings

1.3.1 Overview

After completing surveys and site visits, we analyzed and applied the data to the reported savings. We applied the savings from the updated TRM to each measure and then applied the verification rates to each program. The end result is the total adjusted gross savings for each measure and program, as well as the overall realized savings for each program. In the following sections, we describe each program, explain our analysis steps, and discuss the results and findings.

1.3.2 ENERGY STAR Products

1.3.2.1 Program Description

The ENERGY STAR Products program includes the following measures:

- Clothes Washer (Electric and Gas)
- Dishwasher (with Electric or Gas water heater)
- Freezer
- Refrigerator

The program offers direct financial incentives to motivate customers to use appliances that are more energy efficient. The program indirectly encourages market transformation by increasing

demand for ENERGY STAR products. Both electric and gas measures are included in the program, but this report only considers gas savings.[5]

1.3.2.2 Analysis

The energy savings credited to the ENERGY STAR Products program must meet several criteria. First, the measure must still be installed and operating properly at the time of verification. Second, the number of installed pieces of equipment and their corresponding model numbers (if available) need to match Avista's database. Lastly, the unit must have been ENERGY STAR-qualified at the time of the program offering.

The method we used for verifying measure savings entailed the following steps:

1. Conducting a phone survey or site visit to verify installation of the measure within Avista's service territory.
2. Calculating a realization rate, which is the ratio of verified to claimed units by measure type within the sample.
3. Apply the realization rate to the entire population.

Clothes washer savings have a single deemed value in the TRM, which we applied directly to the entire verified and qualified population of ENERGY STAR clothes washers. There are, however, two savings values for dishwashers depending on the baseline and efficient energy factor (EF) values. Due to the lack of baseline and efficient EF values being collected on the application and in the database tracking system, Cadmus applied an average of the two savings values to the entire verified and qualified population of ENERGY STAR dishwashers.

1.3.2.3 Results and Findings

Table 1-12 shows the total reported and adjusted gross savings for the gas ENERGY STAR Products program by measure.

Table 1-12. ENERGY STAR Products Measure and Program Reported and Adjusted Savings

	Reported Values			Adjusted Gross	
Measures	Count	Unit Savings (Therms)	Reported Savings	Average Unit Savings (Therms)	Total Adj Gross Savings
ENERGY STAR Clothes Washer	3,755	9.0	33,795	14.8	55,649
ENERGY STAR Dishwasher	2,121	5.0	10,605	2.5	5,229
Program Total	5,876	7.6	44,400	10.1	60,878

As can be seen in Table 1-12, there are considerable differences between the savings per measure from the reported savings and those derived from the TRM. This difference is driven by the adjustments Cadmus made to the TRM savings values. The adjusted clothes washer savings of 14.8 therms are the result of an exhaustive study we performed for the California Public Utilities

[5] We will complete the 2010-2011 electric savings report in Q2 of 2012.

Commission, where we determined greater savings than the 9.0 therms/measure reported by Avista. The new ENERGY STAR dishwasher values are based on calculations using federal standards and averages of dishwashers in the market that meet ENERGY STAR standard of 0.72 EF.

Our site visits and participant surveys produced a verification rate of 96 percent using a sample of 76 participants.[6] Table 1-13 shows program-level reported, adjusted gross, and verified savings.

Table 1-13. ENERGY STAR Products Total Gas Savings

Region	Measure Count	Reported Savings	Adjusted Gross Savings	Verification Rate	Verified Savings	Verified Savings Rate
WA	4,269	32,377	44,599	96%	42,838	132%
ID	1,608	12,028	16,282	96%	15,639	130%
Total	5,876	44,400	60,878	96%	58,475	132%

The decreased dishwasher savings are offset by the increased clothes washer savings, and are due to considerably more clothes washer than dishwasher installations. The realized adjusted gross savings rate is 137 percent for the ENERGY STAR gas measure savings. This verification rate decreased the savings slightly to 58,475 therms, and produced an overall verified realized savings of 132 percent of the reported savings.

1.3.3 Heating and Cooling Efficiency

1.3.3.1 Program Description

The Heating and Cooling Efficiency program includes the following measures:

- Gas Boiler
- Gas Furnace
- Ductless Heat Pump (Electric)
- Air Source Heat Pump (Electric)
- Variable Speed Furnace Fan (Electric)

This program offers five categories of incentives for residential electric and gas customers seeking to purchase high-efficiency heating and cooling equipment. In this report, we only discuss installations resulting from the $400 incentive available for installing a high-efficiency natural gas furnace of 90 percent AFUE (heating efficiency) or greater, or a natural gas boiler of 90 percent AFUE or greater.

[6] Confidence and precision information on verification rates are presented in the Verification Confidence and Precision section of this report.

1.3.3.2 Analysis

In PY 2010, 3,860 efficient furnaces were installed in 3,800 residences. Of these residences, 3,146 (83 percent) installed only a furnace measure. The remainder also installed additional gas measures in their home. The 2010 Avista deemed savings estimate for each furnace installation was 123 therms, based on converting a standard code 78 percent efficient furnace to a 90 percent or more efficient furnace. Cadmus conducted a statistical billing analysis to determine the adjusted gross savings and realization rates to modify this value.

With only 74 efficient boilers being installed during PY 2010, we decided that a billing analysis would not be feasible for determining the adjusted gross savings. Engineering algorithms assume a baseline boiler of 80 AFUE and an efficient boiler of 95 AFUE. We chose the value of 95 AFUE due to the results of our site visit analysis, in which all the efficient boilers we reviewed were at least 95 AFUE.

1.3.3.3 Results and Findings

Table 1-14 shows the total reported and adjusted savings for the gas Heating and Cooling Efficiency program measures.

Table 1-14. Heating and Cooling Efficiency Measures and Reported and Adjusted Savings

Measures	Reported Values			Adjusted Gross	
	Count	Unit Savings (Therms)	Reported Savings	Average Unit Savings (Therms)	Total Adj Gross Savings
High-Efficiency Boiler	74	123.0	9,102	141.0	10,435
High-Efficiency Furnace	3,860	123.0	474,780	103.0	397,580
Program Total	3,934	123.0	483,882	103.7	408,015

As can be seen in Table 1-14, the adjusted gross savings increased significantly for boilers. This is due to Cadmus increasing the measure efficient level from 90 to 95 AFUE. Furnace savings decreased as a result of our furnace billing analysis, explained in greater detail below.

Furnace Billing Analysis Model Results

Table 1-15 summarizes the model savings results for the 1,714 furnace measure participants. The model savings for Idaho are 100 therms, 105 for Washington, and 103 overall.[7] The precision level indicates that the percent error of the savings estimate is less than 10 percent.

[7] Cadmus also ran the analysis including participants who received rebates for a water heater and a furnace. Savings for the furnace measure increased by approximately 0.5%.

Table 1-15. Furnace Savings Summary

Group	N	PRENAC	Model Savings Per HDD	Normal HDDs	Model Savings (Therms)	Precision at 90% Confidence	Savings Lower 90% (Therms)	Savings Upper 90% (Therms)
Idaho	586	1,009	0.01458	6,873	100	7%	94	107
Washington	1,128	1,031	0.01566	6,700	105	5%	100	110
Overall	1,714	1,024	0.01527	6,759	103	4%	99	107

Table 1-16 compares the modeled savings with the expected deemed savings to obtain realization rates (81 and 85 percent for Idaho and Washington, respectively).[8] The percent savings are similar in each state, at 10 percent of the weather-normalized pre-period usage.

Table 1-16. Realization Rate Summary

Group	N	PRENAC	Model Savings (Therms)	Expected Savings*	Realization Rate	Savings as Percent of Pre
Idaho	586	1,009	100	123	81%	10%
Washington	1,128	1,031	105	124	85%	10%
Overall	1,714	1,024	103	124	83%	10%

* The deemed per measure savings are 123 therms; however, since some customers installed multiple furnaces, the per customer savings are closer to 124 therms.

In our review of the measure data, we found that approximately 10 percent of furnace participants also installed heat pumps. In these cases, the additional furnaces were installed mainly to supplement the heat pump space heating usage, and to provide backup heating when the weather is too cold for the heat pumps to cover the entire homes' heating requirements.

Table 1-17 summarizes the savings, comparing the 10 percent of customers that installed heat pumps to the 90 percent of customers that only received a furnace.[9] The savings are considerably lower when excluding the heat pump group (82 versus 103 overall). The savings from the heat pump participants is 285 therms, because a portion of the gas heating load is being supplied by the heat pump.

[8] The average home size for the Washington furnace participants was 1,728 square feet. It is possible that the engineering assumptions use a larger home average. Moreover, the homes in the bottom quartile of usage saved only 38 therms. Since the furnace measure was offered to all homes, participants with smaller homes were not expected to yield high furnace savings. Finally, we examined the participant surveys to determine if gas is used as a secondary heating system, as wood and electric may also used to heat the homes, which would lead to lower savings.

[9] In the population of furnace installations, 385 out of 3,800 customers (10 percent) installed a heat pump as well as a furnace.

Table 1-17. Furnace Savings Summary With Heat Pumps and Without Heat Pumps

State	Heat Pumps Installed	N	PRENAC	Model Savings Per HDD	Normal HDDs	Model Savings (Therms)	Precision 90%	Savings Lower 90% (Therms)	Savings Upper 90% (Therms)
Idaho	No	524	1,008	0.01130	6,880	78	9%	71	85
Washington	No	1,017	1,034	0.01250	6,700	84	6%	79	89
Overall	No	1,541	1,025	0.01207	6,761	82	5%	77	86
Idaho	Yes	62	1,018	0.04051	6,814	276	7%	256	296
Washington	Yes	111	1,010	0.04341	6,702	291	5%	275	307
Overall	Yes	173	1,013	0.04230	6,742	285	5%	272	298
Idaho	Overall	586	1,009	0.01458	6,873	100	7%	94	107
Washington	Overall	1,128	1,031	0.01566	6,700	105	5%	100	110
Overall	Overall	1,714	1,024	0.01527	6,759	103	4%	99	107

The overall results should be used, since they represent the savings that occurred as a result of the program.

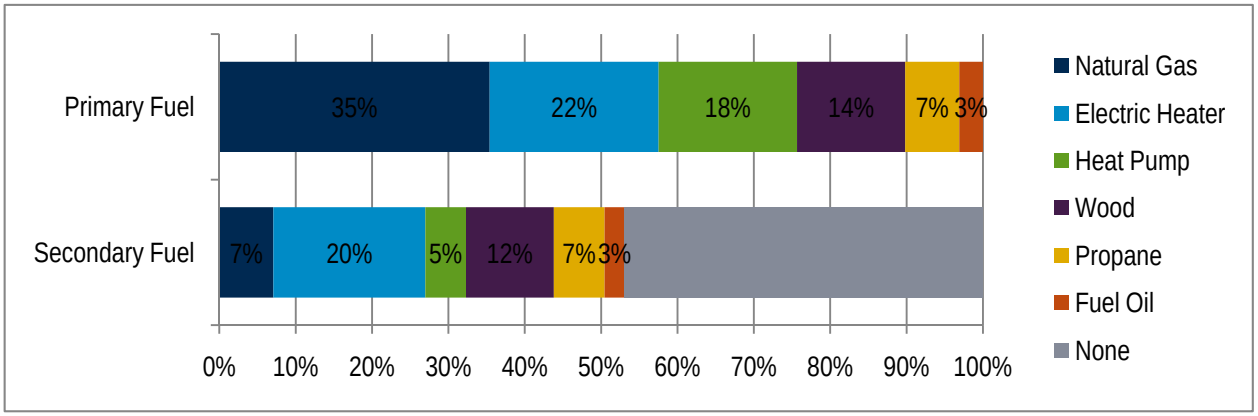
Findings from Participant Surveys

To inform the results of the gas furnace billing analysis (and other heating efficiency measures), the residential participant survey asked homeowners what fuel they "primarily" use to heat their homes, and whether they use "any other kind of heating in addition."

Figure 1-1 shows the responses from 226 participants surveyed. It is apparent that Avista customers use a diverse mix of fuels. Also, slightly more than half of the households reported using a secondary fuel, with electric heaters and wood being the most frequently mentioned.

We explored a few possible reasons for the lower-than-expected savings from the gas furnace measure. One possibility is that Avista customers that primarily heat with natural gas are supplementing their heating with other fuels. A second explanation is that customers may use their gas furnace only as a secondary heating device.

Figure 1-1. Primary and Secondary Heating Fuel Reported by Residential Participants



Expected savings from gas furnace measures assume that an inefficient furnace was replaced with a high-efficiency unit AND that the gas furnace is the only heating method for the home. Whenever these assumptions are not correct, realized savings are likely to be lower than expected.

Table 1-18Table 1-18. Heating Fuel Reported by Furnace Measure Participants summarizes the survey results for participants who received the furnace measure. These data are generally consistent with the results of the billing analysis and the fuel mix data above. As noted, expected savings assume that natural gas is the only fuel used for heating the home; which the survey results show as being the case for 67 percent of participants.[10] As shown, the other 33 percent of participants either supplement with electric heat or wood, or they use the natural gas furnace itself as a supplement to their heat pump.

Table 1-18. Heating Fuel Reported by Furnace Measure Participants

Primary Fuel	Secondary Fuel	Responses	Percent
Natural Gas	None	28	67%
Natural Gas	Electric Heater / Wood	6	14%
Heat Pump	Natural Gas	8	19%
Total		42	100%

Furnace Billing Analysis Conclusions

At present, our billing analysis provides a strong basis for assigning savings to the gas furnace measures during the evaluation period. However, our billing analysis and survey data also show that a significant number of participants receive incentives for installing both a heat pump and a gas furnace. The gas savings for these participants are much larger than expected, because they are presumably using heat pumps to heat their homes until extreme temperatures require the use of a gas furnace. The high savings reflect replacement of an older furnace with BOTH a heat pump and a gas furnace. Our current analysis does not consider the electric impact of the heat pump on the household's overall energy usage, but will in future reports.

Future research can focus on the issues we found with our present study. These include:

- Whether the energy benefits from participants that receive multiple incentives are consistent with Avista's objectives. Specifically, determine whether it is cost-effective to incent customers to install heat pumps, gas furnaces, and (in some cases) to also pay a conversion incentive.
- Whether incentives for gas furnaces are cost-effective in all cases or if some additional restrictions, such as minimum square footage requirements or use of other fuels, might improve program performance.

[10] We designed the survey to provide statistical validity across all Heating and Cooling Efficiency program measures. Since furnaces are just one measure in this program, only 45 furnace participants were surveyed for this study. Generally, a sample size of 67 is expected to produce results at the 90/10 levels of confidence and precision.

Overall Program Savings

Our site visits and participant surveys produced a verification rate of 98 percent from 106 total observations.[11] Table 1-19 shows program-level reported, adjusted gross, and verified savings.

Table 1-19. Heating and Cooling Efficiency Total Gas Savings

Region	Measure Count	Reported Savings	Adjusted Gross Savings	Verification Rate	Verified Savings	Verified Savings Rate
WA	2,636	324,228	273,371	98%	268,213	83%
ID	1,298	159,654	134,644	98%	132,104	83%
Total	3,934	483,882	408,015	98%	400,317	83%

The decreased furnace savings are not offset by the increased boiler savings due to considerably more furnace than boiler installations. We determined the realized adjusted gross savings rate to be 84 percent for the Heating and Cooling Efficiency program gas savings. The verification rate decreased the savings slightly, to 400,317 therms, and the program produced an overall verified realized savings rate of 83 percent.

1.3.4 Weatherization/Shell

1.3.4.1 Program Description

This program incents six categories of measures, which are available to residential electric and gas customers whose homes are heated with fuel provided by Avista:

- Fireplace Dampers (Electric and/or Gas Savings)
- Insulation - Ceiling/Attic (Electric and/or Gas Savings)
- Insulation - Floor (Electric and/or Gas Savings)
- Insulation - Wall (Electric and/or Gas Savings)
- Window Replacement (Electric and/or Gas Savings)
- Programmable Thermostat with AC (Electric and/or Gas Savings)

Avista customers who heat primarily with electric or natural gas and that have a wood burning fireplace may receive up to $100 for installing a rooftop damper.

To qualify for the program, ceiling and attic insulation (both fitted/batt type and blown-in) must increase the R-value by 10 or more, and is incented at $0.25 per square foot of new insulation. Homes are eligible if their existing attic insulation is less than R-19. Floor and wall insulation (both fitted/batt type and blown-in) that increases the R-value by 10 or more is incented at $0.50 per square foot of new insulation. Homes are eligible if their existing floor and/or wall insulation is less than R-5.

[11] Confidence and precision on verification rates are presented in the Verification Confidence and Precision section.

For upgrading windows with a U-factor of 0.30 or lower, the program provides an incentive of $3.00 per square foot of qualifying windows installed. This measure in the program ended on April 1, 2011. Customers have until June 30, 2011 to install windows and submit a rebate form to Avista.

1.3.4.2 Analysis

For all insulation and efficient windows measures, the square footage and baseline and efficient R-values (insulation) and U-factors (windows) were not reported in the program tracking database. The records we sampled contained these values in both the application and supporting invoices. Using these data, we determined qualification rates, but the sample size was too small to apply area and type of insulation or windows to the entire population. In order to safely assume an amount of area for each measure, we averaged the total rebate amount for each measure for each database applicant by measure type. We then divided these averages by the respective rebate amount per square foot, which resulted in an average of installed area by measure.

The main source of error in this methodology is the assumption that all total rebates were calculated correctly. With a large total quantity being averaged—1,295 ceiling, 205 floor, and 388 wall insulations, and 3,762 window records in the database—any rebate mistakes should be diluted. The resulting area of installation per measure was 103 (ceiling), 497 (floor), 526 (wall), and 97.6 (window) square feet.

1.3.4.3 Results and Findings

Table 1-20 shows the total reported and adjusted savings for the gas Weatherization program measures.

Table 1-20. Weatherization Measure and Program Reported and Adjusted Savings

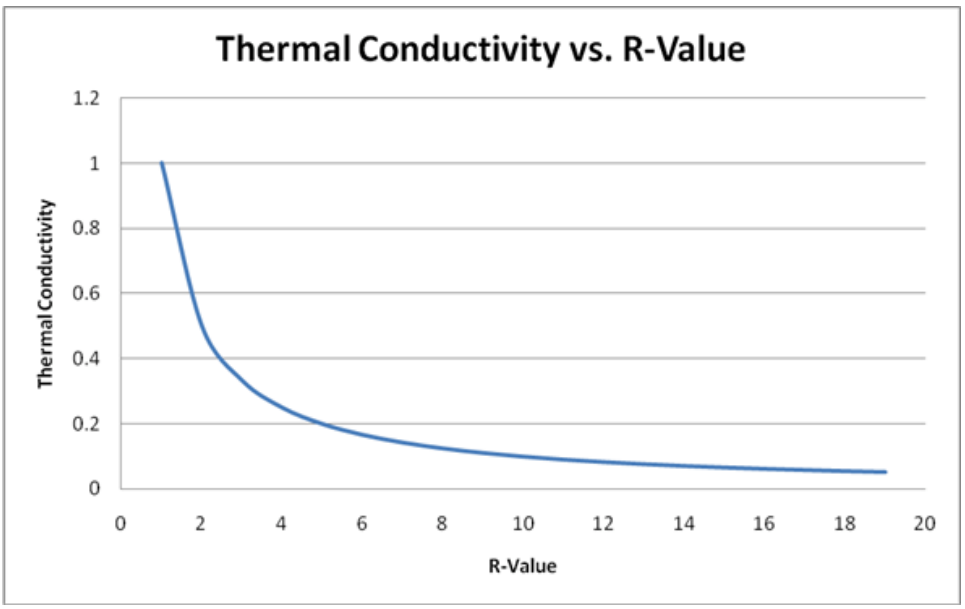
	Reported Values			Adjusted Gross	
Measures	Count	Unit Savings (Therms)	Reported Savings	Average Unit Savings (Therms)	Total Adj. Gross Savings
Fireplace Damper	14	76.0	1,064	5.6	78
Insulation – Ceiling/Attic	1,295	102.9	133,212	102.6	132,775
Insulation – Floor	205	230.5	47,261	163.6	33,542
Insulation – Wall	388	227.0	88,078	154.6	59,985
Programmable Thermostat with AC	3	31.0	93	87.3	262
Replacement Windows	3,762	75.5	284,168	55.4	208,318
Program Total	5,667	76.8	553,876	57.6	434,960

It can be seen in Table 1-20 that for most measures (excluding ceiling insulation), we significantly adjusted savings from reported values due to updated TRM values. We applied TRM values to these measures on an installed area basis. The process we used for extracting the average area is detailed in the Analysis section above.

Residential insulation for a floor or wall has a relatively low baseline R-value compared to roof insulation. Thermal conductivity and the associated heat loss do not vary linearly with increasing R-value. For example, upgrading from R-4 to R-9 creates a much greater savings per square foot than upgrading from R-25 to R-30. This variability, shown in Figure 1-2, cannot be accounted

for in the adjusted savings due to the lack of baseline and efficient R-values being documented in the database. We could apply more accurate savings adjustments in the future with the documentation of the amount of change in R-value for all sites.

Figure 1-2. Thermal Conductivity as a Function of R-value of Insulation



The fireplace damper savings reported in the "*Avista Technical Reference Manual Prescriptive.xls*" is 5.56 therms. The gas savings reported by Avista for 2010 measures was 76 therms. Since this measure accounts for less than 0.1 percent of the overall therm savings, we could not complete a detailed review of these estimates. There were 14 participants in 2010, so a billing analysis would not show savings with a sufficient level of certainty. Heat loss from an open draft is described with air flow heat loss calculations in the tool "*ChimneyCapCalculations (2_24_10).xlsm.*" Cadmus did not verify the parameters used to estimate these savings. We believe that a gap size of 5/8-inch and a chimney of 8-inch width and 20-foot height might represent a typical home in Avista's service territory. The result is an estimated savings of 52 therms/year.

According to the ENERGY STAR calculator, a programmable thermostat saves 11 percent of the heating energy consumed with a 5-degree setback. Assuming that a typical home uses 794 therms in a season, 11 percent energy savings is 87 therms. Avista reports 31 therms of savings for installing a programmable thermostat. Although this measure is not separately metered, we will estimate temperature setback use and percent savings based on our winter meter data from 67 heat pumps. Most of these heat pumps have programmable thermostats, and we will also meter the thermostat set points to determine operational characteristics.

Our site visits and participant surveys produced a verification rate of 79 percent and a qualification rate of 96 percent from 97 total observations. Table 1-21 shows program-level reported, adjusted gross, and verified savings.

Table 1-21. Weatherization Total Gas Savings

Region	Measure Count	Reported Savings	Adjusted Gross Savings	Verification Rate	Verified Savings	Verified Savings Rate
WA	4,426	432,891	340,397	100%	340,397	79%
ID	1,241	120,985	94,563	100%	94,563	78%
Total	5,667	553,876	434,960	100%	434,960	79%

We determined the realized adjusted gross savings rate to be 79 percent for the Weatherization program. The 100 percent verification rate did not affect the savings of 434,960 therms, resulting in an overall verified savings of 79 percent.

1.3.5 Water Heater Efficiency

1.3.5.1 Program Description

The Water Heater Efficiency program includes the following measures:

- High-Efficiency Water Heater (Electric)
- High-Efficiency 40-Gallon Water Heater (Gas)
- High-Efficiency 50-Gallon Water Heater (Gas)
- High-Efficiency Tankless Water Heater (Gas)

Through this program, Avista offers a $50 incentive to residential electric customers who install an eligible high-efficiency water heater. Electric water heaters with a tank must have 0.93 EF or greater to qualify for the program, and natural gas water heaters with a tank must have 0.60 EF or greater for 50-gallon, and 0.62 EF or greater for 40-gallon. We only consider the above gas measures in our analysis for this report.

1.3.5.2 Analysis

All of the water heaters we analyzed were qualified for rebates. Our calculations of the adjusted savings for water heaters are lower than the reported savings due to using figures from the updated TRM.

1.3.5.3 Results and Findings

Table 1-22 shows the total reported and adjusted savings for the gas Water Heater Efficiency program measures.

Table 1-22. Water Heater Efficiency Measure and Reported and Adjusted Savings

Measures	Reported Values			Adjusted Gross	
	Count	Unit Savings (Therms)	Reported Savings	Average Unit Savings (Therms)	Total Adj Gross Savings
High-Efficiency Water Heater - 40G	174	8.0	1,392	8.2	1,425
High-Efficiency Water Heater - 50G	518	11.0	5,698	6.4	3,303
High-Efficiency Water Heater - Tankless	82	60.0	4,920	33.9	2,783
Program Total	774	15.5	12,010	9.7	7,511

Our site visits and participant surveys produced a verification rate of 95 percent from 22 total observations. Table 1-23 shows program-level reported, adjusted gross, and verified savings.

Table 1-23. Water Heater Efficiency Total Gas Savings

Region	Measure Count	Reported Savings	Adjusted Gross Savings	Verification Rate	Verified Savings	Verified Savings Rate
WA	603	9,049	5,701	95%	5,442	60%
ID	171	2,961	1,810	95%	1,728	58%
Total	774	12,010	7,511	95%	7,170	60%

Due to using numbers from the updated TRM, we calculated the realized adjusted gross savings rate as 63 percent for the Water Heater Efficiency program. The verification rate slightly lowered the adjusted gross savings to a verified 7,170 therms, giving an overall verified realized savings rate of 60 percent.

1.3.6 ENERGY STAR Homes

1.3.6.1 Program Description

This program offers incentives to builders for constructing single family or multifamily homes that comply with ENERGY STAR criteria and are verified as ENERGY STAR Homes. Avista provides a $900 incentive for homes using their electric or electric and natural gas service for space and water heating. Avista provides a $650 incentive for homes that use only their natural gas service (both the hot water and space heating must be natural gas).

1.3.6.2 Analysis

Using the ENERGY-10 modeling software, we simulated models of an ENERGY STAR home and a standard built-to-code home. We completed one model for each state (Washington and Idaho) to account for all the differences in state building codes (see Appendix B). We averaged the savings results of each simulation according to the proportion of ENERGY STAR home rebates given in each state. Finally, we applied the weighted averaged savings to the entire population of ENERGY STAR homes that Avista provided rebates for during PY 2010. We calculated the square footage from RASS survey data of newly constructed homes specific for the PacifiCorp service territory.

1.3.6.3 Results and Findings

Table 1-24 shows the total reported and adjusted savings for the gas and electric/gas ENERGY STAR Home program measures.

Table 1-24. ENERGY STAR Home Measure and Program Reported and Adjusted Savings

Measures	Reported Values			Adjusted Gross	
	Count	Unit Savings (Therms)	Reported Savings	Average Unit Savings (Therms)	Total Adj Gross Savings
ENERGY STAR Home - Electric/Gas	140	195.0	27,306	203.3	28,455
ENERGY STAR Home - Gas Only	28	197.0	5,516	203.3	5,691
Program Total	168	195.4	32,822	203.3	34,146

Our site visits produced a verification rate of 100 percent from four observations. Table 1-25 shows program-level reported, adjusted gross, and verified savings.

Table 1-25. ENERGY STAR Home Total Gas Savings

Region	Measure Count	Reported Savings	Adjusted Gross Savings	Verification Rate	Verified Savings	Verified Savings Rate
WA	130	25,381	26,423	100%	26,423	104%
ID	38	7,441	7,724	100%	7,724	104%
Total	168	32,822	34,146	100%	34,146	104%

All of the ENERGY STAR Homes we analyzed met program requirements. We determined a savings of 203 therms through modeling as the verified savings value for a home that operates with gas and electric energy.

We determined the realized adjusted gross savings rate to be 104 percent for the ENERGY STAR Home program measure savings. The verification rate did not change the savings of 34,146 therms, and the overall verified realized savings is also 104 percent.

1.3.7 Net-To-Gross

In Q1 of 2011, Cadmus performed a net-to-gross (NTG) analysis on 2011 program participants. Table 1-26 shows the results from that study. These results span both Washington and Idaho and are applied to adjusted gross savings to determine the net verified savings per program.

Table 1-26. ENERGY STAR Home Total Gas Savings

Program Category	Responses	FR %	Spillover %	NTG
Residential Appliances and Water Heaters	67	48%	0.0%	52.0%
Residential HVAC	67	39%	0.0%	61.0%
Residential Shell	67	45%	8.8%	63.8%
EnergyStar Homes	7	26%	0.0%	73.6%

1.3.8 Verification Confidence and Precision

We determined the precision of verification activities for each program given a 90 percent confidence level. We calculated verification rates using site visits and surveys as equally weighted observations. Table 1-27 shows the number of observations for each program and the corresponding precision level.

Table 1-27. Program Verification Observations and Precision

Program	Measure Count	Verification Observations	Verification Rate	Precisions at 90% Confidence
ENERGY STAR Products	5,876	76	96%	4%
Heating and Cooling Efficiency	3,934	106	98%	2%
Weatherization/Shell	5,667	97	100%	N/A
Water Heater Efficiency	774	22	95%	8%
ENERGY STAR Homes	168	4	100%	N/A
Total	16,419	305	98%	1.3%

The ENERGY STAR Products, Heating and Cooling Efficiency, and Weatherization programs comprised 96 percent of the reported savings for the PY 2010 gas portfolio. Therefore, we focused the majority of our verification activities on those programs, which resulted in the greatest possible confidence and precision levels. The Water Heating Efficiency program had a small proportion of savings, and therefore we concentrated less effort for this program. The same was true for ENERGY STAR Homes; however, we did prepare ENERGY 10 models to determine the average savings per home to apply to the program population. The verification precision for the portfolio verification rate was 1.3 percent with 90 percent confidence.

1.4 Conclusions

The 2010 residential gas programs achieved 935,068 gross verified therms and 580,966 net verified therms overall. Verification activities produced an overall sector verification rate of 98 percent. Table 1-28 through Table 1-30 show total and state level gross and net savings per program.

Table 1-28. Total Program Gross and Net Verified Savings and Realization Rates

Program	Reported Savings (Therms)	Gross Verified (Therms)	Gross Realization Rate	Net Verified (Therms)	Net Realization Rate
ENERGY STAR Products	44,400	58,475	132%	30,408	68%
Heating and Cooling Efficiency	483,882	400,317	83%	244,193	50%
Weatherization/Shell	553,876	434,960	79%	277,505	50%
Water Heater Efficiency	12,010	7,170	60%	3,728	31%
ENERGY STAR Homes	32,822	34,146	104%	25,131	77%
Total	1,126,990	935,068	83%	580,965	52%

Table 1-29. Program Gross and Net Verified Savings and Realization Rates - Washington

Program	Reported Savings (Therms)	Gross Verified (Therms)	Gross Realization Rate	Net Verified (Therms)	Net Realization Rate
ENERGY STAR Products	32,377	42,815	132%	22,276	69%
Heating and Cooling Efficiency	324,228	267,904	83%	163,610	50%
Weatherization/Shell	432,891	340,397	79%	217,173	50%
Water Heater Efficiency	9,049	5,416	60%	2,830	31%
ENERGY STAR Homes	25,381	26,423	104%	19,447	77%
Total	823,926	682,955	83%	425,336	52%

Table 1-30. Program Gross and Net Verified Savings and Realization Rates - Idaho

Program	Reported Savings (Therms)	Gross Verified (Therms)	Gross Realization Rate	Net Verified (Therms)	Net Realization Rate
ENERGY STAR Products	12,028	15,631	130%	8,132	68%
Heating and Cooling Efficiency	159,654	131,951	83%	80,583	50%
Weatherization/Shell	120,985	94,563	78%	60,331	50%
Water Heater Efficiency	2,961	1,720	58%	898	30%
ENERGY STAR Homes	7,441	7,724	104%	5,684	76%
Total	303,069	251,588	83%	155,630	51%

Table 1-31 shows the rate of achievement of gross savings compared to the IRP goal for the residential sector. Table 1-32 shows the net savings and IRP goals.

Table 1-31 IRP Goals and Gross Verified Savings by State

	Washington			Idaho			Total		
Sector	Savings Goal	Gross Achieved	Achiev-ement Rate	Savings Goal	Gross Achieved	Achiev-ement Rate	Savings Goal	Gross Achieved	Achiev-ement Rate
Residential	647,788	683,313	105%	273,281	251,757	92%	921,069	935,070	102%

Table 1-32 IRP Goals and Net Verified Savings by State

	Washington			Idaho			Total		
Sector	Savings Goal	Net Achieved	Achieve-ment Rate	Savings Goal	Net Achieved	Achieve-ment Rate	Savings Goal	Net Achieved	Achieve-ment Rate
Residential	647,788	425,336	66%	273,281	155,630	57%	921,069	580,966	63%

Overall, residential gas program customers responded well to the programs and often installed several measures within the same program year. The residential programs drew enough participation to meet IRP achievement goals overall, which was the only sector to do so. Avista's program and tracking databases were sufficient for evaluation purposes, providing adequate contact, measure and savings information, and the database review confirmed that the information was reliable and accurate. The majority of measures (all but one) were determined to meet program qualification standards. The billing analysis performed to calculate average annual gas savings for furnaces produced interesting and conclusive results. The subsequent electric savings report will further inspect the interaction of gas furnaces and electric heat pumps to determine the overall energy usage of the home for heating.

1.5 Recommendations

The majority of our recommendations center around increasing measure level detail capture on the applications and inclusion in the databases. These measure detail information includes:

- List energy factors (EF and MEF), or at least model numbers, for appliances
- Include baseline information, such as for insulation R-values, type or thickness
- Request square footage, particularly for ENERGY STAR homes

Customers also indicated some confusion on door rebates. If Avista wishes to give incentives on doors explicitly, customers seem to be receptive.

The interaction of gas furnaces and heat pumps on both savings and incentive structure will be revisited in both the electric report and the 2010 process report. Residential heat pumps, many homes with a gas furnace as well, are currently undergoing a metering study and those data will provide important information to assist the Heating and Cooling Efficiency program going forward.

2 2010 Non-Residential Gas Impact Report

Executive Summary

Program Overview

Avista's non-residential programs promote the purchase of industry-proven, high-efficiency equipment for commercial utility customers. They provide rebates to partially offset the difference in cost between high-efficiency and standard equipment, reducing the first cost barrier and making the high-efficiency equipment a more viable option for commercial customers.

Avista's non-residential gas portfolio has eight programs in three major categories: prescriptive, site specific (custom), and the Energy Smart Grocer program. The full list of programs is:

- Prescriptive:
    - ENERGY STAR Residential Products (APP)
    - Prescriptive Commercial Clothes Washer (PCW)
    - Prescriptive Demand Controlled Ventilation (PDCV)
    - Prescriptive Food Service (PFS)
    - Prescriptive Refrigerated Warehouse (PRW)
    - Prescriptive Steam Trap Replacement (PSTR)
- Energy Smart Grocer (ESG)
- Site Specific (SS)

The Site Specific and prescriptive programs are implemented by Avista, while the Energy Smart Grocer program is implemented by PECI. Cadmus conducted both qualitative (process) and quantitative (impact) evaluations of these programs. For the evaluations, we assessed and documented program savings (both the gross realization rate and savings net of freeriders and adjusted for spillover). We also sought to document the evolution of these programs and provide timely feedback to enable program improvements. Cadmus will examine electric savings impacts and report our process evaluation findings in subsequent reports.

Key Findings

Throughout the impact evaluation, the Cadmus team documented program achievements and identified issues to be resolved in regard to lower than expected achieved savings.

Ex ante reported and *ex post* evaluated savings are shown in Table 2-1 through Table 2-3. The net evaluated program savings were 672,344 therms. Net-to-gross (NTG) was determined in a previous Cadmus study in early 2011, and those results were applied to the verified gross savings in this evaluation.

Table 2-1. Program Summary

Program	Number of Measure Installations	*Ex Ante* Gross Program Reported Savings	*Ex Post* Gross Program Evaluated Savings	Net-to-Gross	*Ex Post* Net Program Evaluated Savings
APP	2	17	17	0.87	15
ESG	5	20,100	15,191	0.9	13,672
PCW	6	1,495	1,495	0.87	1,301
PDCV	5	2,256	2,256	0.87	1,963
PFS	31	29,165	29,115	0.87	25,330
PRW	1	12,542	6,936	0.87	6,034
PSTR	2	43,898	30,612	0.87	26,632
SS	401	682,509	807,293	0.74	597,397
Total	453	791,982	892,915	0.75	672,344

Table 2-2. Program Summary - Idaho

Program	Number of Measure Installations	*Ex Ante* Gross Program Reported Savings	*Ex Post* Gross Program Evaluated Savings	Net-to-Gross	*Ex Post* Net Program Evaluated Savings
APP	1	9	9	0.87	8
ESG	1	2,318	2,318	0.90	2,086
PCW	2	477	477	0.87	415
PDCV	3	1,240	1,240	0.87	1,079
PFS	7	12,001	11,980	0.87	10,423
PSTR	1	39,706	28,686	0.87	24,957
SS	122	124,551	147,323	0.74	109,019
Total	137	180,302	192,033	0.77	147,986

Table 2-3. Program Summary - Washington

Program	Number of Measure Installations	*Ex Ante* Gross Program Reported Savings	*Ex Post* Gross Program Evaluated Savings	Net-to-Gross	*Ex Post* Net Program Evaluated Savings
APP	1	9	9	0.87	8
ESG	3	17,782	12,873	0.90	11,586
PCW	4	1,018	1,018	0.87	886
PDCV	2	1,016	1,016	0.87	884
PFS	24	17,164	17,135	0.87	14,907
PRW	1	12,542	6,936	0.87	6,034
PSTR	1	4,192	1,926	0.87	1,676
SS	279	557,958	659,971	0.74	488,378
Total	316	611,681	700,883	0.75	524,358

Avista did not report participation goals in terms of number of projects, but did report energy savings goals as shown in Table 2-4. The net overall PY 2010 non-residential gas portfolio achieved 57 percent of the original energy savings goal.

Table 2-4. Energy Savings Achievements Compared to Goals

Program	*Ex Ante* Program Gross Goals	Evaluated *Ex Post* Gross Program	Net-to-Gross	Evaluated *Ex Post* Net Program	Net Realization Rate
Idaho	347,812	192,033	55%	147,986	43%
Washington	824,457	700,883	85%	524,358	64%
Total	1,172,269	892,916	76%	672,344	57%

The portfolio results shown in Table 2-4 do not account for therm penalties due to increased lighting efficiency. Lighting systems convert a large portion of their input energy to useful light output, but a substantial fraction is converted to heat. Any reduction in lighting input energy also reduces waste heat. This waste heat reduction lowers the site's required cooling load while increasing the heating load. Cadmus noted that Avista tracked these HVAC interactive effects for calculating cost-effectiveness, but did not include them in energy savings goals or reported savings values. Avista noted their methodology for calculating interactive impacts was not as robust as that for energy savings. The Avista database extract did not provide sufficient detail for Cadmus to calculate those impacts.

2.1 Introduction

Avista's non-residential portfolio of programs promote the purchase of industry-proven, high-efficiency equipment for commercial utility customers. Avista provides rebates to partially offset the difference in cost between high-efficiency equipment and standard equipment, reducing the first cost barrier and making the high-efficiency equipment a more viable option for commercial customers.

The non-residential gas portfolio has eight programs in three major categories: prescriptive, site specific (custom), and the Energy Smart Grocer program.

2.1.1 ENERGY STAR Residential Products (APP)

This program is available to non-residential customers who use residential-grade appliances in a small business application. Savings are determined through deemed estimates.

2.1.2 Prescriptive Commercial Clothes Washer (PCW)

To encourage customers to select high-efficiency clothes washers, this program targets non-residential electric and natural gas customers in multifamily or commercial laundromat facilities. The program's streamlined prescriptive approach is designed to reach customers quickly and effectively to promote ENERGY STAR or Consortium for Energy Efficiency (CEE) listed units.

2.1.3 Prescriptive Demand Controlled Ventilation (PDCV)

Under this program, non-residential electric and natural gas customers receive direct incentives to install DCV in existing buildings. This type of ventilation measures the approximate number of people occupying a space—based on carbon dioxide levels—and resets the outdoor air intake

rate for occupant ventilation in accordance with the measurement. To be eligible for the program, the temperature of the conditioned spaces must remain between 65 and 75 degrees during operating hours. Also, the controlled conditioned space must be a minimum of 2,000 square feet.

2.1.4 Prescriptive Food Service (PFS)

Applicable to non-residential electric and gas customers with commercial kitchens, this program provides direct incentives to customers who choose high-efficiency kitchen equipment. The equipment must meet either ENERGY STAR or CEE Tier levels (depending on the unit) to qualify for an incentive.

2.1.5 Prescriptive Refrigerated Warehouse (PRW)

This program offers non-residential electric customers a direct incentive for efficiency improvements in refrigerated warehouses. Although the customer base for this program is limited, there are significant opportunities for energy savings from the program's measures.

2.1.6 Prescriptive Steam Trap Replacement (PSTR)

This program offers rebates to non-residential gas customers who repair or replace failed steam traps on the steam distribution lines of a boiler heating system. The key criteria for this rebate are:

- A replacement must be a new working steam trap of the same duty as what was replaced.
- Each steam trap repair or replacement is only eligible for a rebate once every five years.
- The repaired or replaced trap must include a strainer.

2.1.7 Energy Smart Grocer (ESG)

Refrigeration represents a high potential for energy savings but is often overlooked because of the technical aspects of the equipment. The Energy Smart Grocer program assists non-residential grocery store customers with the technical aspects of their refrigeration systems while providing a clear view of what savings they can achieve. A field energy analyst provides customers with technical assistance, produces a detailed report of the potential energy savings at the facility, and guides customers through the process from inception through the payment of incentives for qualifying equipment.

2.1.8 Site Specific (SS)

The Site Specific program addresses non-residential measures that do not lend themselves to prescriptive applications, and thus must be considered based on their project-specific information. For a measure to be considered, it must have demonstrable kWh and/or therm savings. These measures are available to all commercial, industrial, or pumping customers who receive electric or natural gas service from Avista and want to make cost-effective, energy-efficiency improvements to their business. Electric and gas saving measures included in the program are:

- Appliances
- Compressed air
- HVAC

- LEED
- Industrial process
- Motors and HVAC Variable Frequency Drive
- Shell measures
- Multifamily measures
- Custom lighting projects

The Site Specific and prescriptive programs are implemented by Avista, while the Energy Smart Grocer program is implemented by PECI. As the implementers, Avista and PECI were responsible for designing and managing program details. Avista developed algorithms for use in determining measure savings, as well as measure and customer eligibility.

Avista staff fielded inquiries from potential participants and contractors, and developed a tracking database for projects. Throughout the program, Avista has managed projects by reviewing and approving applications at all stages of the process, determining project savings, and populating the database with relevant information.

2.2 Methodology

We designed the impact evaluation to verify reported program participation and estimate energy and demand savings. Our impact evaluation included:

- Determining *ex post* gross savings through engineering calculations;
- Leveraging freeridership estimates from a previous study we performed; [12] and
- Determining net savings.

Cadmus worked with a subcontractor for this evaluation, SBW (collectively referred to as the Cadmus team). The Cadmus team reviewed *ex ante* gross reported energy savings and available documentation for a sample of sites (e.g., audit reports, savings calculation work papers), giving particular attention to the calculation procedures and documentation for savings estimates. The Cadmus team also verified the appropriate analyses to calculate savings, as well as the operating and structural parameters of the analysis. We then determined *ex post* gross evaluated energy savings through site visits, engineering calculations, and verification surveys of a sample of projects.

The Cadmus team collected baseline, tracking, and program implementation data through on-site interviews with facility staff. We used on-site visits to verify installations and determine any changes to the operating parameters since the measures were first installed. The Cadmus team used the savings realization rate from site visits to estimate savings and develop recommendations for future studies. We also interviewed facility staff to determine the operating

[12] The Cadmus Group, Inc. *Net-to-Gross Evaluation of Avista's Demand-Side Management Programs*. April 19, 2011.

conditions of the installed system and any additional benefits or shortcomings of the installed system.

2.2.1 Sampling

Cadmus developed a sampling calculation tool to estimate the proposed number of metered projects, site verifications, and phone verifications in order to achieve the rigor levels shown in Table 2-5. This table also shows the initial estimates for evaluation activities, which relied on preliminary program population data provided by Avista.

Table 2-5. Originally Proposed PY 2010 Non-Residential Evaluation Activities

Fuel	Proposed Rigor Level*	Proposed Metering Projects	Proposed Site Visits	Proposed Verification Surveys
Electric	90/10	61	58	259
Gas	90/10	49	59	116

* The rigor is the confidence level and interval. These values for gas projects, for example, indicate that Cadmus is 90 percent certain the correct answer is with ±10 percent of the evaluated savings.

After the evaluation contract was awarded, Avista provided Cadmus with the final PY 2010 database extract. Cadmus revised the sample distribution based on the final program populations and energy savings. Cadmus converted both electric and gas savings to MBTUs to more effectively compare savings by fuel, shown in Table 2-6 below.

Table 2-6. PY 2010 Non-Residential Savings Analysis by Fuel

Fuel	Measures	Sites	Savings (kWh)	Savings (therms)	Savings (MBtu)	Portion of Total Savings
Electric	1,891	982	49,484,353	0	168,841	65%
Gas	453	277	2,873,354	791,982	89,002	35%

Based on the weighted proportion of savings, Cadmus determined that 35 percent of the sample should be represented by gas projects. These included purely gas and dual fuel projects in which gas savings exceeded electric savings.

Next, Cadmus selected the appropriate verification activities for each measure type and project, including metering, on-site verification, and phone verification. Cadmus received the final database in the spring of 2011, after the heating season ended. Therefore, we could not effectively meter savings from heating equipment.

The only appropriate measures for metering were for the Site Specific, Energy Smart Grocer, and Prescriptive Steam Trap Replacement programs. However, the Avista PY 2010 population only included a small number of these projects, significantly less than the proposed sample for gas metered projects. Cadmus determined the PY 2010 gas heating measures could be evaluated with on-site verification alone, applying additional rigor. Based on these revisions, we developed a revised evaluation activity sample, shown in Table 2-7.

Table 2-7. Revised PY 2010 Non-Residential Evaluation Activities

Fuel	Metering Projects	Site Visits	Verification Surveys
Electric	61	62	333
Gas	11	55	180

The final achieved evaluation activities for gas measures are shown in Table 2-8. Subsequent sections will detail the variation between revised and achieved evaluation activities. As noted previously, Cadmus will report on electric measure savings in 2012.

Table 2-8. Final FY 2010 Gas Evaluation Activity Sample

Fuel	Achieved Metering Projects	Achieved Site Visits	Achieved Verification Surveys
Gas	7	65	55

The sampling process was iterative, requiring Cadmus to select projects of interest, request data from Avista to determine how many and what types of projects were at various locations, and then obtain contact information and project files for the relevant sites. Cadmus repeated this process until we completed the final primary and backup samples.

In addition, the database extract provided program-level, not measure-level information. The Cadmus team attempted to verify savings for every incented measure at each site, regardless of whether it achieved gas or electric savings. Cadmus was unable to determine whether an accurate distribution of measure types within each program was evaluated. This effort would have required an exhaustive review of project files, which was not within the scope of the evaluation.

2.2.2 Data Collection

The primary methods we used to collect data were metering, on-site verification, and telephone verification. For each activity, we first conducted a document review to determine measure type, quantity, operational parameters, and calculation methodology.

2.2.2.1 Document Review

As the first step in the impact evaluation process, the Cadmus team reviewed documentation, calculation spreadsheets, and energy simulation models relevant to the evaluation effort. Avista provided documentation of the energy-efficiency projects undertaken at the sample sites. The Cadmus team paid particular attention to calculation procedures and documentation for savings estimates. The documentation we reviewed included program forms, the tracking database, audit reports, and savings calculation work papers for each rebated measure.

The Cadmus team reviewed each application to determine whether the following types of information were provided:

- Documentation for the equipment being replaced, including (1) descriptions, (2) schematics, (3) performance data, and (4) other supporting information.
- Documentation for the new equipment installed, including (1) descriptions, (2) schematics, (3) performance data, and (4) other supporting information.

- Information about the savings calculation methodology, including (1) the methodology used, (2) specifications of assumptions and sources for these specifications, and (3) correctness of calculations,

2.2.2.2 Site Visits

The Cadmus team performed on-site visits to verify measure installations, collect primary data to calculate savings impacts, and interview facility staff.

On-site visits accomplished three primary tasks:

1. We verified the implementation status of all measures for which customers received incentives. We verified that the energy-efficiency measures were installed correctly and still functioned properly, and we also verified the operational characteristics of the installed equipment, such as temperature set points and operating hours.
2. We collected the physical data, such as boiler capacity or operational temperature, needed to analyze the energy savings realized from the installed improvements and measures.
3. The Cadmus team conducted interviews with facility personnel to obtain additional information on the installed system to complement the data we collected from other sources.

2.2.2.3 Short-Term Metering

Most metering projects involved a billing analysis to calibrate Avista's hourly meter data against site conditions and production data, where relevant. The Cadmus team metered one Energy Smart Grocer project involving hot water reclamation from a desuperheater. All other ESG gas savings projects involved HVAC equipment, and could not be metered effectively outside the heating season.

2.2.2.4 Surveys

Cadmus also conducted phone verification as a component of the participant process evaluation surveys to supplement the installation rate determined through on-site verification. Cadmus attempted to reach at least one participant for each major measure type and program. We were unable to achieve the full revised sample of verification surveys due to participant refusals and others who could not be reached.

2.2.3 Engineering Analysis

Each of the three major types of programs in Avista's non-residential portfolio (prescriptive and the Site Specific and ESG programs) required significantly different methods for analysis.

2.2.3.1 Overview

The procedures we used to verify savings through an engineering analysis depended on the type of measure being analyzed. The major analyses types included in this evaluation are:

- Prescriptive deemed savings
- Short-term metering
- Billing analysis

- Calculation spreadsheets
- Energy simulation modeling

The following sections describe the procedures we followed to verify savings from the different types of measures installed in the program.

2.2.3.2 Prescriptive Deemed Savings

For most prescriptive measures, Cadmus verified the deemed savings estimates that Avista used for savings calculations, and compared those with values we developed for the new TRM. Our verification activities focused on the installed quantity and equipment nameplate data, as well as the proper installation of equipment and operating hours. Where appropriate, the Cadmus team used data from site verification visits to re-analyze prescriptive measure savings through Avista's Microsoft Excel calculation tools, ENERGY STAR calculation tools, and other secondary sources.

2.2.3.3 Short-Term Metering

The Cadmus team metered one Energy Smart Grocer project involving hot water reclamation from the refrigeration system. The reclaimed hot water offset water heating that would otherwise have been supplied by a natural gas water heater. To determine the amount of heat exchange, the Cadmus team installed temperature sensors with dataloggers on the inlet and outlet streams of both the conventional water heater and the refrigeration heat exchange loops, as well as an ultrasonic meter to record water flow rates.

2.2.3.4 Billing Analysis

Cadmus analyzed the two Prescriptive Steam Trap Replacement and the four largest Site Specific industrial process projects through an analysis of Avista's metered billing data. Our pre–post modeling approach allowed us to directly develop retrofit savings estimates for each site. The modeling approach accounted for differences in HDDs and, where applicable, production. It also determined savings based on normalized weather conditions, since the actual weather conditions may have been milder or more extreme than the 15-year normal weather averages from 1991-2005 we obtained from the National Oceanic and Atmospheric Administration (NOAA).

Cadmus obtained daily weather data from NOAA for each weather station associated with the participant projects. From the daily weather data, we calculated the base 65 reference temperature HDDs. Cadmus matched the participant billing data to the nearest weather station by zip code, and then matched each monthly billing period to the associated base 65 HDDs.

We followed a modified PRISM approach with all the models. Cadmus normalized all dependent and independent variables for the days in each billing period; allowing for model coefficients to be interpreted as average daily values. Cadmus used this methodology to account for differences in the length of billing periods. For each project, we modeled the average daily consumption in therms as a function of some combination of average standing base load, HDD, and (where appropriate) daily consumption.

For each site, Cadmus estimated two demand models: one for the pre period and one for the post period. Cadmus chose this methodology over a single standard treatment effects model to

account for structural changes in demand that might occur due to retrofits. For instance, one site eliminated the standing load as a result of the retrofit program. This pre-post modeling approach enabled Cadmus to estimate an intercept model for the pre period and a no-intercept model for the post period to reflect his change.

Cadmus calculated three scenarios after estimating model coefficients for each site. First, we estimated a reference load for the previous 12 billing cycles using the pre period model. This scenario extrapolated the counterfactual consumption; that is, what the consumption would have been in the absence of the program. The difference between this scenario and the actual consumption represents actual savings.

Cadmus then estimated two normalized scenarios: one using the pre model, and one using the post model. Cadmus estimated these scenarios using 15-year TMY3 data as the annual HDD and mean annual values for the production data. The difference between these two scenarios represents the long-term expected annual savings.

2.2.3.5 Calculation Spreadsheets

Avista developed calculation spreadsheets to analyze energy savings for a variety of measures, including building envelope measures such as ceiling and wall insulation. The calculation spreadsheets require input of relevant parameters such as square footage, efficiency value, HVAC system details, and location details. The spreadsheets use these data to estimate energy savings through algorithms programmed by Avista. For each spreadsheet, the Cadmus team reviewed input requirements and output estimates, and determined the approach was reasonable.

2.2.3.6 Energy Simulation Modeling

Avista determined savings for many Site Specific HVAC and shell projects with energy simulation modeling. This approach was chosen due to complex interactions between heating and cooling loads and the building envelope. Avista provided the original energy simulation models, and the Cadmus team reviewed those models to determine the relevant parameters and operating details (such as temperature set points) for the applicable measure. We updated the models as necessary based on our on-site verification data.

2.2.4 Most ESG program measures involved electric savings from more techniques. PECI determined ESG refrigeration measure energy proprietary modeling software based on the DOE 2.2R module. The the capability to run this custom software, and used other techniques ESG gas projects primarily included HVAC measures, such as which we analyzed with the methods outlined in the Energy Smart Grocer (ESG)

Refrigeration represents a high potential for energy savings but is often overlooked because of the technical aspects of the equipment. The Energy Smart Grocer program assists non-residential grocery store customers with the technical aspects of their refrigeration systems while providing a clear view of what savings they can achieve. A field energy analyst provides customers with technical assistance, produces a detailed report of the potential energy savings at the facility, and guides customers through the process from inception through the payment of incentives for qualifying equipment.

Site Specific (SS) section.

2.3 Results and Findings

2.3.1 Overview

The Cadmus team adjusted gross savings estimates based on our evaluated findings. Further details are outlined in the following sections.

2.3.2 Prescriptive

The Cadmus team evaluated savings for a sample of sites across six prescriptive programs. Table 2-9 through Table 2-11 show our evaluated results by program. Specific evaluation details are noted in each program subsection below.

Table 2-9. Evaluated Results for PY10 Non-Residential Gas Prescriptive

Program	Total FY10 Measure Installations	Evaluated Sample	*Ex-Ante* Gross Reported Savings	*Ex-Post* Gross Evaluated Savings	Realization Rate
APP	2	0	17	17	100%
PCW	6	1	463	463	100%
PDCV	5	1	300	300	100%
PFS	31	11	21,002	20,996	100%
PRW	1	1	12,542	6,936	55%
PSTR	2	2	43,898	30,612	70%

Table 2-10. Evaluated Results for PY10 Non-Residential Gas Prescriptive - Idaho

Program	Total FY10 Measure Installations	Evaluated Sample	*Ex-Ante* Gross Reported Savings	*Ex-Post* Gross Evaluated Savings	Realization Rate
PCW	2	1	463	463	100%
PDCV	3	1	300	300	100%
PFS	7	3	10,166	10,149	100%
PSTR	1	1	39,706	28,686	72%

Table 2-11. Evaluated Results for PY10 Non-Residential Gas Prescriptive - Washington

Program	Total FY10 Measure Installations	Evaluated Sample	*Ex-Ante* Gross Reported Savings	*Ex-Post* Gross Evaluated Savings	Realization Rate
PFS	24	8	10,836	10,817	100%
PRW	1	1	12,542	6,936	55%
PSTR	1	1	4,192	1,926	46%

2.3.2.1 ENERGY STAR Residential Products (APP)

Cadmus attempted to perform phone verification surveys with the two participants of this program, but could not reach either. We assigned a 100 percent realization rate due to the low level of participation and reported savings.

2.3.2.2 Prescriptive Commercial Clothes Washer (PCW)

Cadmus performed a phone verification survey with one participant of this program. The participant confirmed that the measure was installed in the appropriate quantity at the program-listed address, and therefore the full savings should be achieved. We determined that the reported deemed savings were appropriate.

2.3.2.3 Prescriptive Demand Controlled Ventilation (PDCV)

Cadmus performed a phone verification survey with one participant of this program. The participant confirmed that the measure was installed in the appropriate quantity at the program-listed address, and therefore the full savings should be achieved. We determined that the reported deemed savings were appropriate.

2.3.2.4 Prescriptive Food Service (PFS)

Cadmus performed verification visits to eight sites with Prescriptive Food Service program measures, as well as three phone surveys. In most cases, the field engineer or participant confirmed that the measure was installed in the appropriate quantity at the program-listed address, and therefore the full savings should be achieved. We determined that the reported deemed savings were appropriate.

The Cadmus team identified two adjustments to the reported savings. The combined effect of both adjustments reduced sample savings by six therms, much less than 1 percent of the total reported value.

- A grocery store installed a new dishwasher and reported electric savings. Our site verification visit determined that hot water was actually provided by a gas water heater, and the dishwasher had a gas booster. Cadmus updated the project savings to reflect the gas dishwasher measure deemed savings.
- During site visits at a series of locations in a school district, we identified a number of measures not listed in the updated deemed savings tables. Cadmus applied values from previous deemed savings tables.

Cadmus calculated an overall realization rate for all projects in both states, and then applied the resulting realization rate to the savings for each state.

2.3.2.5 Prescriptive Refrigerated Warehouse (PRW)

The Cadmus team performed a site visit of the one gas participant in this program. The participant installed 22 doors to further insulate heated spaces within the warehouse, and thereby reduced the heating load. Cadmus determined that site heating was minimal, and deemed savings estimates were likely overstated. The revised savings estimate adjusted savings to 55 percent of the reported value.

2.3.2.6 Prescriptive Steam Trap Replacement (PSTR)

Cadmus performed site visits to both participants of this program. We determined that the deemed savings estimates could be overstated due to potential variation in measure operation and site production. Therefore, we conducted a billing analysis of hourly metered billing data for each participant, calibrated to site conditions and reported production values. The resulting

analysis identified large variation from deemed savings estimates, and Cadmus adjusted the reported savings values. The combined impact of these adjustments changed the savings values downward by 30 percent.

2.3.3 Site Specific

Cadmus performed site visits on 54 Site Specific program projects, and conducted verification surveys of an additional 50 projects. The Site Specific program projects represented a variety of measure types. Cadmus calculated an overall realization rate for all projects in both states, and then applied the resulting realization rate to the savings for each state. Table 2-12 through Table 2-14 list the different measure types we evaluated, as well as the number of projects and reported savings. Table 2-15 through Table 2-17 show our evaluated results for the program.

Table 2-12. Site Specific Measure Types and Projects Evaluated

Measure Type	Evaluated Projects	*Ex Ante* Reported Gas Savings
Appliances	4	1,362
HVAC	50	251,290
Industrial Process	3	101,782
Shell	47	61,785
Total	104	416,219

Table 2-13. Site Specific Measure Types and Projects Evaluated - Idaho

Measure Type	Evaluated Projects	*Ex Ante* Reported Gas Savings
Appliances	1	73
HVAC	11	21,059
Industrial Process	2	26,782
Shell	19	12,552
Total	33	60,466

Table 2-14. Site Specific Measure Types and Projects Evaluated - Washington

Measure Type	Evaluated Projects	*Ex Ante* Reported Gas Savings
Appliances	3	1,289
HVAC	39	230,231
Industrial Process	1	75,000
Shell	28	49,233
Total	71	355,753

Table 2-15. Evaluated Results for PY 2010 Non-Residential Gas Site Specific Sample

Program	Total FY10 Measure Installations	Evaluated Sample	*Ex-Ante* Gross Reported Sample Savings	*Ex-Post* Gross Evaluated Sample Savings	Sample Realization Rate
SS	401	104	416,219	492,317	118%

Table 2-16. Evaluated Results for PY 2010 Non-Residential Gas Site Specific - Idaho

Program	Total FY10 Measure Installations	Evaluated Sample	*Ex-Ante* Gross Reported Savings	*Ex-Post* Gross Evaluated Savings	Realization Rate
SS	122	33	124,551	147,323	118%

Table 2-17. Evaluated Results for PY 2010 Non-Residential Gas Site Specific - Washington

Program	Total FY10 Measure Installations	Evaluated Sample	*Ex-Ante* Gross Reported Savings	*Ex-Post* Gross Evaluated Savings	Realization Rate
SS	279	71	557,958	659,971	118%

The Cadmus team identified many adjustments to Site Specific program project reported savings. Site specific projects tend to be more complex, and energy savings parameters and impacts can be more difficult to estimate. In addition, the calculations often rely on participant-supplied building, equipment, and operations data, which may vary from parameters identified during an on-site verification visit.

In aggregate, the adjustments noted by Cadmus increased savings by 18 percent. This indicates that Avista's approach to reporting savings was appropriately conservative when considering the nature of these measures.

Typical adjustments we made to the savings values included corrections to equipment efficiency, operating schedules, temperature set points, and building parameters. The Cadmus team also identified errors in simulation models and MS Excel calculation tools, which resulted in adjustments when corrected. Two project-specific adjustments included:

- One office project involved a lake water cooling system which was modeled in eQuest. The simulation model applied a cooling cutoff to the chilled water system, artificially eliminating cooling during many hours. The building contained a dual duct system, so the cooling reduction also resulted in a large drop in heating energy.

  The Cadmus team revised the model to allow for mechanical cooling during all hours, then subtracted cooling energy for all hours when the outside air temperature was below the cutoff temperature. The resulting impact increased savings by 230 percent of the reported value (a significant increase in savings for this large project). The Cadmus team also confirmed the savings impact through pre- and post-installation utility bills.

- A church installed shell measures, including wall and ceiling insulation. However, the ceiling insulation was installed between the basement and main level. The main level of the church is under construction, and plans to operate out of the basement for one to two years until the main level is complete. For the first two years, the wall insulation will not achieve savings because the main level is unconditioned. Following that time, the basement insulation will not achieve savings because it separates to conditioned spaces. The pastor reported the ceiling insulation was installed primarily for soundproofing purposes.

  Cadmus resolved the analysis by discounting ceiling insulation savings, but allowed the wall insulation savings, which should achieve persistence. Cadmus also adjusted the savings calculator based on our on-site verification visit, and determined that overall savings should be reduced by 7 percent.

2.3.4 Energy Smart Grocer (ESG)

Cadmus performed site visits on all three ESG sites with gas savings, which included four reported measures. Two refrigeration measures involved hot water heat reclaim and case doors on medium temperature reach-in display cases. The two HVAC measures involved demand controlled ventilation and replacement of gas furnace units with heat pumps. Table 2-18 through Table 2-20 show our evaluated results for the program.

Table 2-18. Evaluated Results for FY10 Non-Residential Gas ESG Measures

Program	Total PY 2010 Measure Installations	Evaluated Sample	*Ex Ante* Gross Reported Savings	*Ex Post* Gross Evaluated Savings	Realization Rate
ESG	4	4	20,100	15,191	76%

Table 2-19. Evaluated Results for FY10 Non-Residential Gas ESG Measures - Idaho

Program	Total PY 2010 Measure Installations	Evaluated Sample	*Ex Ante* Gross Reported Savings	*Ex Post* Gross Evaluated Savings	Realization Rate
ESG	1	1	2,318	2,318	100%

Table 2-20. Evaluated Results for FY10 Non-Residential Gas ESG Measures - Washington

Program	Total PY 2010 Measure Installations	Evaluated Sample	*Ex Ante* Gross Reported Savings	*Ex Post* Gross Evaluated Savings	Realization Rate
ESG	3	3	17,782	12,873	72%

The Cadmus team identified three adjustments to the reported savings. The combined effect of these adjustments reduced the sample savings by 24 percent of the total reported value.

- One grocery store installed a heat reclaim measure to use waste heat from the refrigeration process to offset domestic gas water heating. The Cadmus team performed two weeks of temperature and flow metering, and determined that achieved savings were only 18 percent of the reported value. Savings were reduced primarily due to a domestic hot water recirculation loop which returned building hot water back to the inlet side of the reclaim tank, instead of to the gas water heater tank. This resulted in an inlet water temperature greater than the reclaim tank temperature for much of the time.
- The same grocery store also claimed gas savings for fuel switching by replacing gas furnace units with heat pumps. The savings assumed no gas backup heat. However, the site installed gas heating units for low temperature operations. During our site visit, we also determined that operating hours and temperature set points were slightly greater than shown in the energy simulation model, which increased gas savings. The combined impact increased gas savings by 2 percent.
- A grocery store in Clarkston, Washington installed a demand controlled ventilation system. Cadmus determined that the energy simulation model settings were appropriate compared to the data we obtained on the site. However, the simulation used weather data from Spokane to model outdoor temperature impacts. Cadmus corrected the weather file to Lewiston, Idaho (which is directly across the Snake River from Clarkston). This resulted in a 28 percent decrease in gas savings.

2.3.5 Extrapolation to Program Population

For most programs, our measurement and verification process involved a minority of sites with incented projects, but we selected these sites to provide the most impactful information. We designed the site visits to achieve a statistically valid sample for the major strata, as discussed previously. Cadmus calculated realization rates (the ratio of claimed to verified savings) to apply to the programs at the remaining non-sampled sites. Cadmus calculated realization rates as weighted averages, based on the verification sample and using the following equations:

$$RR_{ij} = \frac{Verified_{ij}}{Claimed_{ij}}; \text{ for measure } j \text{ at site } i \quad (1)$$

$$RR_{j} = \frac{\sum_{i} Verified_{i}}{\sum_{i} Claimed_{i}}; \text{ for measure } j \text{ across all sample sites} \quad (2)$$

$$\sum_{k} Verified_{k} = RR_{j} x \sum_{k} Claimed_{k}; \text{ for measure } j \text{ across all sites in measure population} \quad (3)$$

$$RR_{l} = \frac{\sum_{k} Verified_{k}}{\sum_{k} Claimed_{k}}; \text{ for the population (all sites and measures)} \quad (4)$$

Where:

RR = the realization rate

i = the sample site

j = the measure type

k = the total population for measure type ‘j’

l = the total program population

We calculated realization rates for each individual site in the sample based on measure type (Equation 1). The Cadmus team then calculated the realization rates for the measure types using the ratio of the sum of verified savings to the sum of claimed savings from the sample for each measure type (Equation 2). We calculated the total population verified savings by multiplying the measure type realization rate from the sample by the total claimed savings for the population of each measure type (Equation 3). The program realization rate is the ratio of all verified to all claimed savings (Equation 4).

Cadmus summed these values to determine the total adjusted evaluated savings and program-level realization rates, as shown in Table 2-21 through Table 2-23. The overall portfolio gross realization rate was 113 percent.

Table 2-21. PY 2010 Gas Gross Program Realization Rates

Program	*Ex Ante* Gross Sample Reported Savings	*Ex Post* Gross Sample Evaluated Savings	Realization Rate	*Ex Ante* Gross Program Reported Savings	*Ex Post* Gross Program Evaluated Savings
APP	17	17	100%	17	17
ESG	20,100	15,191	76%	20,100	15,191
PCW	463	463	100%	1,495	1,495
PDCV	300	300	100%	2,256	2,256
PFS	21,002	20,966	100%	29,165	29,115
PRW	12,542	6,936	55%	12,542	6,936
PSTR	43,898	30,612	70%	43,898	30,612
SS	416,219	492,317	118%	682,509	807,293
Total	514,541	566,802	113%	791,982	892,915

Table 2-22. PY 2010 Gas Gross Program Realization Rates - Idaho

Program	*Ex Ante* Gross Sample Reported Savings	*Ex Post* Gross Sample Evaluated Savings	Realization Rate	*Ex Ante* Gross Program Reported Savings	*Ex Post* Gross Program Evaluated Savings
APP	n/a	n/a	100%	9	9
ESG	2,318	2,318	100%	2,318	2,318
PCW	463	463	100%	477	477
PDCV	300	300	100%	1,240	1,240
PFS	10,166	10,149	100%	12,001	11,980
PSTR	39,706	28,686	72%	39,706	28,686
SS	124,551	147,323	118%	124,551	147,323
Total	177,504	189,239	107%	180,302	192,033

Table 2-23. PY 2010 Gas Gross Program Realization Rates - Washington

Program	*Ex Ante* Gross Sample Reported Savings	*Ex Post* Gross Sample Evaluated Savings	Realization Rate	*Ex Ante* Gross Program Reported Savings	*Ex Post* Gross Program Evaluated Savings
APP	n/a	n/a	100%	9	9
ESG	17,782	12,873	72%	17,782	12,873
PCW	n/a	n/a	100%	1,018	1,018
PDCV	n/a	n/a	100%	1,016	1,016
PFS	10,836	10,817	100%	17,164	17,135
PRW	12,542	6,936	55%	12,542	6,936
PSTR	4,192	1,926	46%	4,192	1,926
SS	557,958	659,971	118%	557,958	659,971
Total	603,310	692,523	115%	611,681	700,883

2.3.6 Net-To-Gross

This section outlines Cadmus' approach and results from conducting a NTG analysis. All programs include participants who would have installed an energy-efficiency measure in the program's absence. These customers are described as freeriders: they only participated in the program to take advantage of the rebate or incentive. In those cases, energy savings from the measures they install cannot be attributed to the program because the program did not actually cause them to install the measure. Table 2-24 through Table 2-26 show the net program evaluated savings after accounting for freeridership.

Table 2-24. PY 2010 Gas Net Program Realization Rate

Program	*Ex Ante* Gross Program Reported Savings	*Ex Post* Gross Program Evaluated Savings	Net-to-Gross	*Ex Post* Net Program Evaluated Savings	Realization Rate
APP	17	17	0.87	15	88%
ESG	20,100	15,191	0.9	13,672	68%
PCW	1,495	1,495	0.87	1,301	87%
PDCV	2,256	2,256	0.87	1,963	87%
PFS	29,165	29,115	0.87	25,330	87%
PRW	12,542	6,936	0.87	6,034	48%
PSTR	43,898	30,612	0.87	26,632	61%
SS	682,509	807,293	0.74	597,397	88%
Total	791,982	892,915	N/A	672,344	88%

Table 2-25. PY 2010 Gas Net Program Realization Rate - Idaho

Program	*Ex-Ante* Gross Program Reported Savings	*Ex-Post* Gross Program Evaluated Savings	Net-to-Gross	*Ex-Post* Net Program Evaluated Savings	Realization Rate
APP	9	9	0.87	8	87%
ESG	2,318	2,318	0.90	2,086	90%
PCW	477	477	0.87	415	87%
PDCV	1,240	1,240	0.87	1,079	87%
PFS	12,001	11,980	0.87	10,423	87%
PSTR	39,706	28,686	0.87	24,957	63%
SS	124,551	147,323	0.74	109,019	88%
Total	180,302	192,033	N/A	147,986	82%

Table 2-26. PY 2010 Gas Net Program Realization Rate - Washington

Program	*Ex-Ante* Gross Program Reported Savings	*Ex-Post* Gross Program Evaluated Savings	Net-to-Gross	*Ex-Post* Net Program Evaluated Savings	Realization Rate

APP	9	9	0.87	8	87%
ESG	17,782	12,873	0.90	11,586	65%
PCW	1,018	1,018	0.87	886	87%
PDCV	1,016	1,016	0.87	884	87%
PFS	17,164	17,135	0.87	14,907	87%
PRW	12,542	6,936	0.87	6,034	48%
PSTR	4,192	1,926	0.87	1,676	40%
SS	557,958	659,971	0.74	488,378	88%
Total	611,681	700,883	N/A	524,358	88%

2.3.7 Achievements Compared to Goals

During the program planning process, Avista outlined goals for various programs to save a total of 1,172,269 therms, as shown in Table 2-27.

Table 2-27. PY 2010 Gas Program Achievements Compared to Goals

State	*Ex-Ante* Program Gross Goals	*Ex-Post* Gross Program Evaluated Savings	Gross Realization Rate	*Ex-Post* Net Program Evaluated Savings	Net Realization Rate
Idaho	347,812	192,033	55%	147,986	43%
Washington	824,457	700,883	85%	524,358	64%
Total	1,172,269	892,916	76%	672,344	57%

The overall portfolio evaluated *ex post* gross savings achieved 76 percent of goals. The NTG impact reduced *ex post* net savings to 57 percent of the original portfolio goal.

2.3.8 HVAC / Lighting Interactive Impacts

The portfolio results did not account for gas heating penalties due to increased lighting efficiency. Lighting systems convert a large portion of their input energy to useful light output, but a substantial fraction is converted to heat. Any reduction in lighting input energy also reduces waste heat. This waste heat reduction lowers the site's required cooling load but increases its heating load.

Cadmus noted that Avista tracked these HVAC interactive effects for many projects and reported those impacts for determining program cost-effectiveness. Most interactive effects involved prescriptive or site specific lighting projects, although some therm penalties were reported for the Energy Smart Grocer and Site Specific HVAC program projects.

Cadmus typically applies interactive factors based on values supplied by the RTF of the Northwest Power and Conservation Council. Those values rely on the fixture savings, building type, and HVAC system; however, that information was not available for most affected projects. Avista noted their methodology for calculating interactive effects was not as robust as that for their energy savings methodology.

In addition, Avista did not factor interactive effects into their portfolio energy savings goals, which would have reduced goals.

2.4 Conclusions

The Cadmus team evaluated 104 of 453 measures installed through the program, representing 65 percent of reported *ex ante* savings.

In general, Cadmus determined that Avista implemented the programs well. Gross *ex post* evaluated savings achieved 76 percent of reported program savings goals. The overall portfolio achieved a 113 percent realization rate comparing gross *ex post* evaluated savings to gross *ex ante* reported savings. However, the NTG impact reduced the savings realization rate to 57 percent of the goals.

Cadmus developed a number of additional conclusions throughout the evaluation process:

- Cadmus could have streamlined the sampling process with the addition of site addresses and contact information. Measure-level data for each project, such as specific measure type and quantity, would have improved the range and depth of our evaluation activities.
- Certain measures (demand controlled ventilation, refrigerated warehouse, and steam trap replacements) are less conducive to deemed savings estimates due to complex HVAC/lighting interactions and significant variation of site conditions.
- Interactive effects between HVAC and lighting represent a significant impact on gas demand. Cadmus is unable to reliably estimate interactive savings impacts through the data available in Avista's current database extracts.

2.5 Recommendations

Cadmus recommends that Avista continue to offer incentives for measure installation through the evaluated programs. We have the following recommendations for potentially improving program energy savings impacts and evaluability:

- Avista may want to consider a method to provide more robust tracking database extracts to improve evaluation activities. The database extract should include site addresses, site contact information, and measure-level details.
- Avista may want to consider providing incentives for demand controlled ventilation, refrigerated warehouses, and steam trap replacements through the Site Specific program.
- Avista should consider revising their methodology for calculating and tracking HVAC/lighting interactive effects.

3 2010 Low-Income Gas Impact Report

Executive Summary

Program Overview

Avista's Low-Income Weatherization Program in Washington and Idaho is aimed at lowering customers' energy consumption and utility bills. The program provides, at no cost to income-qualified customers, a complete home energy audit and installation of energy-efficient measures.

Evaluation Approach

For this impact evaluation, we assessed gas energy impacts associated with measure installations in homes in Avista's Washington and Idaho service territories. The major tasks we performed for the evaluation are described in more detail below.

Data Collection

The data required for this evaluation and their sources are listed in Table 3-1.

Table 3-1. Data Sources

Data	Source
Program participant and measure data	Avista
Expected savings by measure installation	Avista / CAP agencies
Participant billing histories	Avista
Weather data	NOAA

Evaluation of Program Energy Savings

Cadmus reviewed Avista's estimated savings and calculated the average achieved household and total savings as described below:

- **Expected Savings:** Were based on expected measure-level gas savings estimates provided by Avista from their program participant database.
- **Actual Savings:** Were calculated using a pre-post conditional savings analysis (CSA) fixed effects regression model to estimate weather-normalized, program-induced energy savings based on participant billing data. In addition, we leveraged work from Avista's Residential evaluation to determine savings achieved for those participants receiving an electric to high-efficiency gas furnace conversion.

Gas Impact Findings and Conclusions

Billing Analysis Gas Savings

Model savings were applied to the 186 gas-saving participants, summarized in Table 3-2. An additional 42 participants received electric to gas fuel-conversion measures; savings for these installations are discussed below.

Table 3-2. Billing Analysis Gas Savings by State

State	Total Participants	Model Savings Per Participant (Therms)	Total Savings (Therms)
Idaho	72	123	8,886
Washington	114	104	11,862
Overall	186	112	20,749

From the billing analysis, gross savings for program participants averaged 123 therms in Idaho, 104 in Washington, and 112 across both states. This is approximately 15 percent energy savings for participants in both Washington and Idaho relative to their pre-participation annual consumption.

We calculated realization rates of 60 percent in Idaho, 30 in Washington, and 38 overall. Cadmus determined that the average expected savings provided by Avista appeared particularly high for Washington participants, which may account for the lower realization rate. Several other factors may have contributed to the low results:

- High saturation of alternative heating sources (e.g., wood, fuel oil, portable electric heaters) not accounted for when developing expected savings estimates.
- Different approaches in developing expected savings estimates, maybe not always accounting for pre-weatherization annual consumption, square footage, or measure interaction.

Fuel-Conversion Savings

In addition to the 186 participants modeled in the billing analysis, 42 received fuel conversions for electric heating and/or water heating equipment. Conversion installations occurred only in Washington. Of the 42 conversion participants, only 36 received high-efficiency furnace installations, for which estimated savings of 61 therms was adapted from the billing analysis for residential single-family furnace replacements.[13] For these participants, we estimated an additional 2,188 therms.

Overall Gas Savings

Table 3-3 below compares the reported gas savings for PY2010 against the evaluated savings from our analysis. Overall, the program is achieving a 37 percent realization rate compared against the expected therms savings totals from the 228 participants. These results include both model savings applied to the 186 gas-saving participants and the furnace savings applied to the 36 participants receiving furnace conversions.

Table 3-3. Overall Gas Savings Comparison

State	Total Customers	Reported Savings (Therms)	Evaluated Gas Savings (Therms)	Program Realization Rates

[13] The program participant database did not indicate water heater conversions were replaced with efficient units; therefore, no additional gas savings were applied.

Idaho	72	15,286	8,886	58%
Washington	156	45,990	14,049	31%
Overall	228	61,276	22,937	37%

Recommendations

Our impact evaluation revealed several areas where program performance and savings accuracy could be improved:

- Standardize expected savings calculations.
- Account for additional factors in savings calculations, such as historical consumption, interaction effects, square footage, and primary heating source.
- Track alternative heating sources in homes.
- Include high-use customers in program targeting.

3.1 Introduction

Cadmus conducted a statistical billing analysis to determine the adjusted gross savings and realization rates for the energy-efficient measures installed through the Low-Income Weatherization Program in PY 2010. We performed the analysis and provided results at the household- or participant-level, rather than at the measure-level. In this report, we describe our approach and findings for the PY 2010 gas savings.

To estimate the energy savings due to the program, Cadmus used a pre- and post-installation combined CSA and Princeton Score Keeping Method (PRISM) approach using monthly billing data. We analyzed savings estimates for Idaho and Washington, in addition to running a series of diagnostics, such as a review of savings by pre-consumption usage quartile and outlier analysis. Below we include a detailed discussion of the regression model we used for this billing analysis and the resulting savings.

In the 2010 program year, 228 out of 556 total program participants received gas-saving measures, 186 of which we included in the billing analysis.[14] These 186 participants received a mix of energy-efficiency measures, encompassing insulation, infiltration controls, doors, windows, and efficient furnace and water heater replacements. Both Avista and the community action program agencies (CAPs) which implement the program, contributed to developing expected measure-level savings estimates for each participant home.[15]

3.1.1 Program Description

Five programs comprise the Low-Income Weatherization Program, listed in Table 3-4. All of the low-income programs are implemented by local CAPs within Avista's Idaho and Washington service territories. CAPs holistically evaluate homes for energy-efficiency measure applicability,

[14] The analysis excluded 42 customers who also received electric to gas conversion measures.

[15] CAPs in Idaho developed expected savings and provided these estimates to Avista. In Washington, the CAPs did not report expected savings and Avista developed their own savings estimates.

combining funding from different programs to apply appropriate measures to a home based on the results of a home energy audit.

While both states operate very similar weatherization programs, it is important to note that each state has individual programs, with different sovereign statewide administers, implementation agencies, and weatherization protocols. Table 3-4 provides a description of the measures installed under each program component, along with the count of gas measures installed in PY 2010 and included in our gas impact analysis (we will include our findings of the evaluated electric measures in a subsequent report).

Table 3-4. 2010 Gas Efficiency Installations by Program Component

Low-Income Program Component	Measure Description	Measure Installations
Shell / Weatherization	Insulation (ceiling, floor, wall, duct), window/door installation, air infiltration	612
ENERGY STAR® Appliance	High-efficiency refrigerator replacement	N/A
Fuel Conversion*	Electric furnace and water heater replacement with gas units	N/A
Hot Water Efficiency	High-efficiency water heater replacement	8
HVAC Efficiency	High-efficiency gas furnace replacement	42

3.1.2 Data Collection

Cadmus obtained impact evaluation data from a number of different sources, including:

- ***Program participant database***: Avista provided information regarding the program participants and installed measures for each state. Specifically, these data included the list of measures installed per home and the expected savings from each completed installation; however, these data did not include the quantity of measures installed (such as the number of square feet of installed insulation) or the per unit savings estimates.
- ***Billing records***: Avista provided participant meter records from January 2008 through April 2011.
- ***Weather data***: Cadmus collected Idaho and Washington weather data from 10 representative stations for the corresponding time period from the National Oceanic and Atmospheric Administration (NOAA).

Cadmus first matched participant accounts from program data with billing data. We then matched daily heating degree days (HDD) to each of the respective monthly read date periods in the billing data for use in the weather-adjusted savings model. Finally, we paired pre- and post-consumption periods in order to compare consistent time frames.

3.2 Methodology

3.2.1 Sampling

We used a census of program participants in the billing analysis (186 gas accounts, not including any of the gas customers who received conversion measures).

3.2.2 Data Collection Activities

3.2.2.1 Documentation Review/Database Review

Cadmus used the 2010 Idaho and Washington Program participant database provided by Avista to develop a complete population for use in both our billing analysis and for developing the telephone survey sample. The participant data also included customer information, account numbers, type of measure installed, rebate amounts, measure installation costs, measure installation dates, and expected savings per measure. Upon reviewing these data, Cadmus identified the few impact-related issues discussed below. We will include a detailed discussion of our process-oriented findings in the 2010 Process Report.

3.2.2.2 Surveys

Cadmus performed a telephone survey of 123 program participants to collect information about measure installations, energy education, non-energy benefits, and satisfaction with the program. This information contributed only slightly to our impact analysis and most findings will be reported in the 2010 Process Report.

3.2.2.3 Billing Analysis

Avista provided monthly billing data for all the Low-Income Weatherization Program participants from January 2008 through April 2011. Avista also provided the program participant database with participation and measure data, including all the gas and electric measures installed per home by the different CAPs. Cadmus summarized the data in the database for each participant by unique customer account and matched these data to the gas billing data for analysis.

We obtained daily average temperature weather data from 2008 to 2011 for the 10 NOAA weather stations that represent all the zip codes in Avista's Washington and Idaho service territories. From the daily temperatures, we determined base 65-degree HDD for each station. We obtained the nearest weather station for each territory using a zip code map of all the U.S. weather stations. We then matched the billing data periods with the HDDs from the station closest to each participant.

In order to prevent bias in assigning the pre- and post-periods from the different reading cycles (i.e., billing cycles that do not align exactly with the days per month, and different billing cycles for individual customers), and to simplify the analysis, we allocated the therm billing usage and the associated matched HDDs to calendar months.

Since the latest available billing data were for April 2011 and the measures were installed in 2010, we defined the analysis *PRE* period as 2009, before all participation installations occurred. We defined the *POST* period as the months following the installation.

Due to post-period data limitations, most participants had fewer than the desired 12 months of pre- or post-installation billing data. For this reason, we paired the pre- and post-months used in the billing analysis. For example, if a customer had measures installed in August 2010, we defined the post period as September 2010 through April 2011, and defined the pre-period as the corresponding months—from September 2009 through April 2010. This ensured that we used the same calendar months in both the pre and post periods, preventing bias from using mismatching months.

3.2.3 Data Screening

Once we had a subset of participant billing data with only the gas participants that did not receive conversion measures, Cadmus conducted a series of steps to screen participant usage data. These screens ensured that the analysis was conducted with a clean, reliable dataset.

3.2.3.1 General Screens

We performed the following screens to remove accounts that could possibly skew the savings estimation:

- Customers that indicated unit numbers in the address. These could potentially indicate weatherization installations that occurred in apartments.
- Accounts with fewer than three paired months (90 days) of billing data in either the pre- or post- period.

3.2.3.2 PRISM Modeling Screens

The second step in our screening process was to run PRISM models for the pre- and post- billing data. We used these models to obtain weather-normalized pre and post annual usage for each account, and to provide an alternate check of the weatherization savings obtained from the CSA model.

For each participant home, we estimated a heating model in both the pre and post periods to weather-normalize raw billing data.

The PRISM model specification we used was:

$$ADC_{it} = \alpha_i + \beta_1 AVGHDD_{it} + \varepsilon_{it}$$

Where for each customer 'i' and calendar month 't':

ADC_{it}	=	the average daily therms consumption in the post program period
α_i	=	the participant intercept; represents the average daily therms base load
β_1	=	the model space heating slope
$AVGHDD_{it}$	=	the base 65 average daily HDDs for the specific location
ε_{it}	=	the error term

From the model above, we computed the weather-normalized annual consumption (NAC) as follows:

$$NAC_i = \alpha_i * 365 + \beta_1 LRHDD_i + \varepsilon_i$$

Where, for each customer 'i':

NAC_i	=	the normalized annual therms consumption
α_i	=	the intercept that is the average daily or base load for each participant; represents the average daily base load from the model

$\alpha_i * 365$	=	the annual base load therms usage (non-weather sensitive)
β_1	=	the heating slope; in effect, this is the usage per heating degree from the model above
$LRHDD_i$	=	the annual, long-term HDDs of a typical month year (TMY2) in the 1971-2000 series from NOAA, based on home location[16]
$\beta_1 * LRHDD_i$	=	the weather-normalized annual weather sensitive (heating) usage, also known as HEATNAC
ε_i	=	the error term

Once we ran the models, we applied the following first set of screens on the PRISM model output to remove participants from the billing analysis:

- **Accounts with a PRISM model r-squared of less than 0.75.** These indicate a bad fit of the monthly gas usage and the actual HDDs, which is unexpected when gas appliances are used in both the pre and post periods.
- **Accounts with a HEATNAC of less than 100 therms in either the pre or post period**. If the annual heating usage is that low, the heating system was likely not used at all, and gas was probably only used for backup secondary heating. This screen also removed accounts with negative heating slopes from the analysis, since it is unlikely that the usage would have decreased in the heating months.
- **Accounts where the change between the pre weather-normalized usage (PRENAC) and the post weather-normalized usage (POSTNAC) was more than 80 percent of PRENAC.** Such large changes could indicate property vacancies when adding or removing "other" gas equipment, such as pools or spas, that are unrelated or outside of program activities.
- **Accounts where the pre-period base load was 0 and the post-period base load was greater than 0.** Since the base load indicates the usage that occurs in non-winter and shoulder months, those months outside of the heating season, this outcome suggests that a gas water heater, gas dryer, or gas range was added to the participant home. In this situation, the additional base load usage in the post period should not correspond to the weatherization measures installed through the program.
- **Accounts with negative intercepts, and hence negative base load**, were included in the analysis but were truncated to 0. These negative intercepts typically occur in homes with gas space heating and without gas water heating. The base load for these homes is expected to be 0, thus we set the base load to 0.

[16] In billing analysis we typically use 30 year normal heating degree averages to weather normalize the usage. The latest 30 year series available for this analysis was the TMY2 (1971-2000) series from NOAA/NCDC. We also ran the billing analysis using the 15 year TMY3 (1991-2005) heating degree days and the overall savings were not very different (7% lower).

- **Multifamily accounts.** We removed these accounts to avoid any issues associated with multifamily metering, as well as to avoid the interactive effects of heating usage across units.
- **Outliers.** Finally, model outlier diagnostic testing revealed four outliers that had a large influence on the participant HDD savings coefficient, and hence we removed these from the final model.

After applying these screens, there were 111 participants remaining that we used in the CSA model outlined below to determine average per home gas savings.

Table 3-5 summarizes the account attrition from the various screens listed above.

Table 3-5. Weatherization Account Attrition

Screen	Participants Remaining	Percent Remaining	Number Dropped	Percent Dropped
Original Gas Accounts	228	100%	0	0%
Gas-Only Accounts (No Conversion Measures)	186	82%	42	18%
Insufficient Pre- and Post-Period Months	178	78%	8	4%
Low R-Squared, Low Heating Usage	143	63%	35	15%
Changed Usage from the Pre to Post (> 80%)	142	62%	1	0%
Added Base Load	132	58%	10	4%
Multifamily (Unit Number Present)	115	50%	17	7%
Outliers	111	49%	4	2%
Final Analysis Group	111	49%	117	51%

3.2.4 CSA Modeling Approach

To estimate energy savings from this program, we used a pre-post CSA fixed-effects modeling method that uses pooled monthly time-series (panel) billing data. The fixed-effects modeling approach corrects for differences between the pre- and post-installation weather conditions, as well as for differences in usage consumption between participants with the inclusion of a separate intercept for each participant. Our modeling approach ensures that model savings estimates will not be skewed by any unusually high usage or low usage participants. Monthly consumption is also paired between the pre and post months to maintain the same timeframe for evaluating unique participants. We used the following model specification to determine the state-level savings:

$$ADC_{it} = \alpha_i + \beta_1 AVGHDD_{it} + \beta_2 POST\_ID_i * AVGHDD_{it} + \beta_3 POST\_WA_i * AVGHDD_{it} + \beta_{4..14} M_t + \varepsilon_{it}$$

Where, for participant 'i' and monthly billing period 't':

ADC_{it} = the average daily therm consumption during the pre- or post-program period

α_i = the average daily therm base load intercept for each participant (this is part of the fixed effects specification)

$AVGHDD_{it}$ = the average daily base 65 HDD based on home location

β_2 = the therm savings per HDD for the efficient measures in Idaho

$POST\_ID_i$ = an indicator variable that is 1 in the post-period (after the weatherization installations) for Idaho participants, and 0 in the pre-weatherization period

$POST\_ID_i * AVGHDD_{it}$ = an interaction between the Idaho post indicator ($POST\_ID_i$) and the HDDs ($AVGHDD_{it}$)

β_3 = the therm savings per HDD for the efficient measures in Washington

$POST\_WA_i$ = an indicator variable that is 1 in the post-period (after the weatherization installations) for Washington participants, and 0 in the pre-weatherization period

$POST\_WA_i * AVGHDD_{it}$ = an interaction between the Washington post indicator ($POST\_WA_i$) and the HDDs ($AVGHDD_{it}$).

M_t = an array of bill month dummy variables (Feb, Mar, …, Dec), 0 otherwise.[17]

ε_{it} = the modeling estimation error

The above model estimates the savings per heating degree for Idaho and Washington respectively with β_2 and β_3. In order to obtain the actual annual savings under normal weather conditions, we applied the 1971-2000 TMY2 normal HDDs from NOAA.

The per-HDD modeling approach resolves much of the potential bias from customers where predominantly winter month data was available. Since furnaces and shell measure impacts reflect seasonality in gas consumption, a per heating degree savings allows for allocating savings across all the calendar months, as well as being based on the HDDs. Using just a post-period indicator would have had a predominance of the winter months, resulting in savings being biased upwards.

3.3 Results and Findings

3.3.1 Billing Analysis Results

Table 3-6 summarizes the model savings results of the weatherization measure installations for the group of 111 participants. The model savings are an average of 123 therms in Idaho, 104 in Washington, and 112 overall.[18] The precision level indicates that the percent of error in the savings estimates is very low: at 12 percent in the combined model.

[17] We excluded one of the dummy variables from the independent variables, otherwise the 12 monthly indicators would form perfect co-linearity with the intercepts. We excluded January, thus the intercepts include the seasonality from January.

[18] Similar savings were reported in Ecotope's 2008 evaluation of Avista's Low-Income Weatherization Program, where they cited an average of 113 therm savings per gas participant.

Table 3-6. Low-Income Weatherization Program Savings Summary

Group	n	PRENAC	Model Savings Per HDD	Normal HDDs	Model Savings (Therms)	Precision 90%	Savings Lower 90% (Therms)	Savings Upper 90% (Therms)
Idaho	43	850	-0.01735	7,113	123	17%	102	144
Washington	68	753	-0.01572	6,619	104	16%	88	121
Overall	111	791	-0.01638	6,810	112	12%	98	125

Table 3-7 compares the evaluated to expected deemed savings, along with the realization rates. The percent savings are similar by state, at roughly 15 percent of the weather-normalized pre-period usage. By comparison, the expected savings estimates per home relative to pre-period usage represents 24 percent in Idaho, and are nearly doubled in Washington at 46 percent .[19]

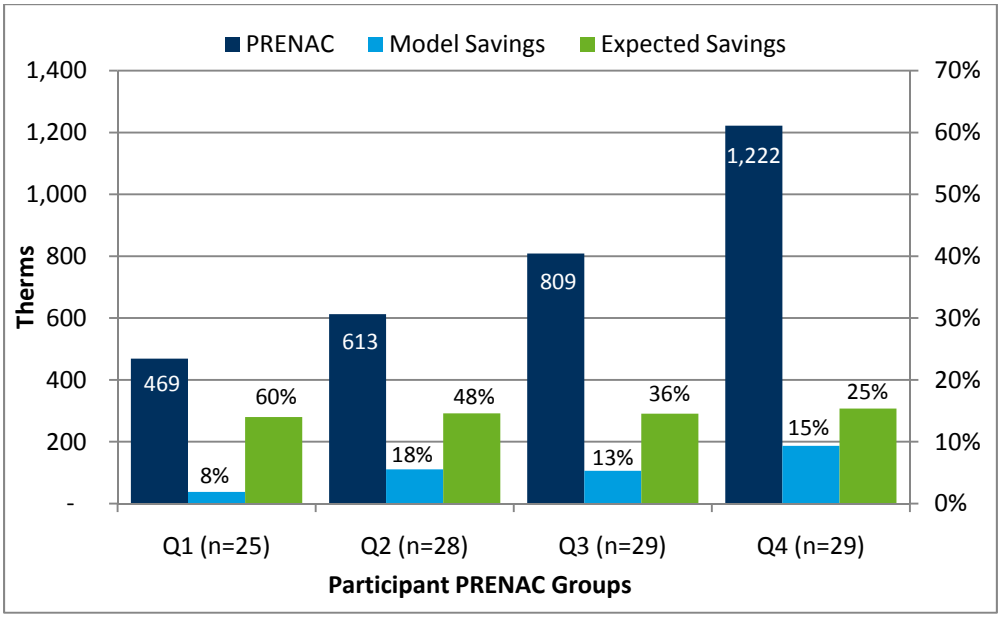
Table 3-7. Realization Rate Summary

Group	n	PRENAC	Model Savings (Therms)	Expected Savings (Therms)	Realization Rate	Model Savings as Percent of Pre-Usage	Expected Savings as Percent of Pre-Usage
Idaho	43	850	123	207	60%	15%	24%
Washington	68	753	104	347	30%	14%	46%
Overall	111	791	112	293	38%	14%	37%

To further illustrate the irregularity with expected savings, Figure 3-1 compares PRENAC to model savings and to expected savings estimates. We made these comparisons across categories of customers grouped by PRENAC usage quartiles (i.e., distribution of participants into four equal groups based on usage), which reflect different groups of customers that vary by their energy use.

[19] By comparison, the 2008 Ecotope evaluation reported a total expected savings of 110,665 therms for the 222 participants, resulting in an average expected savings of 498 therms, which is nearly 200 therms higher than the average expected savings in 2010. Assuming a comparable PRENAC of approximately 800 therms on average, the 2008 expected savings would reflect over 60% savings relative to the average pre-weatherization usage.

Figure 3-1. Savings Comparison by Customer Usage Category



Note: Each PRENAC column represents therm totals, while model savings and expected savings include the percentage of therm savings relative to PRENAC.

Intuitively, PRENAC increases through each quartile (across the different customer usage categories), and the model savings estimates reflect this as an increasing trend. In other words, customers that use more energy have a higher potential for energy savings. In contrast, the expected savings estimates are relatively flat across each customer usage category, with the percent of PRENAC being relatively higher for lower use customers.

Given the fairly similar distribution of installed measures between quartiles 1 and 4, it is surprising that the expected savings do not reflect the pre-period consumption trends.

We compared the average expected measure savings and noticed some discrepancies between the two states. Table 3-8 provides the average expected savings for each installed gas measure by state.

Table 3-8. Average Expected Savings by Measure and by State

Measure	Expected Therms Savings		Number of Installations	
	ID	WA	ID	WA
Ceiling/attic insulation	58.5	183.5	30	81
Wall insulation	74.6	155.4	11	35
Floor insulation	88.0	130.7	32	51
Duct insulation	41.8	67.8	23	18
Air infiltration controls	45.9	83.1	65	84
ENERGY STAR door replacement	23.4	23.6	23	64
ENERGY STAR window replacement	131.9	54.0	41	54
High-efficiency furnace replacement	n/a	150.0	0	42
High-efficiency water heater replacement	n/a	11.0	0	8

Note: Frequencies reflect all gas savings measures from the participant database

For most shell measures (aside from window and door replacements), expected therm savings in Washington are significantly higher than in Idaho. This distinction is clearly driving the difference in expected savings between the two states. The largest discrepancies in savings are with insulation and infiltration measures, which are the most frequently installed measures in participant homes in both states.

To better understand the model results and trends indicative of these expected savings, we assessed two other factors: 1) the average home square footage (primarily available for Washington homes)[20] and 2) HDDs per state. Washington participant homes average approximately 1,250 square feet, which helps to explain why the pre-usage numbers are so low, at 731 therms.

Secondly (and as shown in Table 3-6), Idaho has higher average HDDs (7,113) than Washington (6,619). This indicates that Idaho residents should average higher heating usage due to weather conditions (holding all other factors constant). While higher Idaho HDDs appear to be reflected in the PRENAC values for each state, it is surprising that Washington exhibits such a high expected savings estimate for heating and shell measures. Even assuming that homes in Washington have a higher average square footage than homes in Idaho is not significant enough to account for the differences in expected savings (e.g., average savings for Washington ceiling and wall insulation are twice the savings reported in Idaho for these measures).

3.3.2 Overall Program Results

In applying the state-level savings estimates from the billing analysis to the gas participant program population, a total therms savings of 20,749 is achieved. Table 3-9 provides more detail on the overall savings calculation by state.

Table 3-9. Overall Gas Savings by State

State	Total Participants	Model Savings Per Participant (Therms)	Total Savings (Therms)
Idaho	72	123	8,886
Washington	114	104	11,862
Overall	186	112	20,749

A remaining 42 participants in Washington received electric to gas conversion measures, including high-efficiency gas furnaces and water heaters. For these customers, there is a net increase in therms usage; however, in this report, we calculated therm savings generated from installations of high-efficiency gas equipment compared to standard gas equipment.[21] Table 3-10 provides a distribution of all Avista-funded measure installations for these 42 conversion participants.

[20] Source: Zillow square footage information applied to participant addresses for Washington (www.zillow.com).

[21] Electric savings associated with conversion measure installations will be accounted for in the 2010-2011 Avista Electric Impact Report, along with the increase in therms associated with installation of standard efficiency gas equipment to replace the electric equipment (considered by Avista to be a secondary impact under their electric program).

Table 3-10. Measure Installations for Conversion Participants

Description	Freq
Electric ENERGY STAR Refrigerator	7
Electric to Gas High Efficiency Furnace Conversion	36
Electric to Gas Hot Water Heater Conversion	38
Gas Air Infiltration Reduction	2
Gas ENERGY STAR Door Replacements	2
G ENERGY STAR Window Replacements	3
Gas High Efficiency Furnace	36
Gas Insulation - Ceiling/Attic	3
Gas Insulation – Floor	3
Gas Insulation – Wall	3
Health and Human Safety	1

The majority of these participants received both water heater and high-efficiency furnace conversion (n = 32), while 4 received only high-efficiency furnace conversions and 6 received only water heater conversions.

To account for the gas savings experienced through high-efficiency furnace replacement, we used the savings calculated through for Avista's residential furnace replacement program (84 therms for Washington participants) and scaled this value to reflect low-income participant home square footage.[22] The 36 conversion participants receiving a high-efficiency furnace conversion instead of a standard-efficiency gas furnace will generate a total of 2,188 therms.

Table 3-11 provides the overall savings gas savings by state, including only the savings generated from fuel conversion participants receiving high-efficiency equipment instead of standard-efficiency equipment.

Table 3-11. Overall Gas Savings by State

State	Total Model Savings (Therms)	Conversion Participant Savings (Therms)	Total Savings (Therms)
Idaho	8,886	n/a	8,886
Washington	11,862	2,188	14,049
Overall	20,749	2,188	22,937

[22] For Washington, low-income participants averaged 1,250 square feet per home, while single-family participants averaged 1,728 square feet per home.

3.3.3 Goals Comparison

We compared the evaluated savings for the 228 gas participants against the estimated therms savings for these participants listed in Avista's program participant database. Table 3-12 provides a summary of overall evaluated savings, expected savings goals, and the realization rates overall and by state. Overall, the low-income weatherization program is reaching approximately 37 percent of their gas savings goals.

Table 3-12. IRP Program Goals Comparison

State	Total Customers	Reported Savings (Therms)	Evaluated Gas Savings (Therms)	Program Realization Rates
Idaho	72	15,286	8,886	58%
Washington	156	45,990	14,049	31%
Overall	228	61,276	22,937	37%

3.4 Conclusions

Model savings as a percent of pre-period weather-normalized usage (15 percent) may be the best reference point for assessing the program impacts relative to other programs. In a 2005 national evaluation of the Weatherization Assistance Program, Oak Ridge National Laboratory found that the average gas savings compared to pre-weatherization consumption is approximately 23 percent.[23] Similarly, in a 2006 weatherization evaluation for the state of Ohio, Quantec, LLC (now Cadmus) determined that gas participants save 25 percent of their pre-period normalized annual consumption.[24] However, it is important to take into account the age of these comparison reports and the recent economic factors and changing energy rates that may affect customer behavior. While the ORNL national study did not provide data with enough detail to use in comparison, we were able to use some of the details from our Ohio study to help understand Avista's impacts:

1. Average square footage was slightly higher (1,384 in Ohio compared to 1,250 in Washington).
2. Ohio participant PRENAC averaged 1,290 therms, while Avista participant PRENAC was 791 therms.

Using a savings distribution by PRENAC category from the Ohio study, we can scale the percent savings reported for Ohio using the Avista distribution. Table 3-13 provides details of this comparison, which result in an average percent savings of approximately 14 percent, nearly identical to the percentage found in the Avista study. This finding reinforces the conclusion that lower savings were experienced in the Avista program due to average lower pre-treatment consumption, as a higher percent savings should be realized by weatherizing larger homes with higher pre-treatment consumption.

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[23] ORNL, 2005. *Estimating the National Effects of the U.S. Department of Energy's Weatherization Assistance Program With State-Level Data: A Metaevaluation Using Studies from 1993 to 2005*. http://weatherization.ornl.gov/pdfs/ORNL_CON-493.pdf

[24] http://www.development.ohio.gov/cms/uploadedfiles/Development.ohio.gov/Divisional_Content/Community/Office_of_Community_Services/HWAPImpactEvaluation.pdf

Table 3-13. OH HWAP Savings Comparison

Pre-Treatment Usage	Avista Study			Ohio HWAP % Savings	Weighted Average % Savings Using Avista Participant Distribution
	Participant Count	% Participant Distribution	Average PRENAC		
High Use (>1,800)	1	1%	2,688	26%	
Mid Use (1,000-1,800)	21	19%	1,240	21%	
Low Use (<1,000)	89	80%	663	13%	
Overall	111	100%	791		14%

Additionally, several factors may be contributing to lower realization rates:

- First, low-income programs often experience different types of take-back effects. In some cases, additional family members may move into the newly weatherized home because of the increased comfort provided by the installations, thus increasing usage in the post period. Alternatively, perceived energy savings with respect to new insulation or a new furnace may result in behavior changes where customers turn up the heat, thereby using more energy. Participants who were formerly heating only part of their home may also be able to heat their entire home because of the savings provided by weatherization.
- Second, the use of different types of heating equipment (such as using wood or portable electric heaters instead of an electric or gas furnace) can result in lower savings than expected. A survey of 123 program participants revealed that approximately 10 percent use neither electricity nor natural gas for primary heating, but are instead using wood, propane, or fuel oil.[25] Additionally, nearly one-third of respondents (n=40) indicated using a supplemental heat source, such as a space heater or wood. These results indicate the program may have inaccurate expected savings estimates by assuming primarily gas heating in the home.
- Third, different approaches in deriving expected savings may results in different savings estimates for the same measure. With Avista's program, expected savings for Idaho come directly from the agencies, while the expected savings for Washington are calculated by Avista using a deemed measure-level savings approach that does not appear to account for square footage or historical energy consumption. Deemed savings estimates in low-income programs tend to over-estimate actual savings by not accounting for nuances such as behavior, weather, and alternative fuels.

3.5 Recommendations

The following subsections outline our suggestions of program enhancements that could help to improve program impact results.

[25] Of the 10 percent of respondents who reported using alternative fuel as their primary source of heat, 7 respondents indicated using wood or wood stoves and 4 respondents indicated using fuel oil.

Standardize Expected Savings Calculations

Standardizing expected savings calculations across both states will help avoid wide discrepancies in realization rates.

Account for Additional Factors in Savings Calculations

Accounting for pre-period annual consumption, square footage, and interaction effects will help create a more robust savings estimate and avoid over-estimates that may occur through a prescriptive application of deemed estimates.

Track Alternative Heating Sources

As inexpensive alternatives to gas heat, gas customers may turn to electric room heaters and wood stoves, thereby reducing the impact of the weather-sensitive measures installed through weatherization (e.g., insulation). Collecting information on a customer's primary heating usage at the time of weatherization will allow for more reasonable estimates in cases where, despite being a gas customer, gas is used as a secondary heating source.

Include High-Use Customers in Program Targeting

While prioritization guidelines for targeting low-income weatherization participants are set at the federal level, some utilities actively track customer usage and provide agencies with lists of customers that have particularly high energy consumption for targeting purposes. In these cases, along with other targeting criteria (e.g., families with children, senior citizens), agencies are equipped to incorporate energy consumption characteristics into their program participant prioritization. Not only would weatherizing high use customers likely result in higher energy savings, it is possible that some customers are overly burdened with energy bills due to their housing characteristics, and the program could provide relief.

There are methods for identifying high usage customers while also controlling for factors that contribute to consumption (e.g., square footage, income, number of people per household). Using such an approach would allow Avista to identify their high-use customers.

Appendix A: Residential Furnace Billing Model Outputs

The following tables summarize the model result outputs[26] from our billing analysis of PY 2010 participants.

Table A1. Furnace Savings Regression Model (State-Level Savings)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1,728	350,619	202.90468	305.95	<.0001
Error	25,794	17,107	0.6632		
Corrected Total	27,522	367,726			
Root MSE	0.81437		R-Square	0.9535	
Dependent Mean	2.35167		Adj R-Square	0.9504	
Coeff Variable	34.62944				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	1714	0.84145	0.2158976	4.16	<.0001
AVGHDD	1	0.11299	0.00239	47.34	<.0001
POST_ID * AVGHDD	1	-0.01458	0.0005853	-24.92	<.0001
POST_WA * AVGHDD	1	-0.01566	0.0004522	-34.62	<.0001
Feb	1	-0.15754	0.02125	-7.41	<.0001
Mar	1	-0.38654	0.02745	-14.08	<.0001
Apr	1	-0.6308	0.04133	-15.26	<.0001
May	1	-0.71512	0.06195	-11.54	<.0001
Jun	1	-0.59065	0.07668	-7.7	<.0001
Jul	1	-0.42269	0.08506	-4.97	<.0001
Aug	1	-0.45796	0.08448	-5.42	<.0001
Sep	1	-0.6534	0.07399	-8.83	<.0001
Oct	1	-0.7657	0.04867	-15.73	<.0001
Nov	1	-0.42187	0.02634	-16.01	<.0001
Dec	1	-0.07407	0.02066	-3.58	3E-04

26 We ran all of the models with a fixed effects specification, which is a separate intercept for each participant. Due to the large amount of output from showing the model coefficients for each of the intercepts, we only present the average of all the separate intercepts in the output.

Table A2. Furnace Savings Regression Model (Overall Savings)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1,727	350,618	203.02126	306.11	<.0001
Error	25,795	17,108	0.66323		
Corrected Total	27,522	367,726			
Root MSE	0.81439		R-Square	0.9535	
Dependent Mean	2.35167		Adj R-Square	0.9504	
Coeff Variable	34.63034				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	1714	0.83624	0.21584	4.13	<.0001
AVGHDD	1	0.11312	0.00238	47.44	<.0001
POST * AVGHDD	1	-0.01527	0.00037601	-40.61	<.0001
Feb	1	-0.15712	0.02125	-7.39	<.0001
Mar	1	-0.38533	0.02744	-14.04	<.0001
Apr	1	-0.62855	0.0413	-15.22	<.0001
May	1	-0.71172	0.06191	-11.5	<.0001
Jun	1	-0.58645	0.07664	-7.65	<.0001
Jul	1	-0.41807	0.08501	-4.92	<.0001
Aug	1	-0.4534	0.08443	-5.37	<.0001
Sep	1	-0.64931	0.07394	-8.78	<.0001
Oct	1	-0.76302	0.04864	-15.69	<.0001
Nov	1	-0.42086	0.02634	-15.98	<.0001
Dec	1	-0.07408	0.02066	-3.59	0.0003

Table A3. Furnace Savings Regression Model (Quartile 1: 207-735 therms)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	442	34,242	77.47122	501.12	<.0001
Error	7,230	1,117.73374	0.1546		
Corrected Total	7,672	35,360			
Root MSE	0.39319		R-Square	0.9684	
Dependent Mean	1.38872		Adj R-Square	0.9665	
Coeff Variable	28.31295				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	429	0.51271	0.11794	4.56	<.0001
AVGHDD	1	0.07084	0.00214	33.03	<.0001
POST * AVGHDD	1	-0.0056	0.00035135	-15.94	<.0001
Feb	1	-0.08354	0.02074	-4.03	<.0001
Mar	1	-0.25164	0.02598	-9.69	<.0001
Apr	1	-0.43941	0.03834	-11.46	<.0001
May	1	-0.5412	0.05586	-9.69	<.0001
Jun	1	-0.44099	0.06926	-6.37	<.0001
Jul	1	-0.31625	0.07699	-4.11	<.0001
Aug	1	-0.33503	0.0765	-4.38	<.0001
Sep	1	-0.48238	0.06692	-7.21	<.0001
Oct	1	-0.55694	0.04416	-12.61	<.0001
Nov	1	-0.29982	0.0244	-12.29	<.0001
Dec	1	-0.03962	0.01964	-2.02	0.0436

Table A4. Furnace Savings Regression Model (Quartile 2: 736-939 therms)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	441	59,377	134.64169	651.35	<.0001
Error	6,461	1,335.56723	0.20671		
Corrected Total	6,902	60,713			
Root MSE	0.45466		R-Square	0.978	
Dependent Mean	2.04783		Adj R-Square	0.9765	
Coeff Variable	22.20182				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	428	0.51987	0.14719	3.77	<.0001
AVGHDD	1	0.10243	0.00266	38.5	<.0001
POST * AVGHDD	1	-0.01277	0.00041839	-30.52	<.0001
Feb	1	-0.11737	0.0236	-4.97	<.0001
Mar	1	-0.27638	0.0307	-9	<.0001
Apr	1	-0.43793	0.0459	-9.54	<.0001
May	1	-0.54731	0.06944	-7.88	<.0001
Jun	1	-0.44015	0.08589	-5.12	<.0001
Jul	1	-0.28605	0.09521	-3	0.0027
Aug	1	-0.30825	0.09452	-3.26	0.0011
Sep	1	-0.50876	0.08276	-6.15	<.0001
Oct	1	-0.64131	0.05454	-11.76	<.0001
Nov	1	-0.33758	0.02956	-11.42	<.0001
Dec	1	-0.07396	0.02303	-3.21	0.0013

Table A5. Furnace Savings Regression Model (Quartile 3: 940-1210 therms)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	440	91,198	207.26707	757.29	<.0001
Error	6,410	1,754.39792	0.2737		
Corrected Total	6,850	92,952			
Root MSE	0.523216		R-Square	0.9811	
Dependent Mean	2.56575		Adj R-Square	0.9798	
Coeff Variable	20.39014				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	427	0.419695972	0.170254848	2.8270726	0.03
AVGHDD	1	0.1325	0.00309	42.83	<.0001
POST * AVGHDD	1	-0.01697	0.00048389	-35.08	<.0001
Feb	1	-0.10991	0.02734	-4.02	<.0001
Mar	1	-0.27635	0.03526	-7.84	<.0001
Apr	1	-0.47098	0.05312	-8.87	<.0001
May	1	-0.58867	0.08019	-7.34	<.0001
Jun	1	-0.42928	0.09913	-4.33	<.0001
Jul	1	-0.2029	0.10998	-1.84	0.0651
Aug	1	-0.25344	0.10922	-2.32	0.0203
Sep	1	-0.49487	0.09561	-5.18	<.0001
Oct	1	-0.59265	0.06265	-9.46	<.0001
Nov	1	-0.31833	0.03374	-9.44	<.0001
Dec	1	-0.04687	0.02642	-1.77	0.0761

Table A6. Furnace Savings Regression Model (Quartile 4: Over 1211 therms)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	443	173,443	391.51809	421.01	<.0001
Error	5,655	5,258.87108	0.92995		
Corrected Total	6,098	178,701			
Root MSE	0.96434		R-Square	0.9706	
Dependent Mean	3.77279		Adj R-Square	0.9683	
Coeff Variable	25.56037				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	430	0.065836349	0.342176605	0.428930233	0.67
AVGHDD	1	0.19838	0.00611	32.48	<.0001
POST * AVGHDD	1	-0.0254	0.00092502	-27.46	<.0001
Feb	1	-0.1792	0.05009	-3.58	0.0004
Mar	1	-0.33048	0.06684	-4.94	<.0001
Apr	1	-0.52291	0.10334	-5.06	<.0001
May	1	-0.49647	0.15775	-3.15	0.0017
Jun	1	-0.23818	0.19484	-1.22	0.2216
Jul	1	0.0394	0.21533	0.18	0.8548
Aug	1	0.02262	0.21386	0.11	0.9158
Sep	1	-0.26928	0.18798	-1.43	0.1521
Oct	1	-0.61218	0.12365	-4.95	<.0001
Nov	1	-0.42436	0.06559	-6.47	<.0001
Dec	1	-0.09208	0.05022	-1.83	0.0668

Table A7. Furnace Savings Regression Model Without Heat Pumps (State-Level Savings)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1,555	322,211	207.20972	322.74	<.0001
Error	23,253	14,929	0.64203		
Corrected Total	24,808	337,140			
Root MSE	0.80127		R-Square	0.9557	
Dependent Mean	2.36585		Adj R-Square	0.9528	
Coeff Variable	33.8681				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	1,541	0.80182	0.21433	3.99	<.0001
AVGHDD	1	0.11383	0.00246	46.24	<.0001
POST_ID * AVGHDD	1	-0.0113	0.00061049	-18.5	<.0001
POST_WA * AVGHDD	1	-0.0125	0.00046939	-26.62	<.0001
Feb	1	-0.152	0.02206	-6.89	<.0001
Mar	1	-0.36082	0.02843	-12.69	<.0001
Apr	1	-0.59322	0.04278	-13.87	<.0001
May	1	-0.6728	0.06379	-10.55	<.0001
Jun	1	-0.53892	0.07903	-6.82	<.0001
Jul	1	-0.37086	0.08769	-4.23	<.0001
Aug	1	-0.41219	0.0871	-4.73	<.0001
Sep	1	-0.61516	0.07631	-8.06	<.0001
Oct	1	-0.72472	0.05026	-14.42	<.0001
Nov	1	-0.4033	0.02732	-14.76	<.0001
Dec	1	-0.07937	0.02151	-3.69	0.0002

Table A8. Furnace Savings Regression Model Without Heat Pumps (Overall Savings)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1,554	322,209	207.34194	322.92	1,554
Error	23,254	14,931	0.64208		23,254
Corrected Total	24,808	337,140			24,808
Root MSE	0.8013		R-Square	0.9557	
Dependent Mean	2.36585		Adj R-Square	0.9528	
Coeff Variable	33.86929				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	1,541	0.79603	0.21428	3.96	<.0001
AVGHDD	1	0.11399	0.00246	46.33	<.0001
POST * AVGHDD	1	-0.01207	0.00039101	-30.87	<.0001
Feb	1	-0.15153	0.02205	-6.87	<.0001
Mar	1	-0.35948	0.02842	-12.65	<.0001
Apr	1	-0.59071	0.04276	-13.82	<.0001
May	1	-0.66902	0.06375	-10.49	<.0001
Jun	1	-0.53428	0.07898	-6.76	<.0001
Jul	1	-0.36574	0.08763	-4.17	<.0001
Aug	1	-0.40705	0.08705	-4.68	<.0001
Sep	1	-0.61056	0.07626	-8.01	<.0001
Oct	1	-0.72172	0.05023	-14.37	<.0001
Nov	1	-0.40217	0.02731	-14.72	<.0001
Dec	1	-0.07936	0.02151	-3.69	0.0002

Table A9. Furnace Savings Regression Model With Heat Pumps (State-Level Savings)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	187	28,882	154.44973	229.1	<.0001
Error	2,527	1,703.57301	0.67415		
Corrected Total	2,714	30,586			
Root MSE	0.82107		R-Square	0.9443	
Dependent Mean	2.21626		Adj R-Square	0.9402	
Coeff Variable	37.04731				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	173	0.865818439	0.357330058	2.446589595	0.0148
AVGHDD	1	0.11406	0.00809	14.1	<.0001
POST_ID * AVGHDD	1	-0.04051	0.00178	-22.76	<.0001
POST_WA * AVGHDD	1	-0.04341	0.00143	-30.3	<.0001
Feb	1	-0.17295	0.06735	-2.57	0.0103
Mar	1	-0.54103	0.08936	-6.05	<.0001
Apr	1	-0.82699	0.1351	-6.12	<.0001
May	1	-0.87454	0.21595	-4.05	<.0001
Jun	1	-0.74537	0.26326	-2.83	0.0047
Jul	1	-0.52422	0.29097	-1.8	0.0717
Aug	1	-0.52633	0.28809	-1.83	0.0678
Sep	1	-0.74051	0.25125	-2.95	0.0032
Oct	1	-0.96829	0.16315	-5.93	<.0001
Nov	1	-0.52143	0.08465	-6.16	<.0001
Dec	1	-0.03305	0.0638	-0.52	0.6045

Table A10. Furnace Savings Regression Model With Heat Pumps (Overall Savings)

Source	Analysis of Variance				
	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	186	28,881	155.2736	230.25	<.0001
Error	2,528	1,704.78295	0.67436		
Corrected Total	2,714	30,586			
Root MSE	0.82119		R-Square	0.9443	
Dependent Mean	2.21626		Adj R-Square	0.9402	
Coeff Variable	37.05313				
Source	Parameter Estimates				
	DF	Parameter Estimates	Standard Error	t value	Prob. t
Average Intercept	173	0.85206	0.35705	2.41	0.016
AVGHDD	1	0.11442	0.00809	14.15	<.0001
POST * AVGHDD	1	-0.0423	0.00117	-36.09	<.0001
Feb	1	-0.17191	0.06736	-2.55	0.0108
Mar	1	-0.53795	0.08935	-6.02	<.0001
Apr	1	-0.82128	0.13506	-6.08	<.0001
May	1	-0.86546	0.21588	-4.01	<.0001
Jun	1	-0.73354	0.26316	-2.79	0.0054
Jul	1	-0.51162	0.29086	-1.76	0.0787
Aug	1	-0.516	0.28804	-1.79	0.0733
Sep	1	-0.73068	0.25118	-2.91	0.0037
Oct	1	-0.96158	0.1631	-5.9	<.0001
Nov	1	-0.5189	0.08465	-6.13	<.0001
Dec	1	-0.03349	0.06381	-0.52	0.5997

Appendix B: Residential ENERGY STAR Home Model Inputs

The following table summarizes the standard building codes in Washington and Idaho, along with the standards for new ENERGY STAR homes.

Table B1. ENERGY STAR, Washington, and Idaho Construction Standards for New Homes

Measure	Type	ENERGY STAR® Home	WA Code - Climate Zone II, R-3	ID Code - IECC 2006 Zone 5
Insulation	Ceiling	R-38	R-38	R-38
	Wall	R-19	R-19 + R-5	R-19
	Floors Over Unconditioned Space	R-30	R-30	R-30
	Slab Floors	R-10	R-10	R-10
Windows & Doors	Windows	0.35	0.35	0.35
	Max Glazing Area	0.21	Unlimited	Set to ENERGY STAR standards
	Doors	R-5	0.2 U-factor	Set to ENERGY STAR standards
Ducts	Insulation	R-8	R-10	R-8
	Sealing	Mastic only	Tapes allowed	Tapes allowed
	Max Leakage	<0.06 CFM/sqft or 75 CFM total @50Pa	Set to ENERGY STAR standards	Set to ENERGY STAR standards
Ventilation & Air Sealing	Ventilation System	Exhaust ventilation	Exhaust ventilation	Exhaust ventilation
	Envelope Tightness	0.35 normal ACH	0.35 normal ACH	0.35 normal ACH
Heating & Cooling Equipment	Gas Furnace	90 AFUE	78 AFUE	80 AFUE
	Air Conditioner	SEER 13	SEER 13	SEER 13

Appendix C: Non-Residential Impact Analysis

Overview

For this analysis, we evaluated four non-residential projects. These sites differed substantially; therefore, we evaluated them on a case-by-case basis. The four sites we evaluated are outlined in Table C1.

Table C1. Site Descriptions

Site Number	Business Type	Location	Claimed Savings (therms/year)
19652963	Church	Spokane, WA	4,192
1500385	Wastewater Treatment	Sandpoint, ID	21,883
17739130	Concrete Pre-Mix Facility	Spokane, WA	75,000
18524903	Linen Supply Company	Lewiston, ID	39,706

Billing Analysis Methodology

Our pre–post modeling approach allows for directly developing retrofit savings estimates for each site. The modeling approach accounts for differences in HDDs and, where applicable, production. It also allows for determining savings for normalized weather conditions, since the actual weather conditions may be milder or more extreme than the 15 year (1991-2005) normal weather averages from the NCDC.

Cadmus obtained daily weather data from NCDC for each weather station associated with the participants. From the daily weather data, we calculated the base 65 reference temperature HDDs. We then matched the participant billing data to the nearest weather station by zip code, and matched each monthly billing period to the associated base 65 HDDs.

All models follow a modified PRISM approach. We normalized all dependent and independent variables for the days in each billing period; therefore, model coefficients can be interpreted as average daily values. We did this to account for differences in the length of billing periods. For each model, we took the average daily consumption in therms as a function of some combination of average standing baseload, HDD, and (where appropriate) daily consumption.

For each site, we estimated two demand models: one for the pre period and one for the post period. We chose this methodology over a single standard treatment effects model to account for structural changes in demand that might occur due to retrofits. For instances, we eliminated the standing load for one site as a results of the retrofit program. Using our pre-post modeling approach, we estimated an intercept model for the pre period and a no-intercept model for the post period to reflect this change.

After estimating model coefficients for each site, we calculated three scenarios. First, we estimated a reference load for the past 12 billing cycles using the pre period model. This scenario extrapolates the counterfactual consumption; that is, what the consumption would have been in the absence of the program. The difference between this scenario and the actual consumption represents actual savings.

We then estimated two normalized scenarios—one using the pre model and one using the post model—using 15 year TMY3 data as the annual HDD and mean annual values for the production data. The difference between these two scenarios represents the long-term expected annual savings.

Summary of Estimated Savings

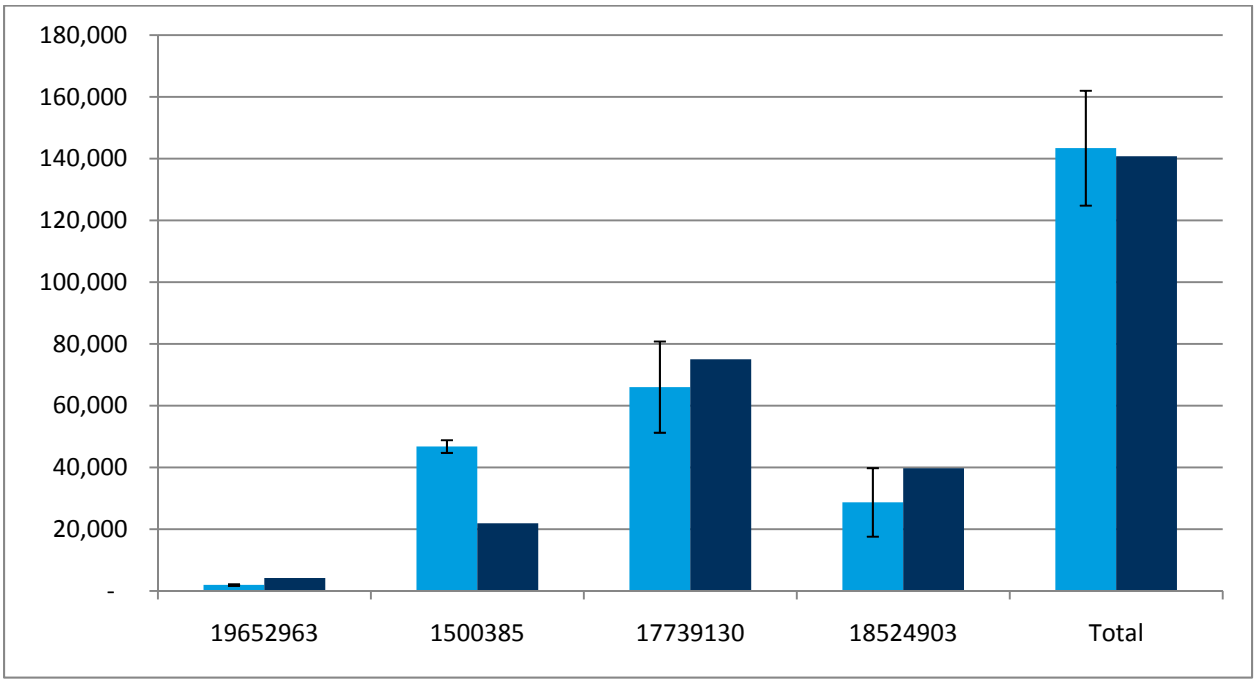
As a result of our site reviews and billing analysis, we found that savings differ substantially from what was claimed in many cases. For all but one of the projects, claimed savings appeared to overstate actual achieved savings.

Table C2. Claimed and Evaluated Savings by Project

Site	Claimed Savings	Evaluated Savings	Relative Precision
19652963	4,192	1,926	14%
1500385	21,883	46,769	4%
17739130	75,000	66,015	22%
18524903	39,706	28,686	39%
Total	140,781	143,396	13%

Despite consistently high claimed savings for the other programs, the offset from low claimed savings for site #1500385 caused the total evaluated savings for the program to closely match claimed savings at the 95 percent confidence level (as shown in Figure C1).

Figure C1. Claimed and Evaluated Savings (with 95% Confidence Intervals)



Case Study - Site # 19652963

Site #19652963 is a church with a congregation of approximately 60 members located in Spokane, Washington.

Site Review

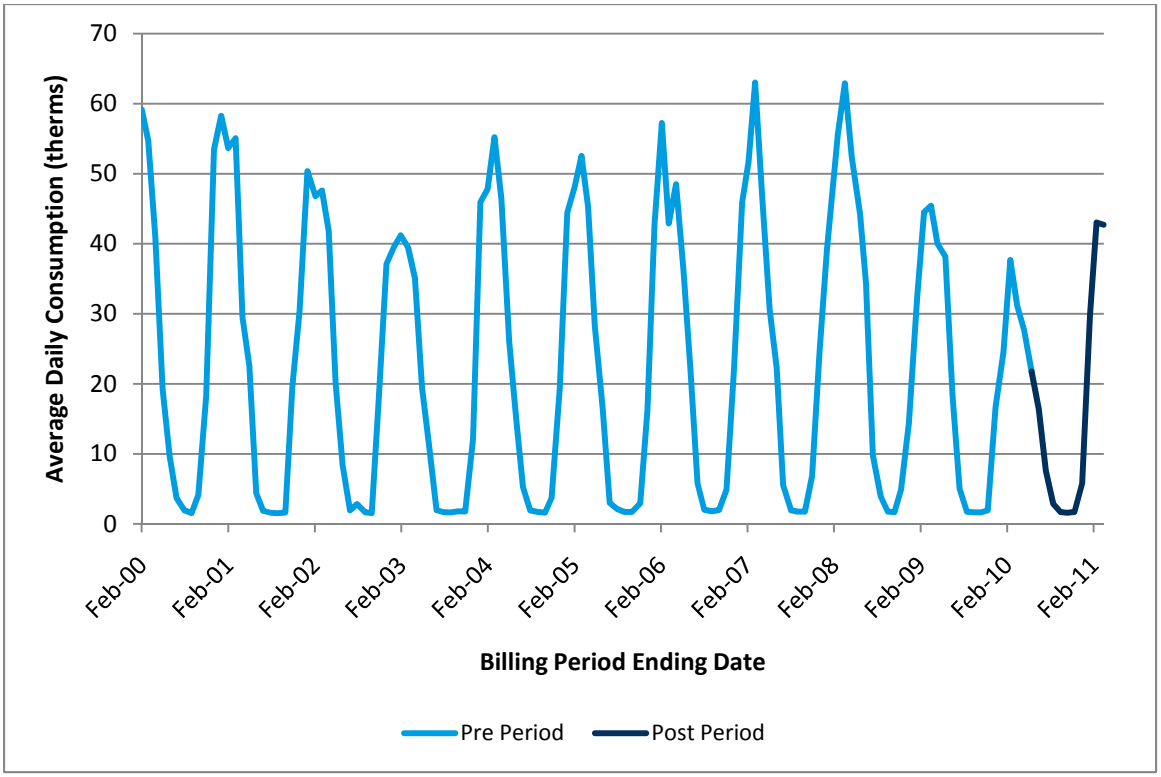
The church has four stories of brick construction with a commercial kitchen, multiple offices, a meeting room, and classrooms. The sanctuary is on the first floor and the rest of the rooms are on the upper levels.

The main church boiler is 76 to 80 percent efficient and 500,000 BtuH in size. The system has a low-pressure steam of 6 psig and a condensate return. The steam distribution lines are mostly 4-inches in diameter; 12-inches where insulated. Most of the radiators have 1/2-inch steam traps installed. The steam traps are thermostatic type.

The congregation stopped heating the two upper floors of the building in the last few years, and only heats the sanctuary and the first floor. Gas heat is used only on Sundays, while electric space heaters are used the remainder of the week.

The site has three water heaters. The primary unit, which is gas-fired, has a tank capacity of 75 gallons and is always on. A 50-gallon gas-fired unit operates on pilot only. The third water heater is electric, is for the commercial kitchen, and is primarily for dishwasher use.

Figure C2. Site #19652963 Average Daily Consumption for the Past 11 Years



Billing Analysis

We obtained Spokane weather data from WBAN #24157, located at the Spokane airport. There were 6,821 HDD in the 12 billing cycles beginning March 29, 2010 and ending March 29, 2011. There are 6,712 TMY3 HDD for this weather station, implying that this past winter season was slightly colder than average.

Given that the gas load is virtually entirely weather sensitive, we did not use intercept models for the pre and post periods. We tested intercept models and found—in all cases—that they did not differ significantly from zero. We estimated models as identical univariate regressions with the following specification:

$$therms_t = \beta_1 HDD_t + e_t$$

Where:

$therms_t$ = average daily therms for billing period *'t'*

HDD_t = average HDD for billing period '*t*'

Findings

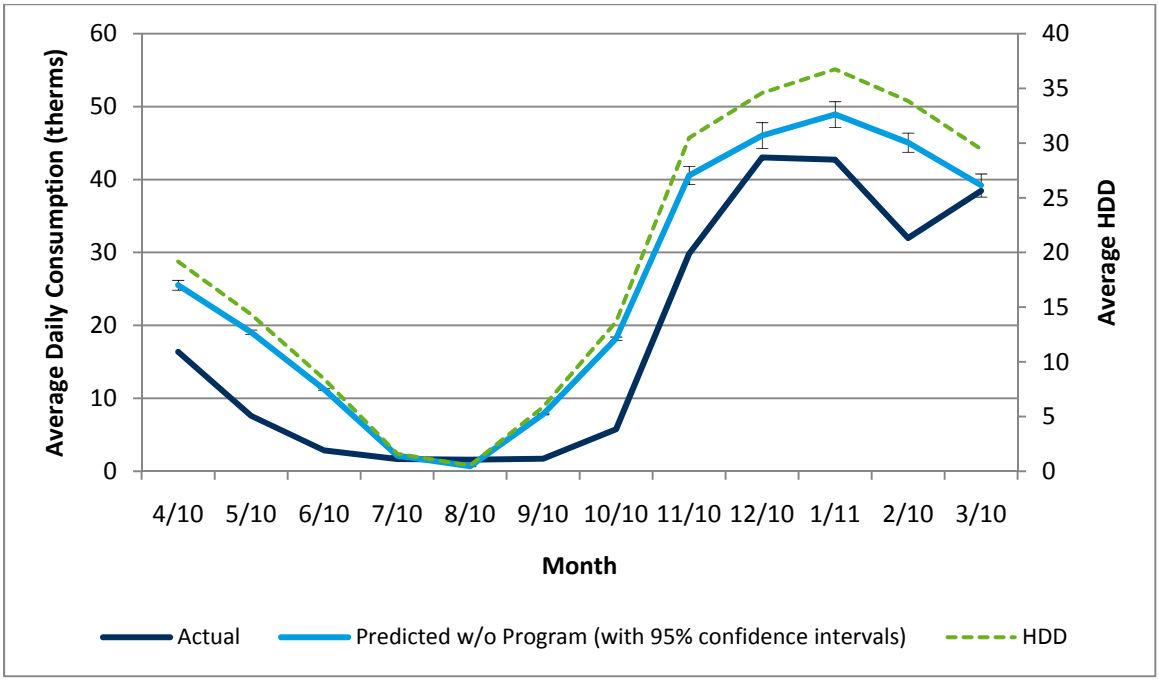
The estimated coefficients from the models support the hypothesis that consumption was decreased as a result of the retrofits. Table C3 shows the coefficients we estimated for each model and their respective fit indices.

Table C3. Site #19652963 Model Fit and Parameters

Model	n	R^2	Coefficients			
			Variable	Parameter	Standard Error	p-value
Pre	123	0.97	HDD	1.331	0.021	<.0001
Post	15	0.96	HDD	1.044	0.065	<.0001

These model coefficients indicate that there was a net decrease of 0.29 therms per HDD on average because of the program. Given that there were 6,821 HDD in the past 12 billing cycles, the model estimates that consumption would have been 9,081 therms; when in fact it was 6,636 therms. We therefore estimate gross savings for the past 12 billing periods at 2,445 therms. The relationship between the actual consumption, estimated consumption, and HDD can be seen in Figure C3.

Figure C3. Site #19652963 Reference vs. Actual Load for Past 12 Billing Cycles



Based on the results of our billing analysis, we conclude that the retrofits did result in savings, albeit lower than those originally claimed. Using TMY3 HDD, we estimate that this project will result in an average annual gross savings of 1,926 therms.

Table C4. Site #19652963 Normalized Annual Gross Savings

Consumption Type	Units	Pre-Retrofit Estimate	Post-Retrofit Estimate	Difference	Normalized Units/Day	Daily Savings	Annual Savings
Weather Sensitive	HDD	1.33	1.04	-0.29	18.4	5.3	1,926
Total						5.3	1,926

Case Study - Site # 1500385

Site #1500385 is a municipal wastewater plant in Sandpoint, Idaho. We installed two measures at this site before January 21, 2009.

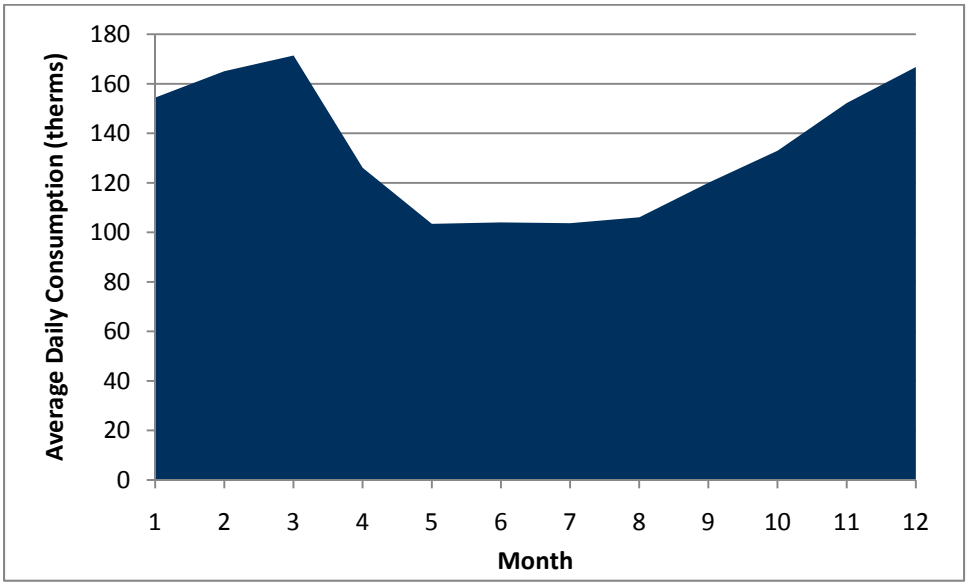
For application #23037, clean digester gas was set up to heat the facility. This involves replacing natural gas with methane gas to feed the main boiler. The boiler subsequently keeps the heat at 98°F for the digester. This project had an anticipated savings of 20,604 therms per year.

For application #23040, installers replaced the gravity thickener with a rotary screen. This reduces the quantity of water going to the digester, where it has to be removed. This project had an anticipated savings of 1,279 therms per year.

Site Review

The throughput for wastewater treatment is normally in the high two million gallons/day (MGD). In past four years, it has been closer to the low two MGD. In the spring, throughput can often climb to ten MGD for two to three weeks. This pattern appears to take place in March, as can be seen in Figure C4. The typical heating season is from October to the end of May, when the unit heaters are being used and consuming gas.

Figure C4. Site #1500385 Average Daily Consumption by Month



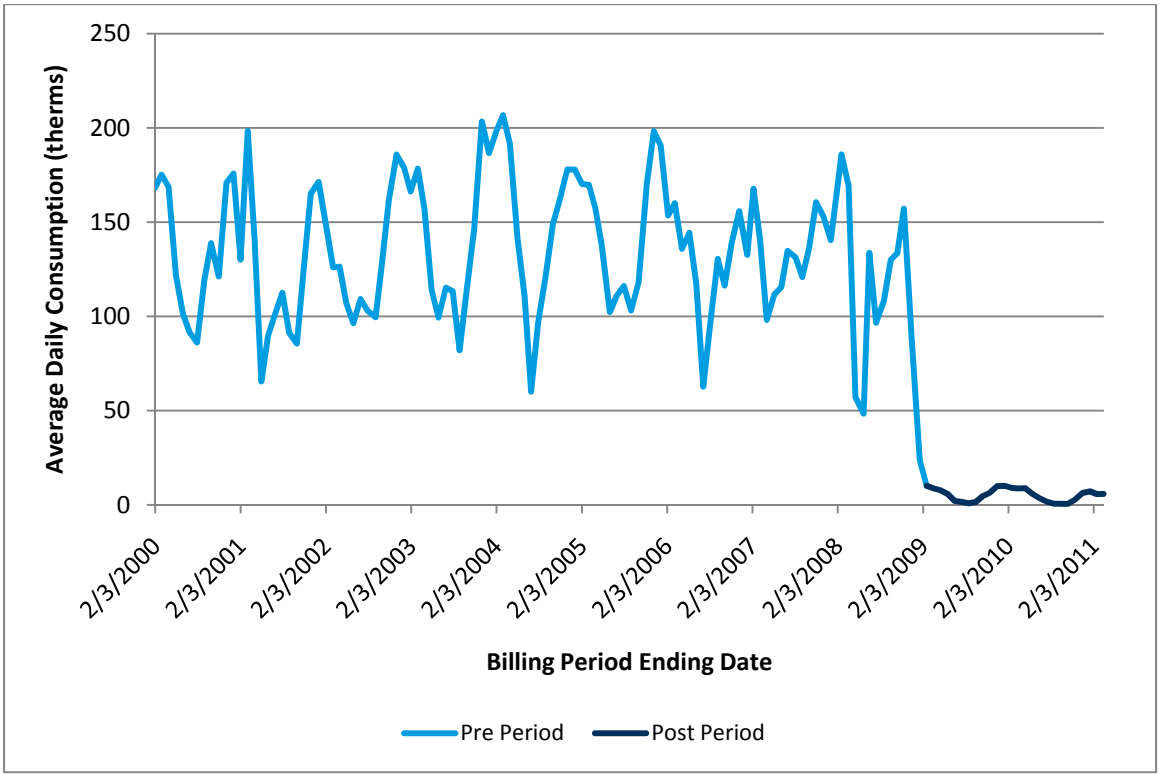
The application #23037 project provides a waste stream of gas to one of the boilers that provides heat for the digester. The digester must remain around 98°F all year to function properly. Because of the low pressure on the methane waste gas being used, only one of two boilers has been converted to use this gas. The second boiler is still on natural gas, and is now used as a backup.

The application #23040 project reduced the amount of water going to the digester. This reduced the amount of heat needed from the boiler to eliminate extra water in the digester. This project therefore reduced the demand for natural gas. The installation of the gravity thickener has improved process control. This project also included the installation of new primary pumps to the digester to improve the process control.

Other minor process improvements are ongoing, such as the installation of an electronic spark ignition at the flare to keep it going (as methane gas is not available).

This site has shown a very large drop in the use of natural gas since the projects were completed. Hourly meter data show a drop from an average of approximately 133 therms/day to 5 therms/day on average (see Figure C5).

Figure C5. Site #1500385 Average Daily Consumption for the Past 11 years



Billing Analysis

The nearest major weather station to Sandpoint is WBAN #24157, located at the Spokane airport. There were 6,808 HDD in the 12 billing cycles beginning March 17, 2010 and ending March 17, 2011. There are 6,712 TMY3 HDD for this weather station, implying that this past winter season was slightly colder than average.

Since wastewater treatment involves both weather-sensitive demand and a certain standing production demand, we used intercept models for the billing analysis of this site. We estimated two separate models for the pre and post periods. The pre period model was as follows:

$$therms_t = \beta_0 + \beta_1 HDD_t + \beta_2 March_t + e_t$$

Where:

$therms_t$ = average daily therms for billing period *'t'*

HDD_t = average HDD for billing period '*t*'

$March_t$ = a dummy variable that equals 1 if '*t*' is during the March peak period and equals 0 otherwise

The model for the post period was nearly identical, with the exception that we excluded the March dummy variable. We chose to exclude this variable for two reasons: 1) we should not expect a spike in consumption now that the boiler is being run on methane, and 2) the coefficient was not found to differ significantly from zero. The final post period model was as follows:

$$therms_t = \beta_0 + \beta_1 HDD_t + e_t$$

Where:

$therms_t$ = average daily therms for billing period *'t'*

HDD_t = average HDD for billing period '*t*'

Findings

The estimated coefficients from the models support the hypothesis that consumption decreased substantially as a result of the retrofits. Table C5 shows the estimated coefficients for each model and their respective fit indices.

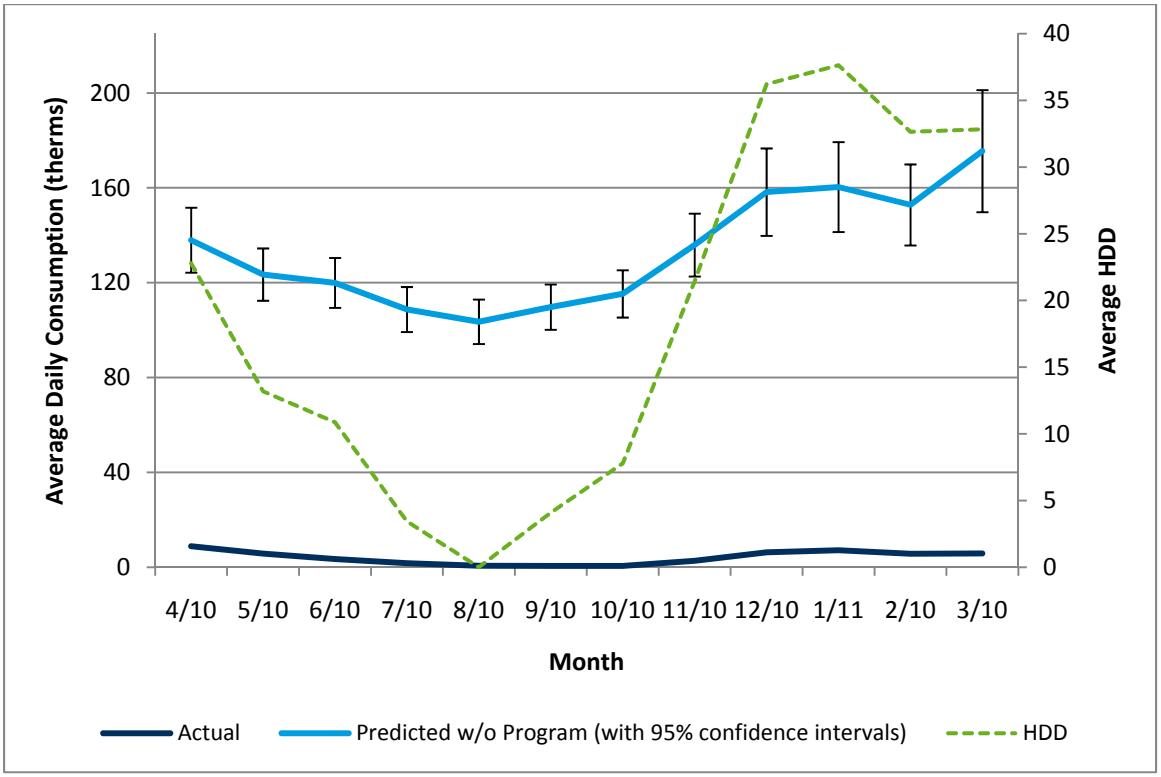
Table C5. Site #1500385 Model Fit and Parameters

Model	n	R^2	Coefficients			
			Variable	Parameter	Standard Error	p-value
Pre	108	0.39	Intercept	103.54	4.79	<.0001
			HDD	1.51	0.22	<.0001
			March Dummy	22.40	9.77	0.0239
Post	26	0.75	Intercept	1.10	0.59	0.07
			HDD	0.22	0.03	<.0001

These model coefficients indicate that there was a net decrease of 1.3 therms per HDD on average because of the program, as well as an average daily decrease to the standing load of 101.9 therms. In addition, the March spike in production does not appear to be significant, resulting in a 22.4 therms per day during the March billing period.

Given that there were 6,808 HDD in the past 12 billing cycles, the model estimates that weather sensitive consumption would have been 10,277 therms. There would have been a standing baseload of 37,792 therms and 672 therms for the March production spike. Actual total consumption over this period was 1,507 therms. We therefore estimate gross savings for the past 12 billing periods at 47,234 therms. The relationship between the actual consumption, estimated consumption, and HDD can be seen in Figure C6.

Figure C6. Site #1500385 Reference vs. Actual Load for Past 12 Billing Cycles



Given the results of our billing analysis, we conclude that the retrofits resulted in substantial savings. Using TMY3 HDD, we estimate that this project will result in an average annual gross savings of 46,769 therms.

Table C6. Site #1500385 Normalized Annual Gross Savings

Estimate	Units	Pre-Retrofit	Post-Retrofit	Difference	Normalized Units/Day	Daily Savings	Annual Savings
Standing Production	Day	103.5	1.1	-102.4	1.0	102.4	37,415
March Production Spike	Day	22.4	0.0	-22.4	1.0	1.8*	672
Weather Sensitive	HDD	1.5	0.2	-1.3	18.4	23.8	8,682
Total						128.0	46,769

*Since this savings only takes place during the month of March, we adjusted the annual average daily savings for this factor by the proportion of March billing period days in the total year: 30/365 = 0.082.

Case Study - Site # 17739130

Site #17739130 is a concrete pre-mix facility in Spokane, Washington. Two projects were completed for this site.

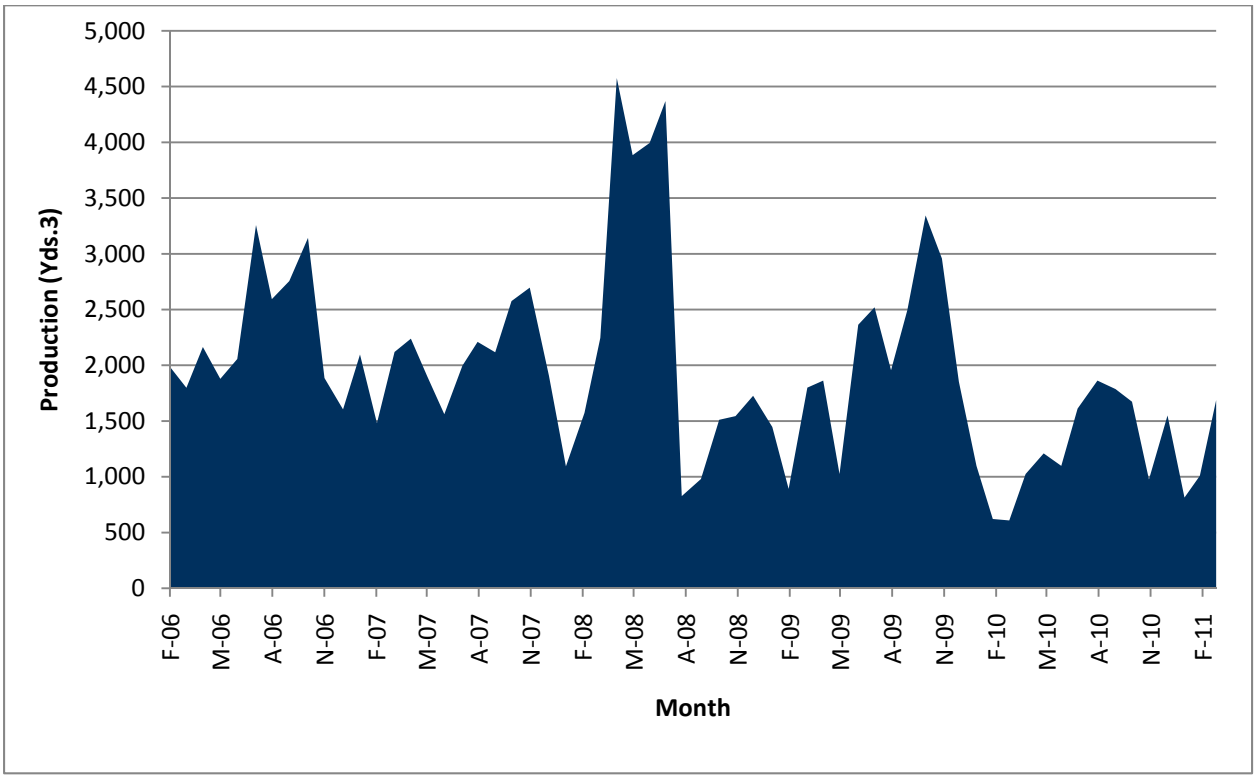
Application #27543 involved the replacement and insulation of outdoor steam lines used in curing beds. We completed a final inspection of measure installation for this project on June 18, 2009. The claimed savings for this project was 63,500 therms per year.

The second project, application #27545, was for the installation of condensing economizers for the site's two gas-fired boilers. We completed the final inspection of measure installation for this project on June 22, 2010. The claimed savings for this project was 11,500 therms per year.

Site Review

Concrete production at this site has only recently started to increase after a notable decline in concrete demand due to the 2007-08 recession. The variation in production has a large effect on the overall gas consumption. Figure C7 shows the variation in monthly production over the past five years.

Figure C7. Site #17739130 Concrete Production for the Past Five Years



We observed three main pipelines that feed the steam mains for the curing beds. The mains and beds are all located outside. Thermocouples are imbedded into the concrete to control the steam valves to maintain roughly 98ºF in the beds for approximately 12 to 24 hours, depending on the product being manufactured.

The pipelines are 6-inches in diameter with 1-1/2-inches of foam glass insulation and an aluminum jacket for lines that are outside. We measured the steam pressure at 12 to 14 psig. The steam line is only a few feet above ground, then goes into the ground at a depth of approximately 3 to 4-feet. After the new steam mains were installed, about 30 traps that were blowing through had to be replaced.

The entering city water temperature was 80ºF, as measured at the water meter located inside the boiler room. When examining the water line discharge from the stack heat exchanger, we observed discharge at 135ºF for one line and at 165 ºF for another line.

Figure C8 is based on monthly billing data. In addition to these billing data, we received hourly data for the past five months. These data (shown in Figure C9 for one week in December 2010 and in Figure C10 for one week in January 2011) reinforce the hypothesis that the majority of gas usage is associated with production. Consumption is much less on weekends, with a standing base load of only around 10 therms per hour.

Figure C8. Site #17739130 Average Daily Consumption for Past 11 Years

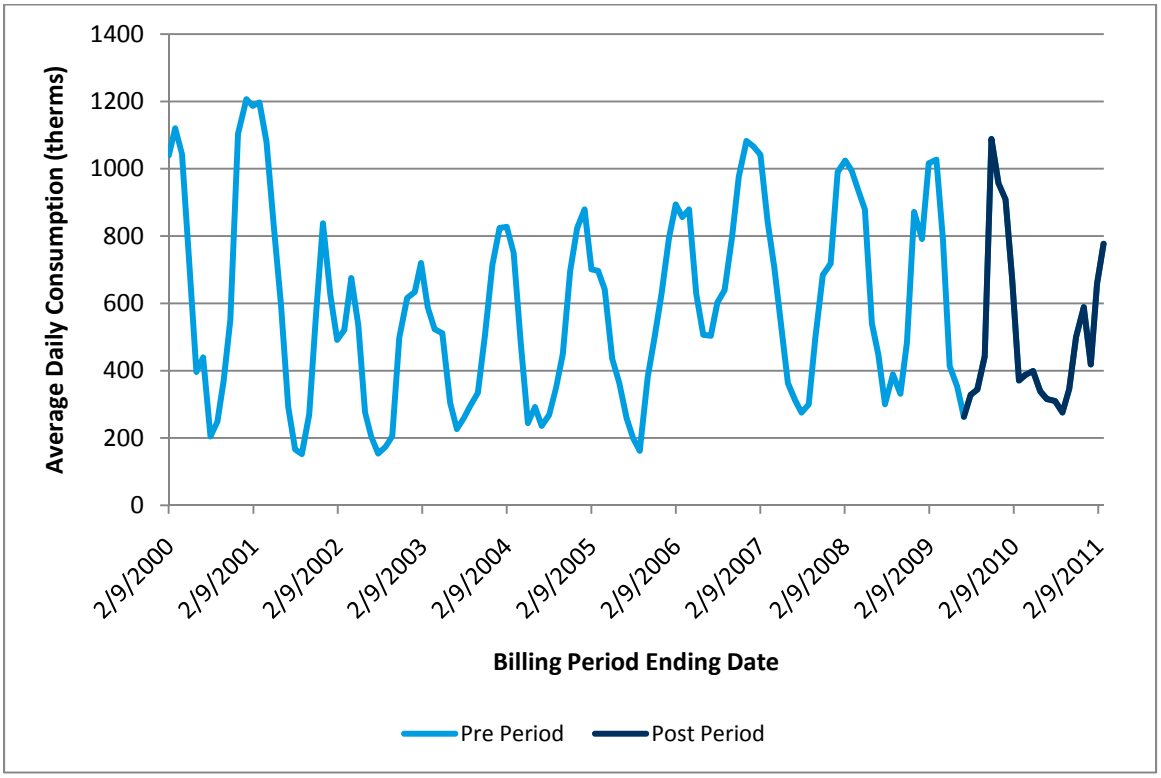


Figure C9. Site #17739130 Hourly Consumption (12/21/10 - 12/28/10)

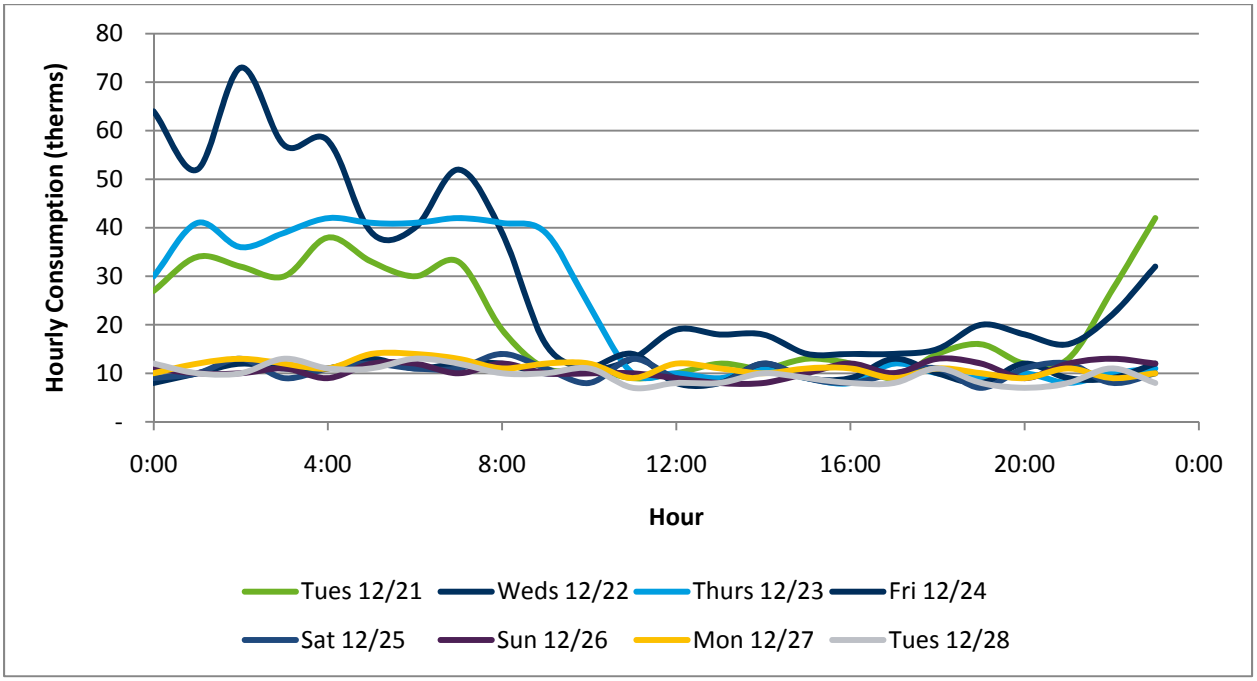
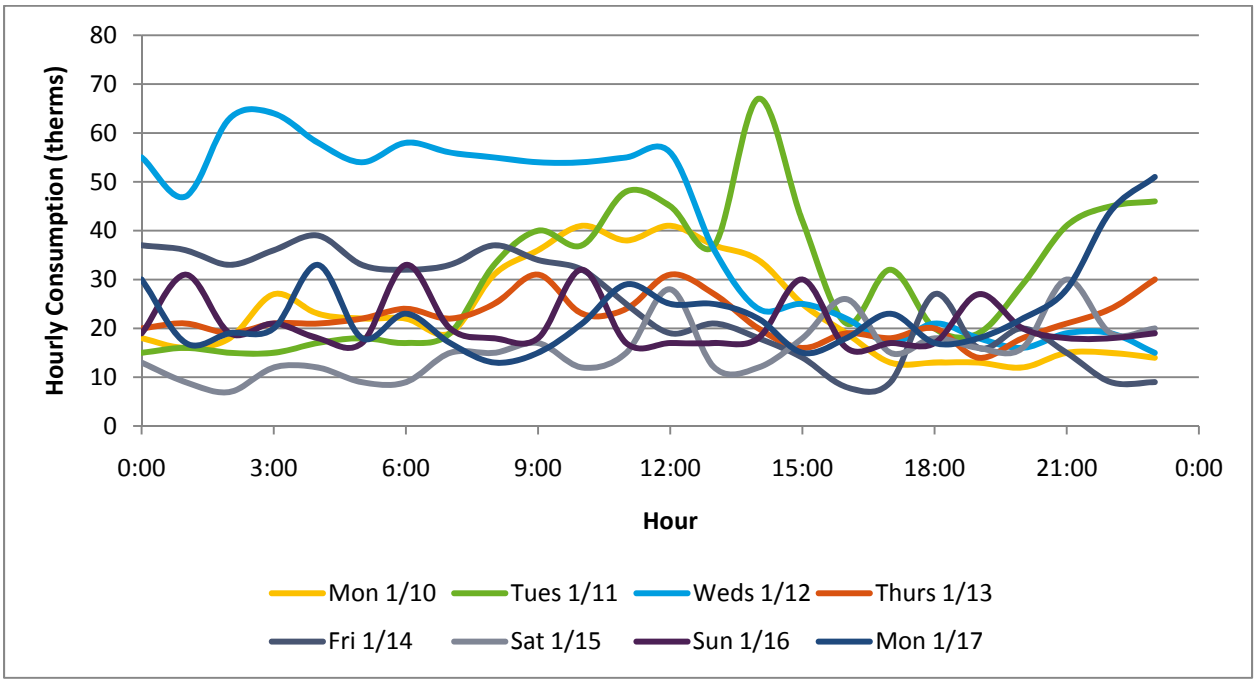


Figure C10. Site #17739130 Hourly Consumption (1/10/11 – 1/17/11)



Our independent calculation for the steam pipeline losses is noted below. We used the NAIMA 3E Plus 4.0 program to independently determine the amount of heat lost in the steam pipe to the beds. The NAIMA computer run showed bare pipe loss of 1,279 BTU/Hr/ft (with 1/2-inch of

insulation, 134 BtuH/ft for pipe, and a jacket). The NAIMA run gave the heat loss parameters shown in Table C7.

Table C7. Site #17739130 NAIMA 3EPlus Parameters

Input	
Parameter	Value
Average Temp (F)	47.6
Wind Speed (MpH)	9.75
Pipe	4"
Process Temp (F)	250
Outer Jacket	0.9 Aluminum Service
Hours	8,760
Given Load (BtuH)	860,000 (389 per ft.)

Given these values, we ran calculations using the linear feet of piping we measured during the site visits. Our initial calculations estimate a savings value within a range near the claimed savings of 63,500 therms.

Table C8. Site #17739130 Initial Engineering Estimates

Insulation	Heat Loss, (BTU/hr/ft)	Length of Steam Pipe Line (ft.)	Hours/yr	BthH/ft	BtuH Required	Saved BtuH	Saved Therms
Bare	389	2,212	8,760	860,000	7,533,600,000	-	-
0.5	134	1,060	8,760	141,934	1,243,341,840	6,290,258,160	62,903
1	75	1,060	8,760	79,903	699,948,528	6,833,651,472	68,337

Billing Analysis

We obtained Spokane weather data from WBAN #24157, located at the Spokane airport. There were 6,819 HDDs in the 12 billing cycles beginning March 3, 2010 and ending March 4, 2011. There are 6,712 TMY3 HDDs for this weather station, implying that this past winter season was slightly colder than average.

Due to the complexity of the relationship between weather and production for this site, along with the fact that measures were installed in two stages a year apart, we estimated one model for this site. By using a single model, we were able to include greater variation in production and model different aspects of each retrofit stage. We estimated the model as follows:

$$therms_t = \beta_0 + \beta_1 HDD_t + \beta_2 production_t + \beta_3 post1_t + \beta_4 post2HDD_t + e_t$$

Where:

$therms_t$ = average daily therms for billing period *'t'*

HDD_t = average HDDs for billing period '*t*'

$production_t$ = average daily production in cubic yards of concrete for billing period '*t*'

$post1_t$ = a dummy variable that equals 1 if 't' is after replacement and insulation of outdoor steam lines, and equals 0 otherwise

$post2HDD_t$ = a variable which equals HDD if 't' is after installation of condensing economizers and equals 0 otherwise

Findings

The estimated coefficients from the model supports the hypothesis that consumption decreased substantially as a result of the retrofits. Table C9 shows the estimated coefficients for the model and their respective fit indices.

Table C9. Site #17739130 Model Fit and Parameters

n	R^2	Coefficients			
		Variable	Estimate	Standard Error	p-value
62	0.78	Intercept	161.192	60.442	0.010
		HDD	17.801	1.354	<.0001
		Production	2.700	0.612	<.0001
		Dummy: Steam Pipes	-74.838	40.736	0.071
		Interaction: HDD Economizers	-5.763	2.195	0.011

These model coefficients indicate that there was a net decrease of 78.8 therms per day on average following the installation of the new steam pipes, insulation, and control valves. In addition, the installation of the condensing economizers resulted in a decrease of 5.8 therms per HDD on average. Table C10 shows the calculations for the counterfactual load for the past 12 billing cycles, broken out by each consumption type.

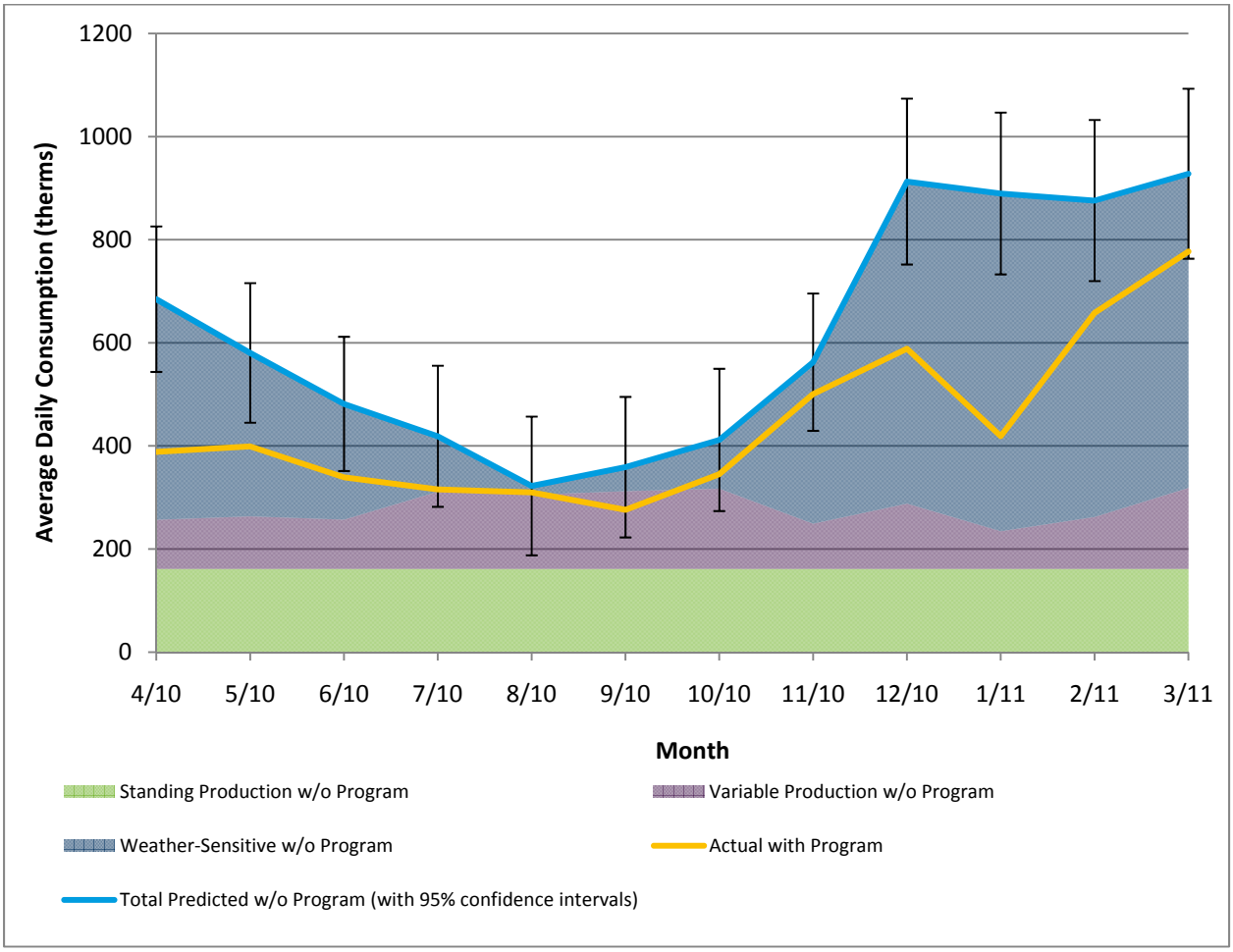
Table C10. Site #17739130 Predicted Load by Consumption Type for Past 12 Billing Cycles

Billing Period End Date	Days	Standing Load	Production	Variable Production Load	HDD	Weather Sensitive	Total Predicted Load
4/1/2010	29	4,675	1,026	2,770	697	12,407	19,852
5/3/2010	32	5,158	1,210	3,266	570	10,147	18,571
6/3/2010	31	4,997	1,099	2,967	391	6,960	14,924
7/2/2010	29	4,675	1,612	4,352	175	3,115	12,141
8/6/2010	35	5,642	1,864	5,032	34	605	11,279
9/7/2010	32	5,158	1,788	4,827	84	1,495	11,480
10/6/2010	29	4,675	1,674	4,519	154	2,741	11,935
11/5/2010	30	4,836	977	2,637	528	9,399	16,872
12/8/2010	33	5,319	1,551	4,187	1,158	20,613	30,120
1/7/2011	30	4,836	814	2,197	1,104	19,652	26,685
2/3/2011	27	4,352	1,009	2,724	931	16,573	23,649
3/4/2011	29	4,675	1,689	4,560	993	17,676	26,910
Total	366	58,998	16,313	44,038	6,819	121,383	224,418

As shown in Table C10, the model estimates that weather sensitive consumption would have been 121,383 therms. There would have been a standing production load of 58,998 therms. In

addition, this site produced 16,313 cubic yards in the past year, which was responsible for approximately 44,038 therms of consumption. This would lead to a total consumption of 224,418 therms. Actual total consumption over this period was 160,679 therms. We therefore estimate gross savings for the past 12 billing periods at 63,739 therms. The relationship between the actual consumption, estimated consumption, and HDD is shown in Figure C11.

Figure C11. Site #17739130 Reference vs. Actual Load for Past 12 Billing Cycles



In sum, given the results of our billing analysis, we conclude that the retrofits resulted in substantial savings. Using TMY3 HDDs, we estimate that this project will result in an average annual gross savings of 66,015 therms. This value comes from using TMY3 HDDs and the five-year average production of 23,708 cubic yards per year.

Table C11. Site #17739130 Normalized Annual Gross Savings

Estimate	Units	Pre-Retrofit	Post-Retrofit	Difference	Normalized Units/Day	Daily Savings	Normalized Units/Year	Annual Savings
Standing Production	Days	161.2	86.4	-74.8	1.0	74.8	365.25	27,334
Weather Sensitive	HDD	17.8	12.0	-5.8	18.4	105.9	6,712	38,681
Variable Production	Yds.3/ day	2.7	2.7	0.0	64.9	0.0	23,708	-
Total						180.7		66,015

Case Study - Site # 18524903

Site #18524903 is a linen supply company located in Lewiston, Idaho. The project (application #33831) involved installing steam traps in the facility. Installation was completed by May 2010. The claimed savings for this project were 39,706 therms/year.

Site Review

The facility is quite large (between 28,000 and 33,000 sq.ft.), with 102 employees working on site and 12 delivery drivers. Production has varied substantially over the last few years, though by what amount is unclear, as production data was only provided for 15 of the months that we have billing data for.

A 150 HP boiler at 90 to 125 psig was recently repaired after losing a couple of tubes. Condensate is returned to the boiler at roughly 190°F, and we measured exhaust from the boiler at between 345 and 365°F.

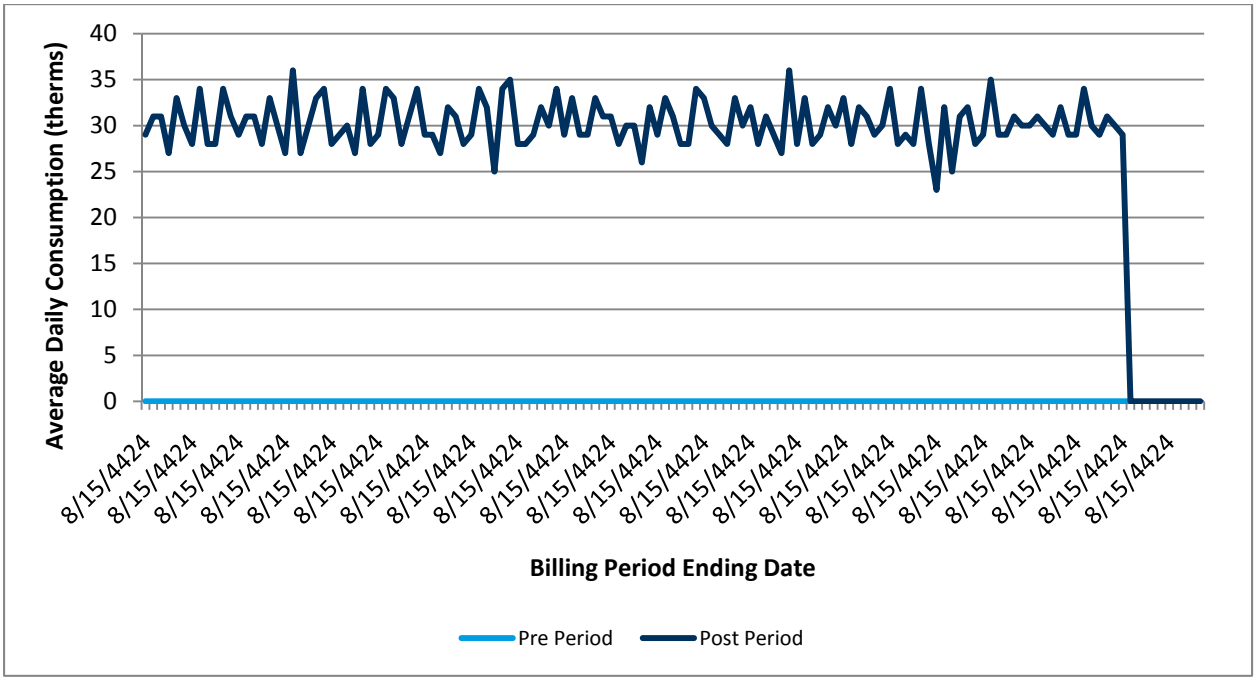
Insulation is falling off in many places throughout the plant. Staff we interviewed mentioned that they plan to reinsulate the building. They also plan to insulate the hot water storage tank. Hot water is maintained at 160°F. Both boiler and wash water are softened.

Steam is only used for production to heat water to 152°F when the gas fired water heater is down and to provide dry steam to production machines. The staff will now clean out the installed steam traps integral strainers on an annual basis. Some of the drip legs could benefit from being a bit longer. The plant turns the boiler on and purges the steam lines with low-pressure steam at 5:00 a.m., and is ready for production at 5:45 a.m. The steam lines are 2-inches in diameter, and most takeoffs are 1-1/4-inches from the machines.

The staff on site noted that the ironing machines have been easier to use since the installation of the steam traps. Much of that is related to a substantial decrease in the amount of moisture in many areas of the plant, and a decrease in water hammer. Pressures have also been reduced by the regulators.

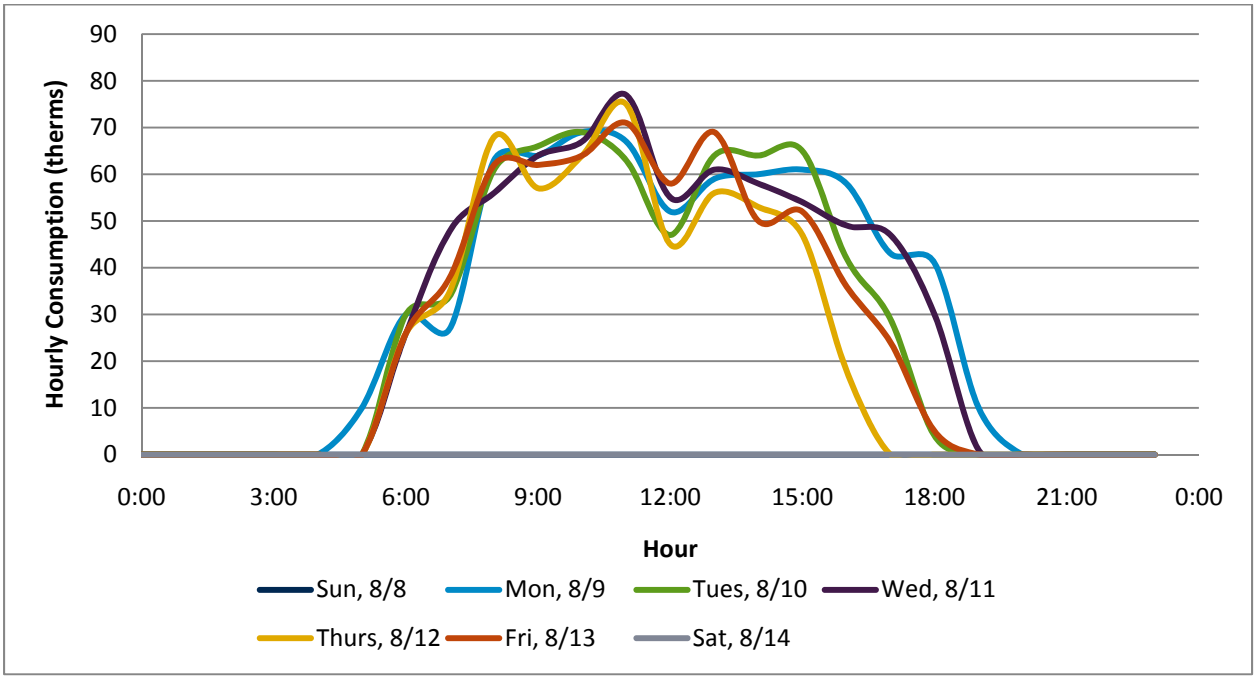
Production has been quite variable over the last few years. This is evident from the gas consumption at the site over the past 11 years (as shown in Figure C12). Per staff we interviewed on site, production is picking up. In 2007, the company was producing 5.0 million pounds in linen; in 2010 it produced 5.6 million pounds. Dry loads increased by 15 percent this year due to a hospital being added in January 2011.

Figure C12. Site #18524903 Average Daily Consumption for Past 11 Years



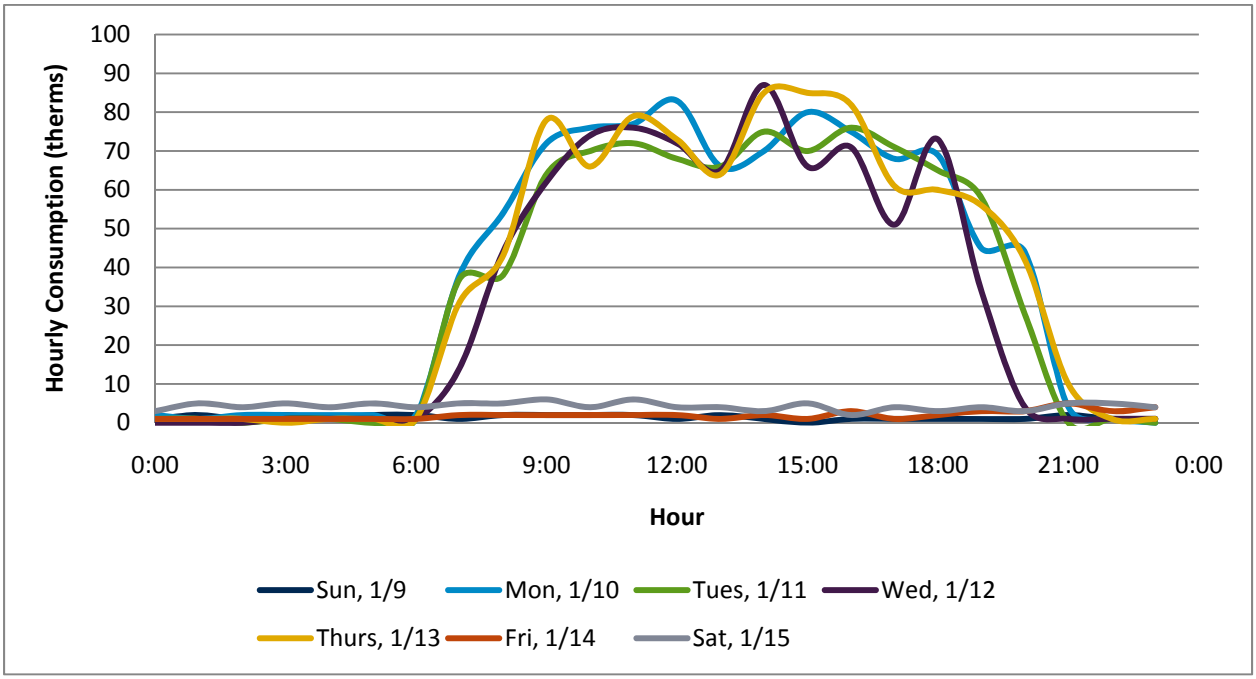
We were also provided with hourly consumption data from the past year. These data confirmed that little space or water heating takes place outside of production hours. Figure C13 and Figure C14 show this pattern for two sample weeks, one in the summer and one in the winter.

Figure C13. Site #18524903 Hourly Consumption (8/8/10 – 8/14/10)



Note that there appears to be a very low level of heating in the winter months. This most likely reflects water heating, as the consumption is not nearly large enough to be reflecting space heaters.

Figure C14. Site #18524903 Hourly Consumption (1/9/11 – 1/15/11)



Billing Analysis

We obtained Lewiston weather data from WBAN #24149, located at the Nez Perce County airport. There were 5,242 HDDs in the 12 billing cycle beginning March 3, 2010 and ending March 4, 2011. There are 5,515 TMY3 HDDs for this weather station, implying that this past winter season was slightly warmer than average.

Given that production data were only available for the previous 15 months (only five of which were pre-period), we were unable to model consumption as a function of both production and weather. However, as previously shown in Figure C12, changes in production clearly have a significant impact on consumption. As production is on the rise, failing to account for the related increase in consumption could create a significant negative bias in savings estimates. This is evident when modeling consumption merely as a function of the retrofit and HDDs, where the model estimates negative savings as a result of the program retrofits.

We attempted several strategies to mitigate this issue. We estimated models using a variety of instrumental variables to account for the unobserved production in the pre-period. We included explanatory variables for HDDs and treatment dummy variables in all the models. We also tested interactions between HDDs and treatment to determine if there is an interactive effect from heat spillage, but found that the effect did not differ significantly from zero in any of the model iterations we ran.

To account for production, we estimated the following models:

- As a function of individual dummy variables controlling for each year and month to account for both year-on-year business cycles and seasonal variations in production;
- As a function of statewide macroeconomic indicators;
- As a function of a polynomial time-trend; and
- Various hybrid models combining the explanatory variables outlined above.

In the end, we decided that the most appropriate model was one that used a simple polynomial time trend. We opted for this model for several reasons. First, this model makes no presuppositions about the drivers of production over time, which is important for determining the change in demand given previous trends. Second, this model was the most parsimonious and well fitting. That is, we achieved the desired significance and expected signs for model coefficients while optimizing both the total and adjusted r-squares.

Models that included a complex dummy structure approximated the time trend model, but lacked the parsimony and ease of interpreting the time trend models. We found macroeconomic models to have only weak signals; largely because most data were only available at the annual and statewide levels. Despite our preference for our final model, savings from comparable models did not differ dramatically from our final estimates. We estimated the model as follows:

$$therms_t = \beta_0 + \beta_1 HDD_t + \beta_2 time_t + \beta_3 time_t^2 + \beta_4 time_t^3 + \beta_5 post_t + e_t$$

Where:

$therms_t$	=	average daily therms for billing period *'t'*
HDD_t	=	average HDDs for billing period '*t'*
$time_t$	=	a variable which equals 1 in the first billing period of the sample and increases by 1 in each subsequent period
$post_t$	=	a dummy variable which equals 1 if '*t'* is after replacement and insulation of outdoor steam lines and equals 0 otherwise

Findings

The estimated coefficients from the model supports the hypothesis that consumption decreased substantially as a result of the retrofits. Table C12 shows the estimated coefficients for the model and its respective fit indices.

Table C12. Site #18524903 Model Fit and Parameters

n	R^2	Coefficients			
		Variable	Estimate	Standard Error	p-value
137	0.77	Intercept	537.31	12.607	<.0001
		HDD	2.18	0.259	<.0001
		Dummy: Steam Traps	-78.54	18.850	<.0001
		Time	-2.20	0.813	0.008
		Time2	-0.023	0.015	0.114
		Time3	0.0003	0.0001	<.0001

These model coefficients indicate that there was a net decrease of 78.5 therms per day on average following installation of the steam traps, holding the past consumption trends constant. Though this model controls for these trends, it is unclear under what conditions this trend analysis will remain stable in the future. For this reason, we present these daily savings as a best estimate, as more production data is necessary to better understand the interaction between production and heating consumption.

Table C13. Site #18524903 Annual Gross Savings

Daily Savings	Annual Savings
78.5	28,686