Exhibit K-1 Methodology of Avista Poverty Statistics

Methodology of Avista Poverty Count Calculation

Idealized Calculation

In an ideal world, conceptually the preferred calculation consists of multiplying a 2007 percent of dwellings in poverty by zip code by the number of Avista consumers in each zip code. An idealized equation follows:

$$\sum_{zip}\left({}^{2007}125PctPoverty_{zip} * {}^{2008}Consumers_{zip}\right)$$

In the above nomenclature, the subscript is the cross-section of the measure, in this case zip code. The superscript is the year of the data. The variable name is chosen to be as descriptive as possible.

Data Impacts the Idealized Calculation

In the real world, there are large amounts of 2000 census data by zip codes and a lack of data available for 2001-2007. The limited data that is available after 2007 is available by county, not zip code. This inconsistent mix of available of data significantly impacts the structure of any possible calculation attempting to make estimates for 2007. We prefer using partial data and reasonable assumptions to infer current data rather than applying out of date data to current consumer counts; however, we completed both calculations to show the reasonableness of the preferred approach.

Results of the Calculation

Table 1 shows the resulting total household poverty percentage estimates for Avista at 100 percent and 125 percent of poverty level by zip code as applied to gas only, combo and electric only customer counts provided by zip code by Avista. Alternate calculations are included using unmodified 2000 census data for the calculation. Different poverty levels are calculated later in this discussion.

Table 1 Estimated Avista Households at or Below Threshold Poverty Levels

Method	00 Census	WW 07	00 Census	WW 07	00 Census	WW 07	00 Census	WW 07
Threshold	Gas Only	Gas Only	Combo	Combo	Electric	Electric	Total	Total
100%	1,694	1,729	11,271	11,533	9,802	10,020	22,767	23,282
125%	2,273	2,324	14,972	15,324	12,980	13,267	30,225	30,915

Table 2 shows the resulting household poverty percentage estimates for Avista at 100 percent and 125 percent of poverty level by zip code as applied to gas only, combo and electric only customer counts provided by zip code by Avista. Alternate calculations are included using unmodified 2000 census data for the calculation. Different poverty levels are calculated later in this discussion.

Table 2	**Estimated Percent Avista Households at or Below Threshold Poverty Levels**							
Method	00 Census	WW 07	00 Census	WW 07	00 Census	WW 07	00 Census	WW 07
Threshold	Gas Only	Gas Only	Combo	Combo	Electric	Electric	Total	Total
100%	10.6%	10.8%	11.9%	12.1%	14.5%	14.8%	12.8%	13.0%
125%	14.2%	14.5%	15.7%	16.1%	19.2%	19.7%	16.9%	17.3%

Base of Calculation

Since the variable $^{2008}Consumers_{zip}$ is known by Avista, WeatherWise attempts to estimate $^{2007}125PctPoverty_{zip}$ using modifiers (ratios) from the 2000 census and 2007 American Community Survey data sets.
The starting point for the calculation is the $^{2000}100PctPovertyFamily_{zip}$. The data set used for the $^{2000}100PctPovertyFamily_{zip}$ is the Census 2000 Summary File 3 (SF 3) - Sample Data, Quick Tables (DP-3) "USC00SF3/DP3" extracted by 5 digit zip code for all the zip codes in each county in which Avista provides service in the state of Washington. The percent $^{2000}100PctPovertyFamily_{zip}$ is DP-3, Column 155 (POVERTY STATUS IN 1999 (below poverty level); Families; Percent below poverty level; Percent) which was confirmed to be calculated from DP-3, Column 154 (POVERTY STATUS IN 1999 (below poverty level); Families; Number) divided by DP3-Column 128 (Income in 1999; Families; Number). Table 3 is a list of $^{2000}100PctPovertyFamily_{zip}$ data. The data at this level is percentage of families in poverty. Since there is a factor adjustment for households at or below poverty, an adjustment will have to be made later.

Table 3
2000 County Ratio Percent Household to Percent Family Poverty

Zip	Ratio	Zip	Ratio	Zip	Ratio	Zip	Ratio
99344	0.994	99027	1.323	99223	1.705	99126	1.4
99371	1.352	99012	1.52	99023	1	99157	1.265
99341	0.961	99202	1.205	99018	0.762	99129	1.023
99169	1.596	99208	1.856	99020	1	99131	1.463
99402	1.005	99212	1.135	99019	1.76	99167	1.707
99403	1.159	99216	1.369	99021	1.301	99013	1.146
99138	1.403	99204	1.085	99022	1.515	99040	1.089
99146	1	99009	1.544	99016	1.368	99179	1.1
99160	0.891	99006	1.359	99203	1.81	99176	1.175
99326	1.031	99217	1.276	99026	1.409	99130	1.304
99335	1.096	99218	1.612	99025	1.507	99033	1.017
98857	1.04	99001	1.102	99201	1.455	99102	1.298
98620	1.134	99005	0.949	99101	1.363	99111	1.58
99103	1.088	99207	1.123	99141	1.354	99113	1.064
99008	1.792	99004	2.089	99034	1.448	99125	1.18
99029	1.545	99003	1.099	99148	1.211	99128	0.919
99032	1.249	99224	1.374	99110	1.27	99171	1.15
99185	1.158	99205	1.219	99137	0.992	99143	1.309
99117	1.395	99030	0.988	99109	1.476	99149	0.945
99122	1.737	99031	1.089	99114	1.456	99170	1.087
99134	2.757	99206	1.523	99173	1.146	99158	0.916
99159	1.084	99036	1.119	99151	1.056	99163	2.508
98648	1.313	99037	1.802	99181	1.103	99161	1.375

Converting Base to 2007

To convert the $^{2000}100PctPovertyFamily_{zip}$ to $^{2007estimate}100PctPovertyFamily_{zip}$ WeatherWise used county poverty ratios derived from the 2007 American Community Survey "ACS07" and USC00SF3/DP3. The data sets used from ACS07 and USC00SF3/DP3 were extracted by County in Washington. The $^{2007estimate}100PctPovertyFamily_{county}$ data is calculated by dividing ACS07 Table C17010 Column 2 (Universe: FAMILIES: Income in the past 12 months below poverty level (Estimate)) by ACS07 Table B11001 Column 2 (Universe: HOUSEHOLDS: Family households (Estimate)). The $^{2007estimate}100PctPovertyFamily_{county}$ data is DP-3, Column 155 (POVERTY STATUS IN 1999 (below poverty level); Families; Percent below poverty level; Percent), which should be noted is the same as the previous data, but aggregated by county rather than 5 digit zip code. The data at this level is families at or below poverty by county.

$$^{2007\text{estimate}}100\text{PctPovertyFamily}_{zip} = {}^{2000}100\text{PctPovertyFamily}_{zip} * \frac{^{2007}100\text{PctPovertyFamily}_{county}}{^{2000}100\text{PctPovertyFamily}_{county}}$$

Table 4 shows the values of $^{2000}100\text{PctPoverty}_{county}$ for all counties with data. Table 5 shows values of $^{2007}100\text{PctPoverty}_{county}$ for all counties with data. For counties missing data, the average of the surveyed counties was used (1.021). There are three major assumptions in this approach. The first assumption is that every zip code can be ratioed up by the same amount to reach current poverty levels. The assumption is not bad on the whole, but individual zip code and county estimates may be off somewhat. The second assumption is that an average poverty level can be substituted for missing data. The third assumption is that county ratios used are percent persons at or below poverty. This is justifiable as the conversion from persons to households is likely stable from 2000 to 2007.

Table 4 County Percent Family Poverty 2000

COUNTY	County Estimate
ADAMS	13.6
ASOTIN	11.6
FERRY	13.3
FRANKLIN	15.5
GRANT	13.1
KLICKITAT	12.6
LINCOLN	8.4
SKAMANIA	10
SPOKANE	8.3
STEVENS	11.5
WHITMAN	11

Table 5 County Percent Family Poverty 2007

County	County Estimate
Franklin County	0.123
Grant County	0.127
Spokane County	0.085

It should be noted that Table 5 has only three entries. Missing entries were replaced with the average of the nineteen surveyed counties. This approach is likely reasonable since the bulk of Avista's consumers are within the three counties, and therefore the other counties have little weight in the results. This assumption was tested by replacing the missing percentages with the percentages of individual poverty. Very similar answers were produced by the replacement. This will be discussed later in this document.

Converting Base from families to households

To convert the $^{2007estimate}100PctPoverty_{zip}$ to $^{2007estimate}100PctPovertyHH_{zip}$ WeatherWise used county household to family ratios from Census 2000 Summary File 3 (SF 3) - Sample Data, Quick Tables (QT-P35) "USC00SF3/QTP35" extracted by 5 digit zip code for all the zip codes in each county in which Avista provides service in Washington.

$$^{2007estimate}100PctPovertyHH_{zip} = {}^{2007estimate}100PctPoverty_{zip} * \frac{{}^{2000}100PctPovertyHH_{zip} / {}^{2000}TotalHH_{zip}}{{}^{2000}100PctPovertyFamily_{zip}}$$

Table 6 shows the values of household data. Table 7 shows the household to family ratios by zip code. There are three major assumptions in this approach. The first assumption is that the 2000 conversion ratio holds for 2007. The second is that the average value can be substituted for missing data. The third assumption is that county wide data can be widely applied.

Table 6 County Percent Household Poverty 2000

Zip	HHRatioZip	Zip	HHRatioZip	Zip	HHRatioZip
98620	0.185	99102	0.116	99170	0.126
98648	0.175	99103	0.159	99171	0.09
98857	0.157	99109	0.158	99173	0.259
99001	0.214	99110	0.189	99176	0.193
99003	0.078	99111	0.085	99179	0.03
99004	0.244	99113	0.044	99181	0.197
99005	0.041	99114	0.134	99185	0.127
99006	0.111	99117	0.177	99201	0.339
99008	0.057	99122	0.115	99202	0.237
99009	0.102	99125	0.12	99203	0.062
99012	0.161	99126	0.147	99204	0.246
99013	0.275	99128	0.127	99205	0.11
99016	0.068	99129	0.232	99206	0.101
99018	0.068	99130	0.111	99207	0.199
99019	0.03	99131	0.22	99208	0.078
99020	0	99134	0.176	99212	0.103
99021	0.06	99137	0.369	99216	0.092
99022	0.085	99138	0.216	99217	0.111
99023	0	99141	0.153	99218	0.077
99025	0.047	99143	0.097	99223	0.072
99026	0.051	99146	0	99224	0.1
99027	0.077	99148	0.102	99326	0.141
99029	0.077	99149	0.176	99335	0.109
99030	0.084	99151	0.278	99341	0.088
99031	0.056	99157	0.212	99344	0.154
99032	0.115	99158	0.077	99371	0.138
99033	0.144	99159	0.111	99402	0.151
99034	0.188	99160	0.157	99403	0.131
99036	0.036	99161	0.092		
99037	0.05	99163	0.349		
99040	0.293	99167	0.179		
99101	0.158	99169	0.129		

Table 7 2000 County Ratio of Percent Household Poverty 2000 To Percent Family Poverty

Zip	Ratio	Zip	Ratio	Zip	Ratio	Zip	Ratio
99344	0.994	99027	1.323	99223	1.705	99126	1.4
99371	1.352	99012	1.52	99023	1	99157	1.265
99341	0.961	99202	1.205	99018	0.762	99129	1.023
99169	1.596	99208	1.856	99020	1	99131	1.463
99402	1.005	99212	1.135	99019	1.76	99167	1.707
99403	1.159	99216	1.369	99021	1.301	99013	1.146
99138	1.403	99204	1.085	99022	1.515	99040	1.089
99146	1	99009	1.544	99016	1.368	99179	1.1
99160	0.891	99006	1.359	99203	1.81	99176	1.175
99326	1.031	99217	1.276	99026	1.409	99130	1.304
99335	1.096	99218	1.612	99025	1.507	99033	1.017
98857	1.04	99001	1.102	99201	1.455	99102	1.298
98620	1.134	99005	0.949	99101	1.363	99111	1.58
99103	1.088	99207	1.123	99141	1.354	99113	1.064
99008	1.792	99004	2.089	99034	1.448	99125	1.18
99029	1.545	99003	1.099	99148	1.211	99128	0.919
99032	1.249	99224	1.374	99110	1.27	99171	1.15
99185	1.158	99205	1.219	99137	0.992	99143	1.309
99117	1.395	99030	0.988	99109	1.476	99149	0.945
99122	1.737	99031	1.089	99114	1.456	99170	1.087
99134	2.757	99206	1.523	99173	1.146	99158	0.916
99159	1.084	99036	1.119	99151	1.056	99163	2.508
98648	1.313	99037	1.802	99181	1.103	99161	1.375

Converting Base from 100 percent of poverty to 125% or other levels

To convert the $^{2007estimate}100PctPovertyHH_{zip}$ to $^{2007estimate}125PctPovertyHH_{zip}$ WeatherWise used county data from the 2000 Census. The calculation follows:

$$^{2007estimate}125PctPovertyHH_{zip} = {}^{2007estimate}100PctPovertyHH_{zip} * \frac{^{2000}125PctPovertyFamily_{county}}{^{2000}100PctPovertyFamily_{county}}$$

There are numerous assumptions here, including county to zip, missing zips replaced by averages and use of 2000 data. Overall, WeatherWise feels the use of this data is warranted due to the low result weighting these missing counties have.

Data exists for numerous points other than 125 percent. Conversion factors were calculated at the numerous existing data points. A constrained cubic spline was fit through the points to produce fine conversion tables. Cubic splines were used rather than interpolation because cubic splines are designed to pass through all the data points. The advantage of this is that it eliminates fitting error at the 100 percent and 125 percent numbers and all other points where actual data exists. The cubic spline methodology implemented was documented by CJC Kruger (Kruger, 2003). Cubic spline ratio calculations are contained in the ending pages of this document.

Final Calculation

In an ideal world, conceptually the calculation that WeatherWise would prefer to run consists of multiplying a 2007 percent of dwellings at or below poverty by zip code by the number of Avista consumers in each zip code. The practical calculation equation follows:

$$\sum_{zip}\left(^{2007estimate}XXXPctPovertyHH_{zip} * {}^{2008}Consumers_{zip}\right)$$

The results of the estimate for various levels of XXX are contained in Table 8 and the equivalent percentages are contained in Table 9. Along with the calculation discussed is a calculation of:

$$\sum_{zip}\left(^{2000}125PctPoverty_{zip} * {}^{2008}Consumers_{zip}\right)$$

In the above calculation, the data was taken completely from the 2000 census, and no assumption adjustments were made.

Table 8	**Estimated Avista Households at or Below Threshold Poverty Levels**							
Method	00 Census	WW 07	00 Census	WW 07	00 Census	WW 07	00 Census	WW 07
Threshold	Gas Only	Gas Only	Combo	Combo	Electric	Electric	Total	Total
50%	699	713	4,828	4,938	4,246	4,339	9,773	9,990
55%	799	815	5,451	5,577	4,785	4,893	11,035	11,285
60%	894	910	6,078	6,218	5,330	5,444	12,302	12,572
65%	992	1,013	6,707	6,861	5,863	5,999	13,562	13,873
70%	1,087	1,108	7,332	7,503	6,412	6,552	14,831	15,163
75%	1,186	1,210	7,973	8,154	6,961	7,117	16,120	16,481
80%	1,283	1,309	8,615	8,811	7,516	7,683	17,414	17,803
85%	1,383	1,414	9,264	9,477	8,079	8,257	18,726	19,148
90%	1,485	1,515	9,923	10,153	8,642	8,833	20,050	20,501
95%	1,589	1,622	10,591	10,841	9,215	9,426	21,395	21,889
100%	1,694	1,729	11,271	11,533	9,802	10,020	22,767	23,282
105%	1,798	1,841	11,969	12,246	10,400	10,633	24,167	24,720
110%	1,913	1,956	12,686	12,983	11,014	11,261	25,613	26,200
115%	2,031	2,076	13,420	13,738	11,649	11,916	27,100	27,730
120%	2,149	2,191	14,189	14,521	12,303	12,572	28,641	29,284
125%	2,273	2,324	14,972	15,324	12,980	13,267	30,225	30,915
130%	2,409	2,460	15,844	16,209	13,731	14,045	31,984	32,714
135%	2,545	2,597	16,699	17,089	14,472	14,797	33,716	34,483
140%	2,683	2,741	17,552	17,960	15,207	15,548	35,442	36,249
145%	2,813	2,873	18,397	18,828	15,931	16,286	37,141	37,987
150%	2,951	3,009	19,232	19,679	16,649	17,024	38,832	39,712
155%	3,078	3,142	20,048	20,513	17,353	17,739	40,479	41,394
160%	3,198	3,270	20,848	21,326	18,037	18,444	42,083	43,040
165%	3,329	3,399	21,644	22,144	18,721	19,142	43,694	44,685
170%	3,455	3,529	22,453	22,976	19,425	19,862	45,333	46,367
175%	3,584	3,662	23,288	23,829	20,149	20,596	47,021	48,087
180%	3,730	3,807	24,195	24,749	20,941	21,414	48,866	49,970
185%	3,873	3,953	25,087	25,670	21,718	22,209	50,678	51,832
190%	3,996	4,087	25,909	26,511	22,399	22,896	52,304	53,494
195%	4,125	4,211	26,700	27,321	23,033	23,552	53,858	55,084
200%	4,243	4,337	27,475	28,118	23,659	24,188	55,377	56,643

Table 9	Estimated Percent Avista Households at or Below Threshold Poverty Levels							
Method	00 Census	WW 07	00 Census	WW 07	00 Census	WW 07	00 Census	WW 07
Threshold	Gas Only	Gas Only	Combo	Combo	Electric	Electric	Total	Total
50%	4.4%	4.5%	5.1%	5.2%	6.3%	6.4%	5.5%	5.6%
55%	5.0%	5.1%	5.7%	5.9%	7.1%	7.2%	6.2%	6.3%
60%	5.6%	5.7%	6.4%	6.5%	7.9%	8.1%	6.9%	7.0%
65%	6.2%	6.3%	7.1%	7.2%	8.7%	8.9%	7.6%	7.8%
70%	6.8%	6.9%	7.7%	7.9%	9.5%	9.7%	8.3%	8.5%
75%	7.4%	7.6%	8.4%	8.6%	10.3%	10.5%	9.0%	9.2%
80%	8.0%	8.2%	9.1%	9.3%	11.1%	11.4%	9.8%	10.0%
85%	8.7%	8.8%	9.7%	10.0%	12.0%	12.2%	10.5%	10.7%
90%	9.3%	9.5%	10.4%	10.7%	12.8%	13.1%	11.2%	11.5%
95%	9.9%	10.1%	11.1%	11.4%	13.6%	14.0%	12.0%	12.3%
100%	10.6%	10.8%	11.9%	12.1%	14.5%	14.8%	12.8%	13.0%
105%	11.2%	11.5%	12.6%	12.9%	15.4%	15.8%	13.5%	13.8%
110%	12.0%	12.2%	13.3%	13.7%	16.3%	16.7%	14.3%	14.7%
115%	12.7%	13.0%	14.1%	14.5%	17.3%	17.7%	15.2%	15.5%
120%	13.4%	13.7%	14.9%	15.3%	18.2%	18.6%	16.0%	16.4%
125%	14.2%	14.5%	15.7%	16.1%	19.2%	19.7%	16.9%	17.3%
130%	15.1%	15.4%	16.7%	17.1%	20.3%	20.8%	17.9%	18.3%
135%	15.9%	16.2%	17.6%	18.0%	21.4%	21.9%	18.9%	19.3%
140%	16.8%	17.1%	18.5%	18.9%	22.5%	23.0%	19.8%	20.3%
145%	17.6%	18.0%	19.4%	19.8%	23.6%	24.1%	20.8%	21.3%
150%	18.5%	18.8%	20.2%	20.7%	24.7%	25.2%	21.7%	22.2%
155%	19.3%	19.7%	21.1%	21.6%	25.7%	26.3%	22.7%	23.2%
160%	20.0%	20.5%	21.9%	22.4%	26.7%	27.3%	23.6%	24.1%
165%	20.8%	21.3%	22.8%	23.3%	27.7%	28.4%	24.5%	25.0%
170%	21.6%	22.1%	23.6%	24.2%	28.8%	29.4%	25.4%	26.0%
175%	22.4%	22.9%	24.5%	25.1%	29.8%	30.5%	26.3%	26.9%
180%	23.3%	23.8%	25.5%	26.0%	31.0%	31.7%	27.4%	28.0%
185%	24.2%	24.7%	26.4%	27.0%	32.2%	32.9%	28.4%	29.0%
190%	25.0%	25.6%	27.3%	27.9%	33.2%	33.9%	29.3%	30.0%
195%	25.8%	26.3%	28.1%	28.7%	34.1%	34.9%	30.2%	30.8%
200%	26.5%	27.1%	28.9%	29.6%	35.0%	35.8%	31.0%	31.7%

The following figures, Figure 1 through Figure 4, are values from Tables 8 and 9 plotted.

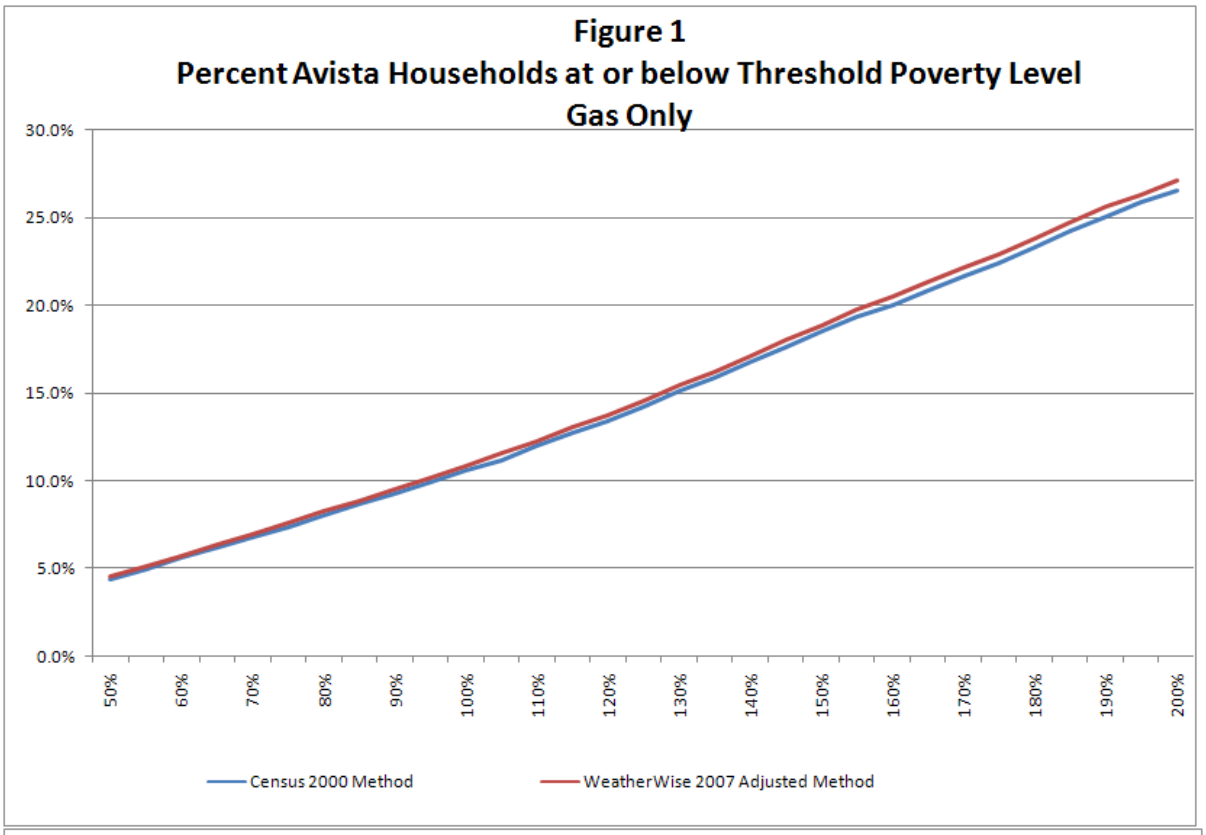


Figure 1
Percent Avista Households at or below Threshold Poverty Level
Gas Only
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
50%
60%
70%
80%
90%
100%
110%
120%
130%
140%
150%
160%
170%
180%
190%
200%
Census 2000 Method
WeatherWise 2007 Adjusted Method

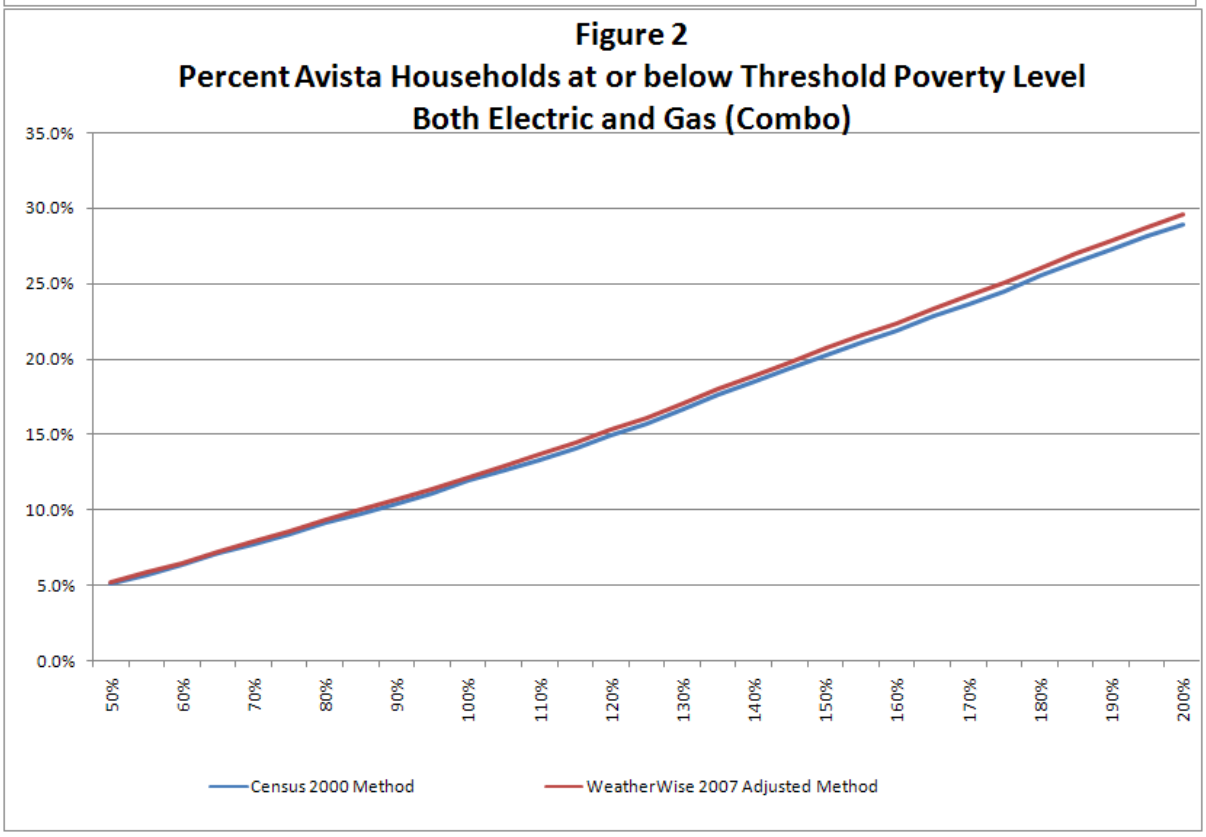


Figure 2
Percent Avista Households at or below Threshold Poverty Level
Both Electric and Gas (Combo)
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
50%
60%
70%
80%
90%
100%
110%
120%
130%
140%
150%
160%
170%
180%
190%
200%
Census 2000 Method
WeatherWise 2007 Adjusted Method

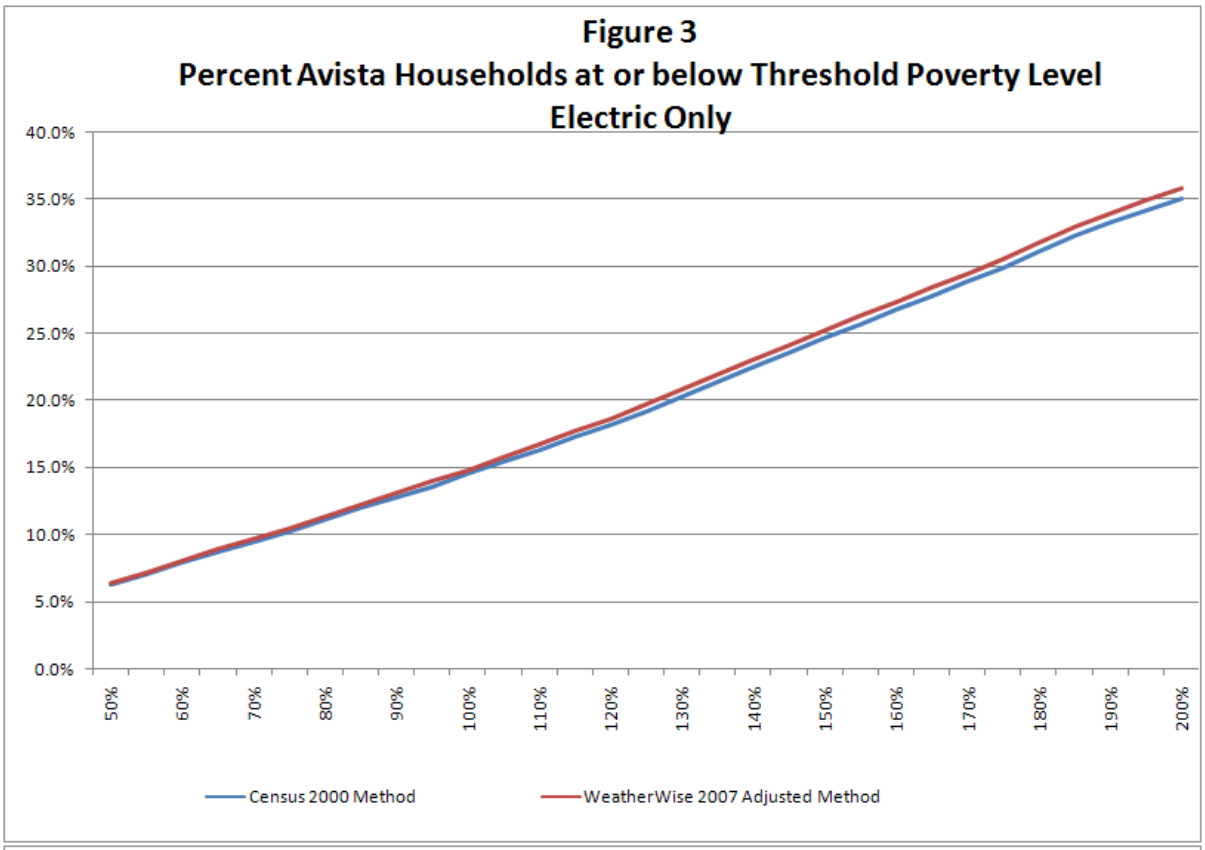


Figure 3
Percent Avista Households at or below Threshold Poverty Level
Electric Only
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
50%
60%
70%
80%
90%
100%
110%
120%
130%
140%
150%
160%
170%
180%
190%
200%
Census 2000 Method
WeatherWise 2007 Adjusted Method

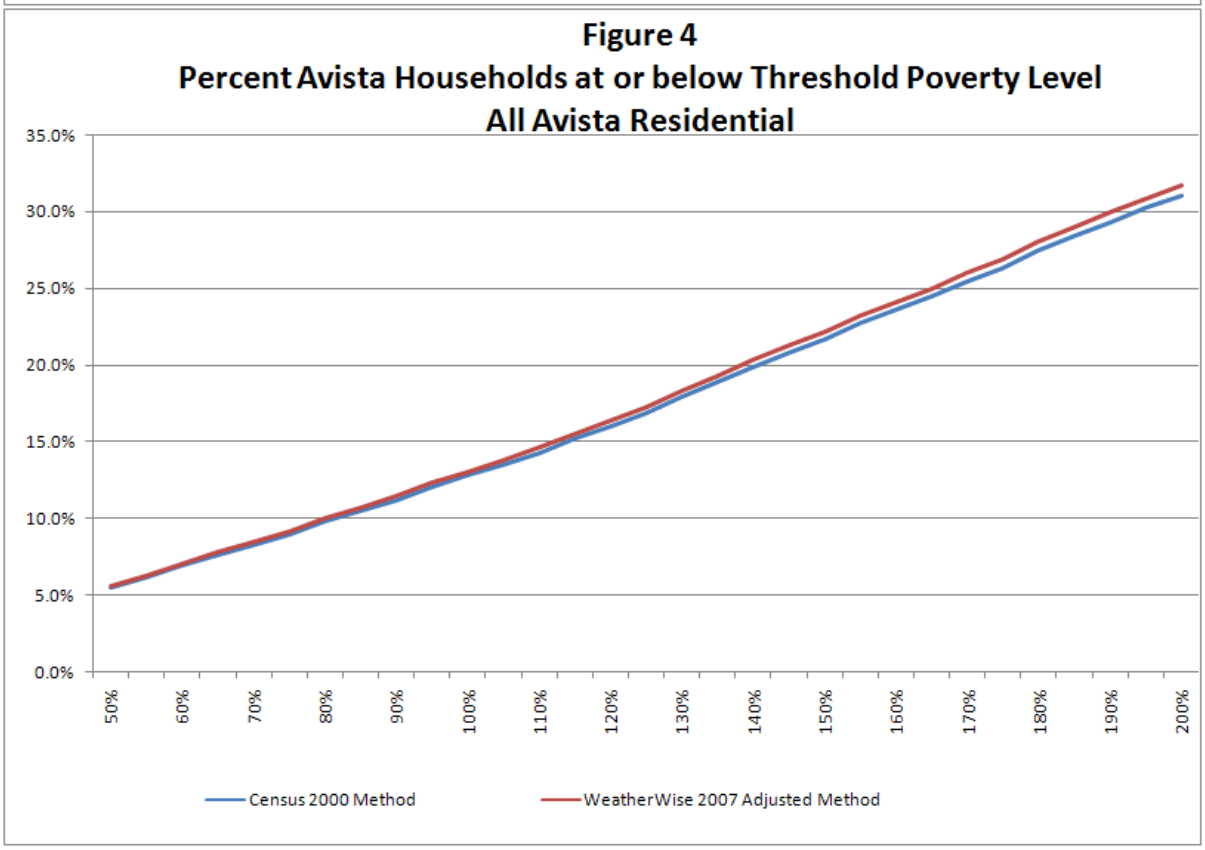


Figure 4
Percent Avista Households at or below Threshold Poverty Level
All Avista Residential
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
50%
60%
70%
80%
90%
100%
110%
120%
130%
140%
150%
160%
170%
180%
190%
200%
Census 2000 Method
WeatherWise 2007 Adjusted Method

Notes

Due to the fact that zip codes are continually being adjusted, created and retired by the US postal service some inaccuracies have been introduced from the use of the zip codes as the lowest stratification. By the time the data is summed to a county level, the vast majority of this error is removed since the zip code adjustments will be primarily confined within a county. Since the 2000 Census was based on zip codes in existence around mid-year 2001, some mismatches due to creation and retirement of zip codes was expected. When 2008 Zip codes were provided by Avista that did not tie into the census data, the "missing" zip codes were mapped to a nearby zip code that existed in 2001. A table of the remapped zip codes and the affected number of Avista customers can be found in Table 10.

Table 10

Avista zip code	Remapped zip code	Customer count
99014	99012	123
99039	99037	63
99104	99101	7
99107	99109	8
99127	99126	9
99164	99163	27
99174	99173	86
99211	99212	1
99214	99216	1

2000 based calculation notes

We also generated a calculation using just the 2000 census data as a comparison to our 2007 based estimate. We simply multiplied the Avista customer count by the 2000 Household poverty ratio:

$$^{2000}100PctPovertyHH_{zip} / {}^{2000}TotalHH_{zip}$$

This calculation provides a lower bound estimate of poverty. It is based on the assumption that poverty has not changed at all since the 2000 census.

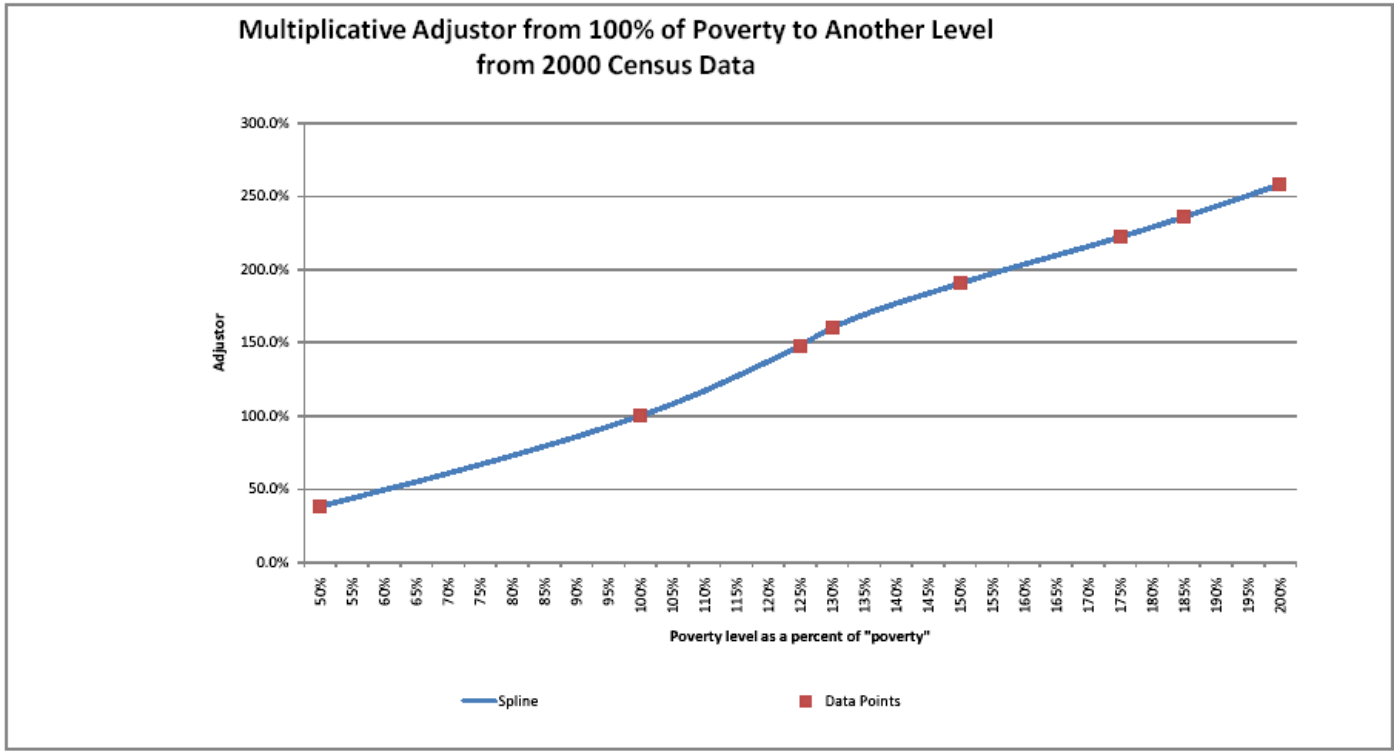
2005 substitution for missing 2007 data

As an alternate calculation, we used the Census Bureau's Small Area Income and Poverty Estimates (SAIPE) data set that contained county level data estimates for individual poverty for all counties in Avista's service territory. The ratio of number of individuals in poverty in 2005 to the total number of individuals in poverty in 2000 was calculated and used in place of the ACS 2007 county average for those counties without ACS 2007 data. The result of this calculation was so close to the current calculation that it is not included here.

Cubic Spline Calculation Details Follow Next Page

53001 Adams County, Washington **16217 Population**

Zip Code	PctThresh	Spline	DataPoints
53001	50%	38.2%	38.2%
53001	55%	43.7%	
53001	60%	49.3%	
53001	65%	54.9%	
53001	70%	60.7%	
53001	75%	66.6%	
53001	80%	72.7%	
53001	85%	79.1%	
53001	90%	85.7%	
53001	95%	92.7%	
53001	100%	100.0%	100.0%
53001	105%	108.1%	
53001	110%	117.1%	
53001	115%	126.9%	
53001	120%	137.2%	
53001	125%	148.0%	148.0%
53001	130%	160.6%	160.6%
53001	135%	169.3%	
53001	140%	176.9%	
53001	145%	183.8%	
53001	150%	190.6%	190.6%
53001	155%	197.3%	
53001	160%	203.6%	
53001	165%	209.7%	
53001	170%	215.9%	
53001	175%	222.3%	222.3%
53001	180%	229.0%	
53001	185%	236.0%	236.0%
53001	190%	243.2%	
53001	195%	250.6%	
53001	200%	258.1%	258.1%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
2951	100%	1	5625	150%	1.906134
1128	50%	0.382243	6561	175%	2.223314
4367	125%	1.479837	6963	185%	2.359539
4739	130%	1.605896	7618	200%	2.581498

Spline Calc

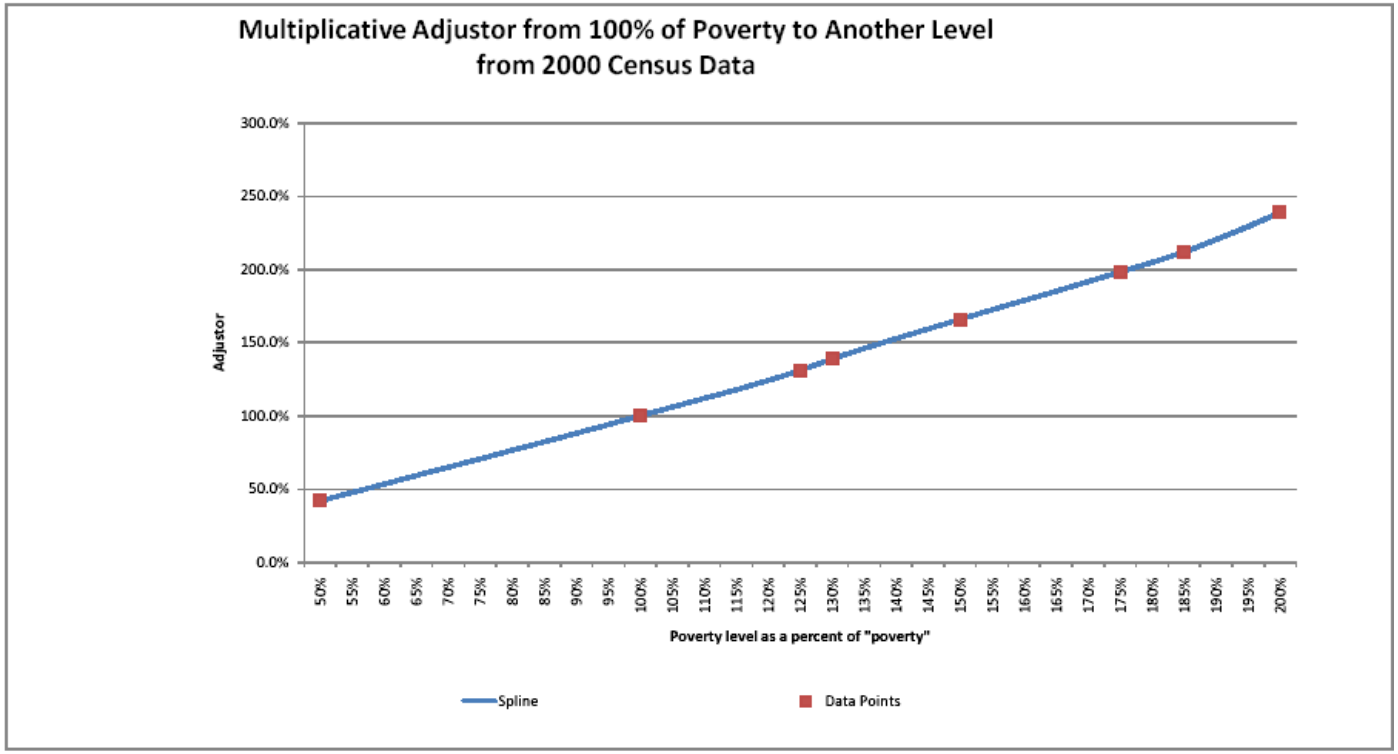
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.382243	1.101611	1	0	1.101611	#N/A	#N/A
1	100%	1	1.503319	1	0	1.503319	0	1.606830942
2	125%	1.479837	2.179481	1	0	2.179481	4.57544	0.833858954
3	130%	1.605896	1.881857	1	0	1.881857	52.90873	-64.81367425
4	150%	1.906134	1.3752	1	0	1.3752	-6.35356	1.286984456
5	175%	2.223314	1.313824	1	0	1.313824	-2.06444	1.573439272
6	185%	2.359539	1.418559	1	0	1.418559	0.810864	1.283844963
7	200%	2.581498	1.510307	1	0	1.510307	1.223302	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications
(CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.382243
1	-0.23551	1.503319	-0.80342	0.53561	1
2	4.278789	-10.5553	9.770883	-2.49439	1.479837
3	806.5124	-1903.37	1497.984	-392.408	1.605896
4	-20.1979	42.42281	-28.0086	6.367124	1.906134
5	-10.6644	20.84234	-11.9459	2.425256	2.223314
6	-3.05905	7.137341	-3.73316	0.788302	2.359539
7	10.43468	-14.8004	8.155344	-1.35922	2.581498

53003 Asotin County, Washington **20293 Population**

Zip Code	PctThresh	Spline	DataPoints
53003	50%	41.9%	41.9%
53003	55%	47.6%	
53003	60%	53.3%	
53003	65%	59.0%	
53003	70%	64.8%	
53003	75%	70.6%	
53003	80%	76.4%	
53003	85%	82.2%	
53003	90%	88.1%	
53003	95%	94.0%	
53003	100%	100.0%	100.0%
53003	105%	105.9%	
53003	110%	111.9%	
53003	115%	117.9%	
53003	120%	124.2%	
53003	125%	131.0%	131.0%
53003	130%	139.0%	139.0%
53003	135%	146.1%	
53003	140%	152.9%	
53003	145%	159.4%	
53003	150%	166.0%	166.0%
53003	155%	172.5%	
53003	160%	179.0%	
53003	165%	185.4%	
53003	170%	191.9%	
53003	175%	198.4%	198.4%
53003	180%	205.0%	
53003	185%	212.1%	212.1%
53003	190%	220.4%	
53003	195%	229.6%	
53003	200%	239.1%	239.1%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
3132	100%	1	5198	150%	1.659642
1311	50%	0.418582	6215	175%	1.984355
4102	125%	1.309706	6643	185%	2.121009
4354	130%	1.390166	7490	200%	2.391443

Spline Calc

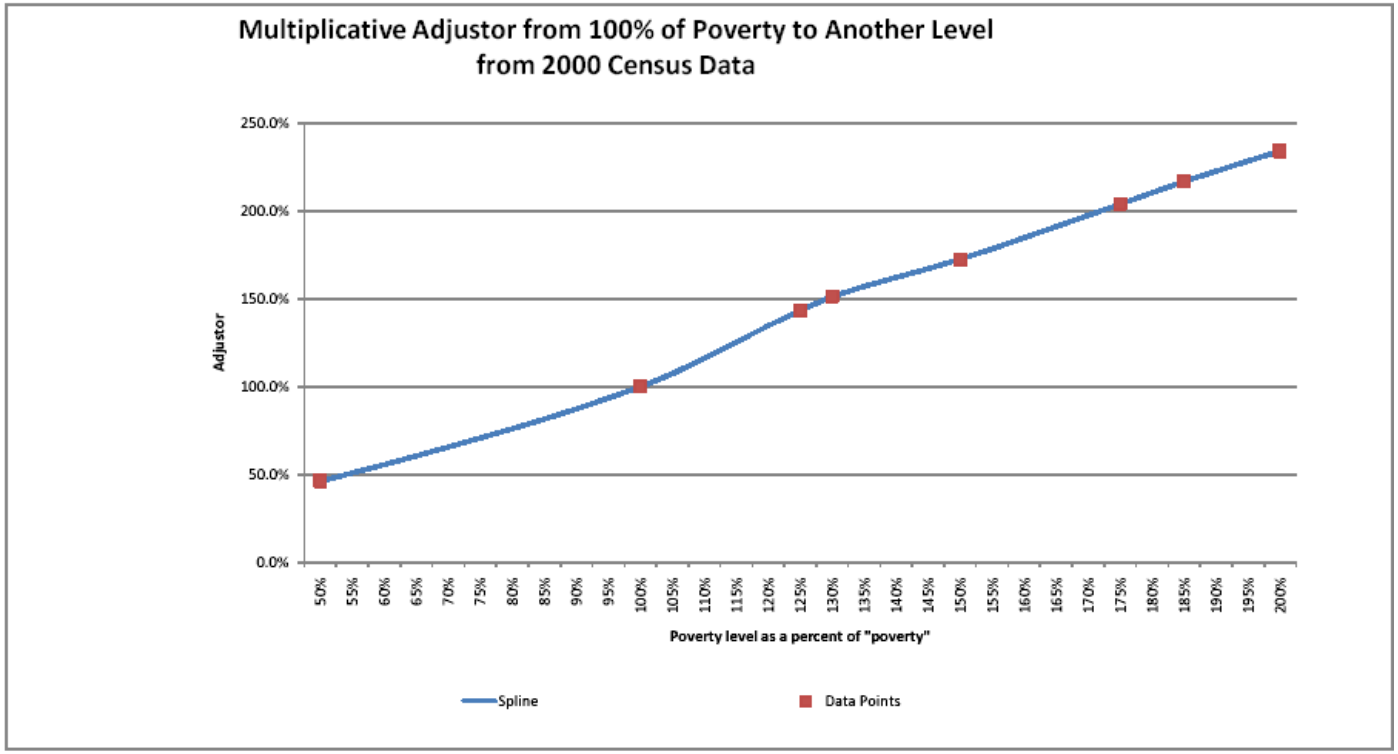
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.418582	1.144439	1	0	1.144439	#N/A	#N/A
1	100%	1	1.199628	1	0	1.199628	0	0.22075628
2	125%	1.309706	1.399928	1	0	1.399928	-0.66167	2.264068353
3	130%	1.390166	1.466696	1	0	1.466696	22.44136	-19.77061813
4	150%	1.659642	1.322671	1	0	1.322671	-2.13919	0.698932502
5	175%	1.984355	1.331835	1	0	1.331835	-0.64501	0.718320238
6	185%	2.121009	1.554679	1	0	1.554679	-2.37465	6.83152723
7	200%	2.391443	1.927003	1	0	1.927003	4.964318	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications (CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.418582
1	-0.16284	1.199628	-0.11038	0.073585	1
2	-2.48095	7.712773	-6.18231	1.950492	1.309706
3	291.9097	-686.214	538.8704	-140.707	1.390166
4	-7.52027	16.23868	-10.2935	2.365098	1.659642
5	-4.11749	8.425158	-4.41249	0.908885	1.984355
6	-86.2148	146.4571	-81.7414	15.34363	2.121009
7	42.6647	-64.2639	33.09545	-5.51591	2.391443

53019 Ferry County, Washington **7185 Population**

Zip Code	PctThresh	Spline	DataPoints
53019	50%	46.1%	46.1%
53019	55%	50.9%	
53019	60%	55.7%	
53019	65%	60.6%	
53019	70%	65.6%	
53019	75%	70.7%	
53019	80%	76.0%	
53019	85%	81.6%	
53019	90%	87.4%	
53019	95%	93.5%	
53019	100%	100.0%	100.0%
53019	105%	107.4%	
53019	110%	116.1%	
53019	115%	125.4%	
53019	120%	134.7%	
53019	125%	143.4%	143.4%
53019	130%	151.3%	151.3%
53019	135%	157.1%	
53019	140%	162.2%	
53019	145%	167.2%	
53019	150%	172.6%	172.6%
53019	155%	178.5%	
53019	160%	184.8%	
53019	165%	191.2%	
53019	170%	197.7%	
53019	175%	204.1%	204.1%
53019	180%	210.6%	
53019	185%	216.9%	216.9%
53019	190%	222.8%	
53019	195%	228.6%	
53019	200%	234.3%	234.3%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
1368	100%	1	2361	150%	1.725877
631	50%	0.461257	2792	175%	2.040936
1962	125%	1.434211	2967	185%	2.16886
2070	130%	1.513158	3205	200%	2.342836

Spline Calc

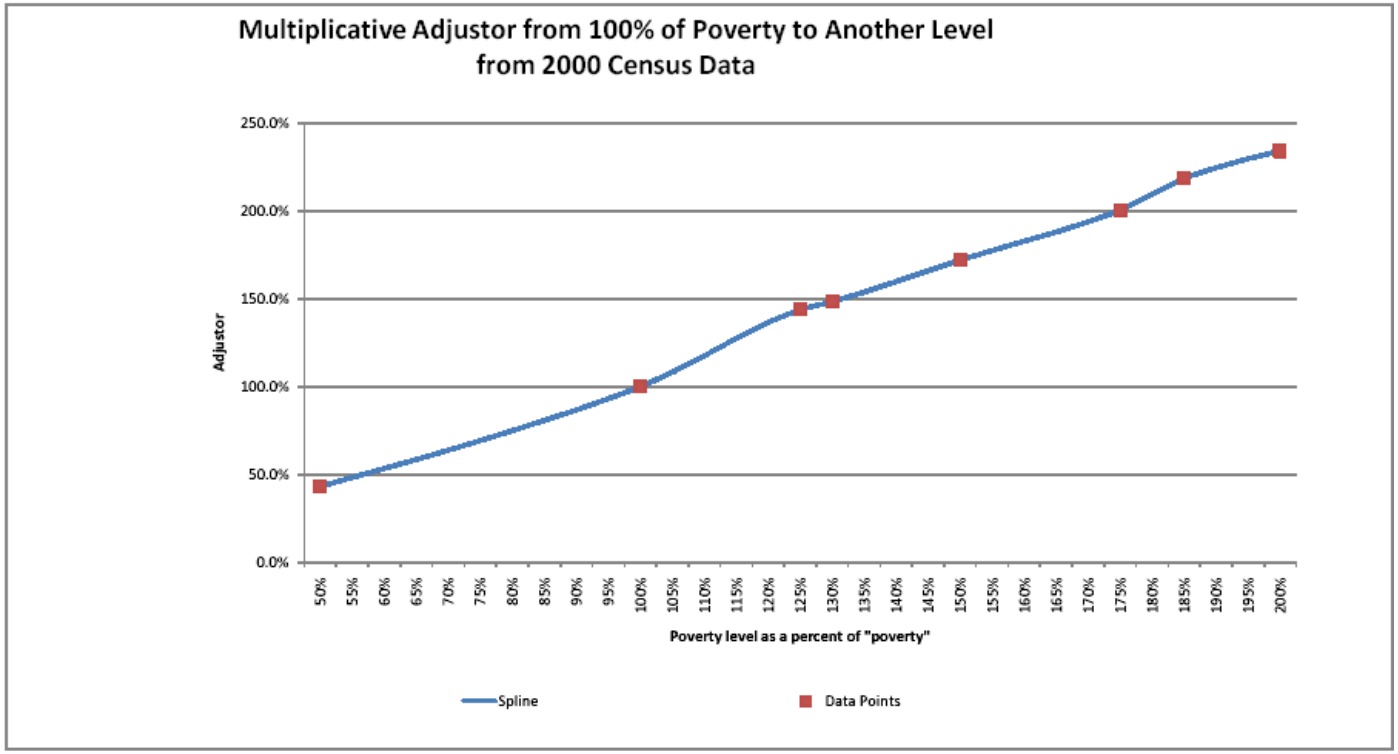
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.461257	0.951266	1	0	0.951266	#N/A	#N/A
1	100%	1	1.329925	1	0	1.329925	0	1.514636591
2	125%	1.434211	1.654135	1	0	1.654135	7.172331	-4.578646617
3	130%	1.513158	1.27102	1	0	1.27102	6.302062	-21.62668081
4	150%	1.725877	1.153596	1	0	1.153596	-5.04846	3.874217817
5	175%	2.040936	1.269666	1	0	1.269666	1.630757	-0.702196977
6	185%	2.16886	1.21662	1	0	1.21662	1.635364	-2.696286046
7	200%	2.342836	1.131456	1	0	1.131456	-1.13551	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications
(CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.461257
1	-0.07749	1.329925	-0.75732	0.504879	1
2	11.09023	-29.3444	27.08812	-7.83398	1.434211
3	186.1178	-442.61	352.2603	-93.0958	1.513158
4	-20.7411	45.53233	-31.5229	7.435565	1.725877
5	7.079232	-11.7908	7.814241	-1.5553	2.040936
6	41.01474	-67.9206	38.71962	-7.21942	2.16886
7	-10.0135	16.27161	-7.57008	1.26168	2.342836

53021 Franklin County, Washington **48307 Population**

Zip Code	PctThresh	Spline	DataPoints
53021	50%	43.2%	43.2%
53021	55%	48.3%	
53021	60%	53.4%	
53021	65%	58.6%	
53021	70%	63.9%	
53021	75%	69.3%	
53021	80%	74.9%	
53021	85%	80.8%	
53021	90%	86.9%	
53021	95%	93.3%	
53021	100%	100.0%	100.0%
53021	105%	108.1%	
53021	110%	117.7%	
53021	115%	127.7%	
53021	120%	136.8%	
53021	125%	144.1%	144.1%
53021	130%	148.4%	148.4%
53021	135%	153.9%	
53021	140%	159.9%	
53021	145%	166.1%	
53021	150%	172.1%	172.1%
53021	155%	177.6%	
53021	160%	182.8%	
53021	165%	188.2%	
53021	170%	193.9%	
53021	175%	200.5%	200.5%
53021	180%	209.8%	
53021	185%	219.0%	219.0%
53021	190%	224.9%	
53021	195%	229.8%	
53021	200%	234.3%	234.3%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
9280	100%	1	15967	150%	1.720582
4012	50%	0.432328	18602	175%	2.004526
13369	125%	1.440625	20319	185%	2.189547
13776	130%	1.484483	21742	200%	2.342888

Spline Calc

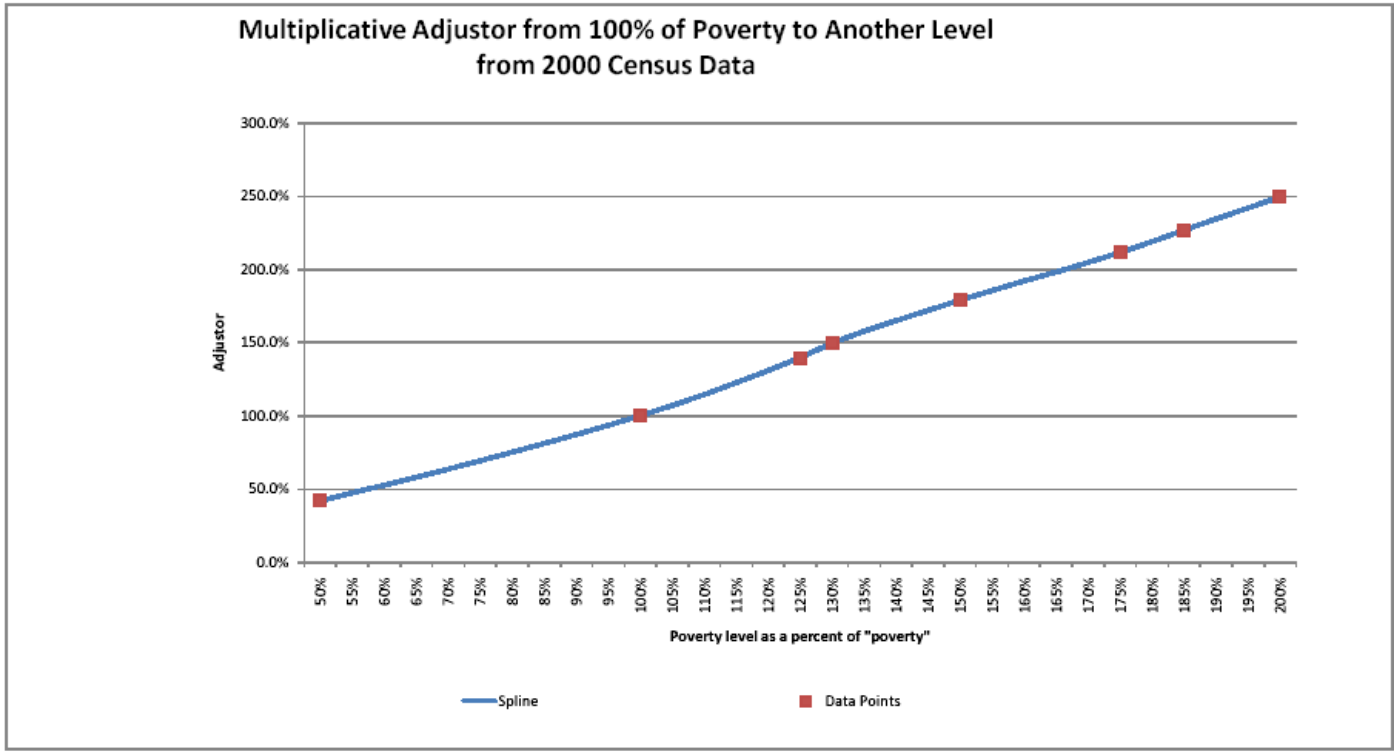
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.432328	1.012488	1	0	1.012488	#N/A	#N/A
1	100%	1	1.381058	1	0	1.381058	0	1.474276416
2	125%	1.440625	1.171355	1	0	1.171355	10.83224	-12.50986738
3	130%	1.484483	1.006466	1	0	1.006466	-28.7084	22.11284611
4	150%	1.720582	1.157704	1	0	1.157704	3.708508	-2.196128331
5	175%	2.004526	1.407526	1	0	1.407526	-2.52485	4.523426567
6	185%	2.189547	1.316922	1	0	1.316922	28.37345	-30.18552528
7	200%	2.342888	0.874944	1	0	0.874944	-5.89304	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications
(CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.432328
1	-0.13534	1.381058	-0.73714	0.491425	1
2	20.59647	-56.1354	52.10034	-15.5614	1.440625
3	-353.319	831.1385	-649.62	169.4041	1.484483
4	14.12017	-28.7617	21.04432	-4.92053	1.720582
5	-18.7151	36.66223	-22.4073	4.698852	2.004526
6	566.0541	-944.93	526.5778	-97.5983	2.189547
7	-51.7896	79.44883	-39.2869	6.547824	2.342888

53025 Grant County, Washington **73591 Population**

Zip Code	PctThresh	Spline	DataPoints
53025	50%	41.8%	41.8%
53025	55%	47.2%	
53025	60%	52.6%	
53025	65%	58.1%	
53025	70%	63.6%	
53025	75%	69.2%	
53025	80%	75.0%	
53025	85%	81.0%	
53025	90%	87.1%	
53025	95%	93.4%	
53025	100%	100.0%	100.0%
53025	105%	107.0%	
53025	110%	114.6%	
53025	115%	122.6%	
53025	120%	131.0%	
53025	125%	139.7%	139.7%
53025	130%	149.7%	149.7%
53025	135%	157.8%	
53025	140%	165.2%	
53025	145%	172.2%	
53025	150%	179.1%	179.1%
53025	155%	185.8%	
53025	160%	192.1%	
53025	165%	198.4%	
53025	170%	204.9%	
53025	175%	211.7%	211.7%
53025	180%	219.2%	
53025	185%	227.0%	227.0%
53025	190%	234.7%	
53025	195%	242.2%	
53025	200%	249.8%	249.8%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
12809	100%	1	22939	150%	1.79085
5360	50%	0.418456	27113	175%	2.116715
17893	125%	1.396908	29081	185%	2.270357
19176	130%	1.497072	31999	200%	2.498165

Spline Calc

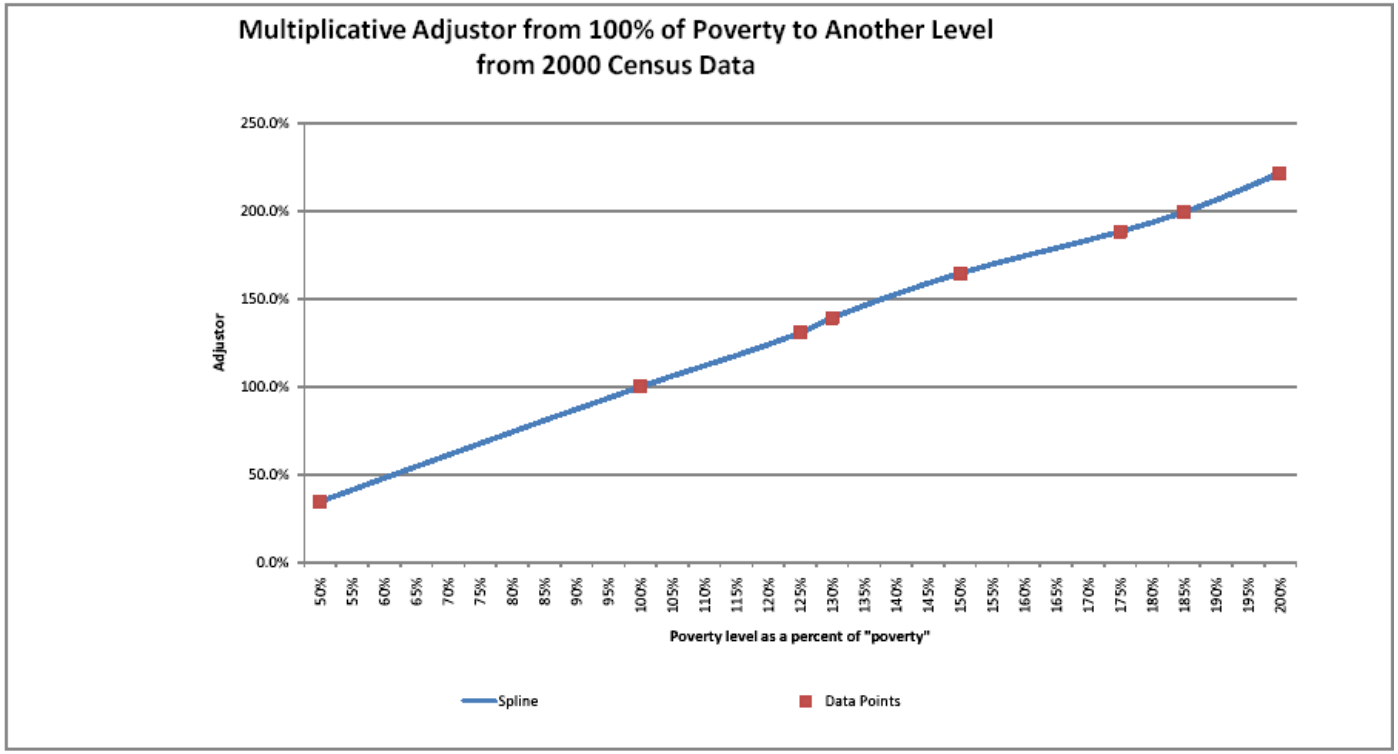
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.418456	1.073333	1	0	1.073333	#N/A	#N/A
1	100%	1	1.342599	1	0	1.342599	0	1.07706335
2	125%	1.396908	1.771401	1	0	1.771401	2.450416	0.979999702
3	130%	1.497072	1.694961	1	0	1.694961	30.88296	-33.94055944
4	150%	1.79085	1.381238	1	0	1.381238	-3.64493	0.507697812
5	175%	2.116715	1.410384	1	0	1.410384	-2.09988	2.333043374
6	185%	2.270357	1.527521	1	0	1.527521	5.219414	-2.876682745
7	200%	2.498165	1.514325	1	0	1.514325	-0.17593	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications
(CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.418456
1	-0.16309	1.342599	-0.53853	0.359021	1
2	1.862887	-4.04865	4.166041	-0.98028	1.396908
3	445.3381	-1049.7	825.7354	-216.078	1.497072
4	-11.3891	23.9782	-15.3185	3.46052	1.79085
5	-12.6174	24.47919	-14.3487	2.95528	2.116715
6	79.95747	-131.695	73.45055	-13.4935	2.270357
7	-2.09434	3.860111	-1.17289	0.195482	2.498165

53039 Klickitat County, Washington **18983 Population**

Zip Code	PctThresh	Spline	DataPoints
53039	50%	34.6%	34.6%
53039	55%	41.3%	
53039	60%	47.9%	
53039	65%	54.5%	
53039	70%	61.1%	
53039	75%	67.7%	
53039	80%	74.2%	
53039	85%	80.8%	
53039	90%	87.2%	
53039	95%	93.6%	
53039	100%	100.0%	100.0%
53039	105%	106.1%	
53039	110%	111.9%	
53039	115%	117.8%	
53039	120%	124.0%	
53039	125%	130.7%	130.7%
53039	130%	139.2%	139.2%
53039	135%	146.3%	
53039	140%	152.9%	
53039	145%	159.0%	
53039	150%	164.7%	164.7%
53039	155%	169.8%	
53039	160%	174.5%	
53039	165%	179.0%	
53039	170%	183.6%	
53039	175%	188.5%	188.5%
53039	180%	193.7%	
53039	185%	199.6%	199.6%
53039	190%	206.5%	
53039	195%	214.0%	
53039	200%	222.0%	222.0%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
3236	100%	1	5329	150%	1.646786
1121	50%	0.346415	6099	175%	1.884734
4230	125%	1.307169	6459	185%	1.995983
4505	130%	1.392151	7183	200%	2.219716

Spline Calc

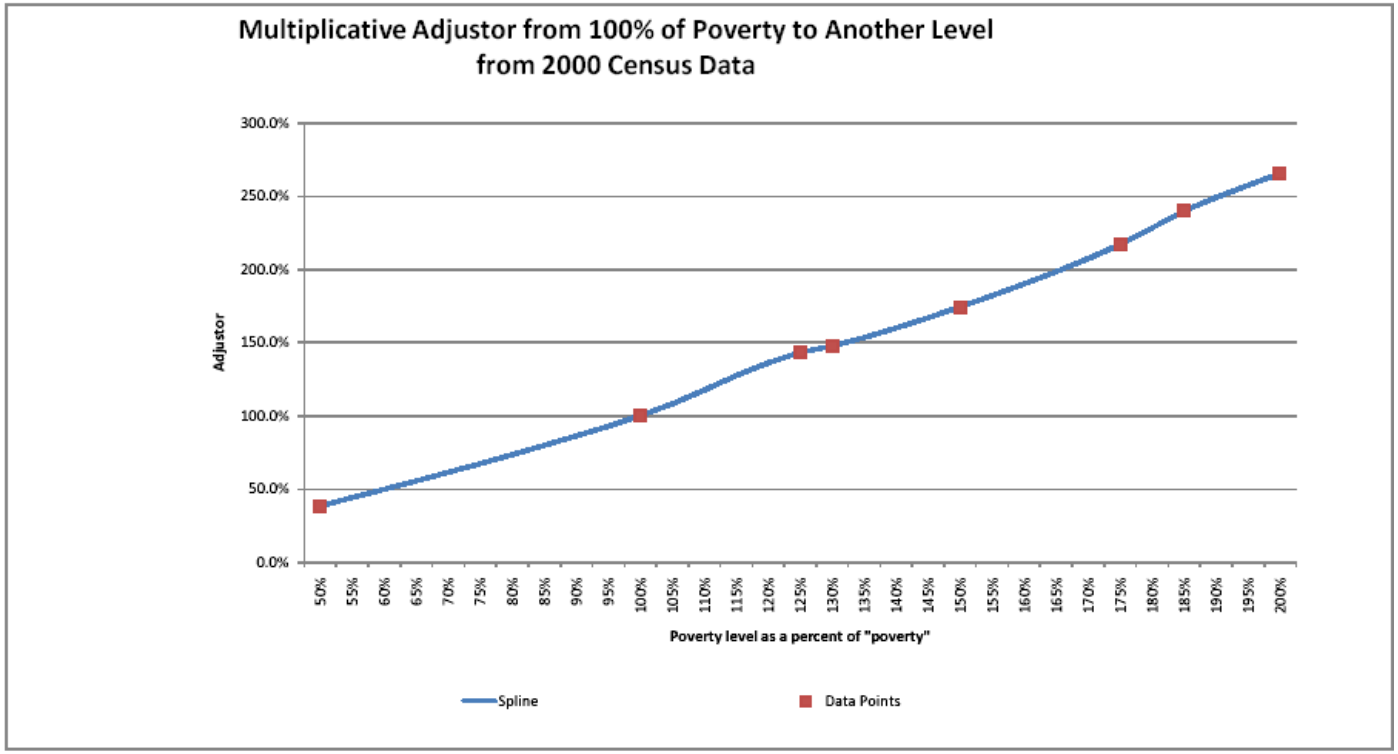
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.346415	1.3274	1	0	1.3274	#N/A	#N/A
1	100%	1	1.266709	1	0	1.266709	0	-0.242764572
2	125%	1.307169	1.426282	1	0	1.426282	-2.18934	3.465928523
3	130%	1.392151	1.455815	1	0	1.455815	31.6203	-30.4389743
4	150%	1.646786	1.089273	1	0	1.089273	-1.81374	-1.851679577
5	175%	1.884734	1.025884	1	0	1.025884	-2.79243	2.285314826
6	185%	1.995983	1.274429	1	0	1.274429	0.225145	4.74574626
7	200%	2.219716	1.600116	1	0	1.600116	4.342497	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications
(CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.346415
1	-0.30717	1.266709	0.121382	-0.08092	1
2	-5.13156	14.76658	-12.4052	3.770178	1.307169
3	428.2594	-1007.78	791.5511	-206.864	1.392151
4	-1.96356	3.653384	-0.78357	-0.03162	1.646786
5	-14.5535	28.12777	-16.6295	3.385164	1.884734
6	-39.9451	69.85359	-39.4427	7.534336	1.995983
7	37.61946	-56.2998	28.94998	-4.825	2.219716

53043 Lincoln County, Washington **10026 Population**

Zip Code	PctThresh	Spline	DataPoints
53043	50%	38.3%	38.3%
53043	55%	44.0%	
53043	60%	49.7%	
53043	65%	55.4%	
53043	70%	61.3%	
53043	75%	67.2%	
53043	80%	73.3%	
53043	85%	79.6%	
53043	90%	86.2%	
53043	95%	92.9%	
53043	100%	100.0%	100.0%
53043	105%	108.2%	
53043	110%	117.7%	
53043	115%	127.4%	
53043	120%	136.3%	
53043	125%	143.3%	143.3%
53043	130%	147.7%	147.7%
53043	135%	153.4%	
53043	140%	160.0%	
53043	145%	167.0%	
53043	150%	174.4%	174.4%
53043	155%	182.1%	
53043	160%	190.2%	
53043	165%	198.7%	
53043	170%	207.6%	
53043	175%	217.1%	217.1%
53043	180%	228.6%	
53043	185%	240.1%	240.1%
53043	190%	249.3%	
53043	195%	257.8%	
53043	200%	265.8%	265.8%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
1260	100%	1	2198	150%	1.744444
483	50%	0.383333	2736	175%	2.171429
1806	125%	1.433333	3025	185%	2.400794
1861	130%	1.476984	3349	200%	2.657937

Spline Calc

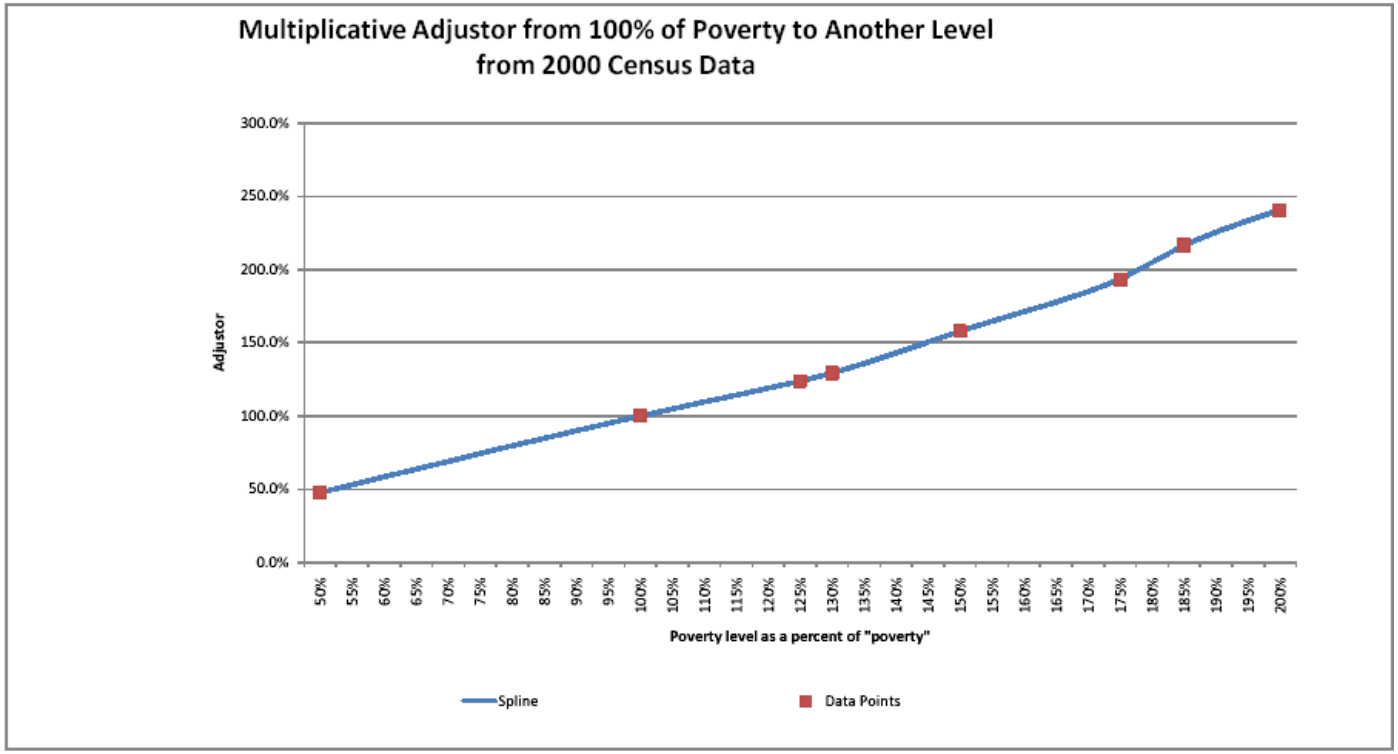
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.383333	1.129401	1	0	1.129401	#N/A	#N/A
1	100%	1	1.441199	1	0	1.441199	0	1.247191011
2	125%	1.433333	1.161186	1	0	1.161186	9.25134	-11.49144325
3	130%	1.476984	1.056396	1	0	1.056396	-30.3888	26.19721524
4	150%	1.744444	1.500064	1	0	1.500064	3.990482	0.446197068
5	175%	2.171429	1.957928	1	0	1.957928	1.326026	2.336884903
6	185%	2.400794	1.962093	1	0	1.962093	20.06006	-19.97675337
7	200%	2.657937	1.590382	1	0	1.590382	-4.95615	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications
(CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.383333
1	-0.23333	1.441199	-0.6236	0.41573	1
2	18.01299	-49.2957	46.11124	-13.8285	1.433333
3	-392.158	923.3035	-722.519	188.62	1.476984
4	9.964621	-19.1058	13.51417	-2.95357	1.744444
5	-1.2883	4.059889	-2.36956	0.673906	2.171429
6	387.0825	-646.211	360.3521	-66.728	2.400794
7	-44.5775	67.67242	-33.041	5.506836	2.657937

53059 Skamania County, Washington **9763 Population**

Zip Code	PctThresh	Spline	DataPoints
53059	50%	47.7%	47.7%
53059	55%	53.0%	
53059	60%	58.4%	
53059	65%	63.7%	
53059	70%	69.0%	
53059	75%	74.3%	
53059	80%	79.5%	
53059	85%	84.7%	
53059	90%	89.9%	
53059	95%	95.0%	
53059	100%	100.0%	100.0%
53059	105%	104.9%	
53059	110%	109.6%	
53059	115%	114.2%	
53059	120%	119.0%	
53059	125%	123.9%	123.9%
53059	130%	129.3%	129.3%
53059	135%	135.9%	
53059	140%	143.1%	
53059	145%	150.5%	
53059	150%	157.8%	157.8%
53059	155%	164.7%	
53059	160%	171.2%	
53059	165%	177.9%	
53059	170%	185.1%	
53059	175%	193.3%	193.3%
53059	180%	204.9%	
53059	185%	216.9%	216.9%
53059	190%	225.7%	
53059	195%	233.5%	
53059	200%	240.8%	240.8%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
1281	100%	1	2022	150%	1.578454
611	50%	0.476971	2476	175%	1.932865
1587	125%	1.238876	2778	185%	2.168618
1656	130%	1.29274	3085	200%	2.408275

Spline Calc

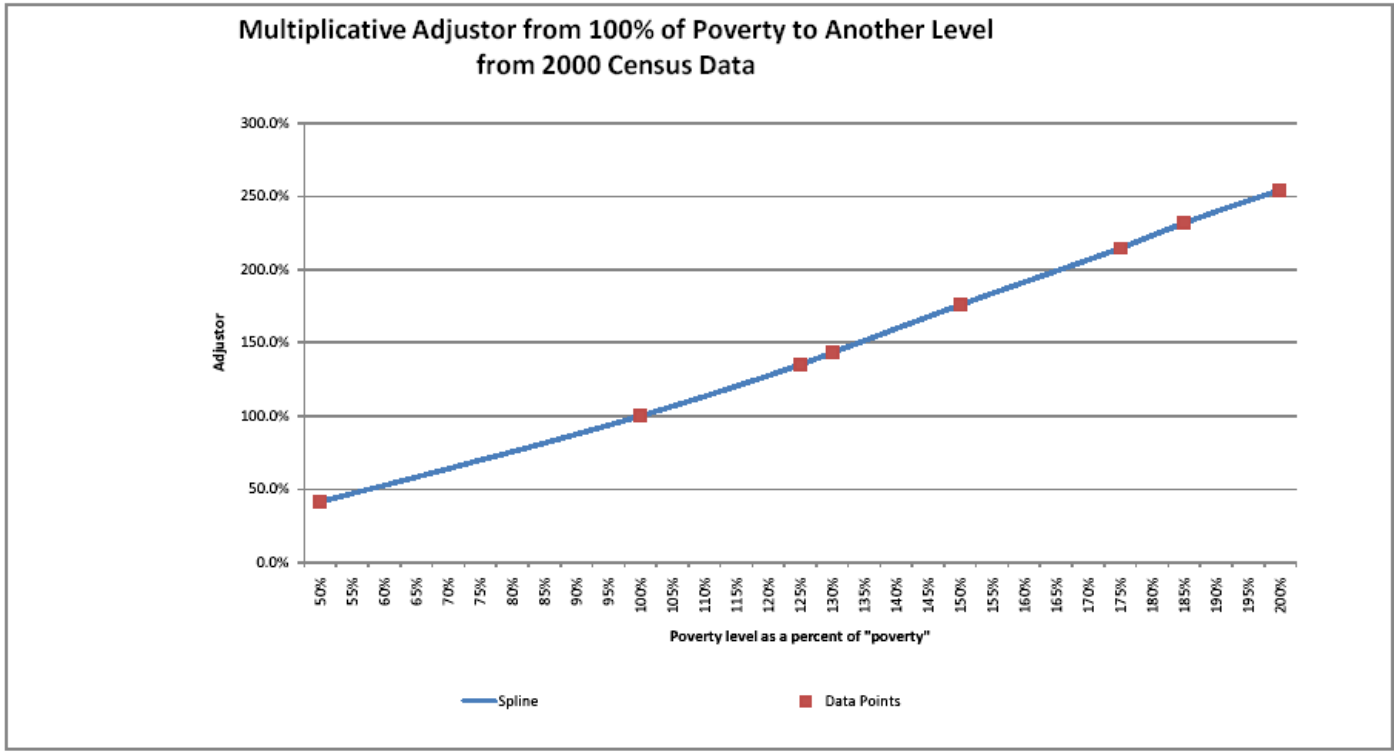
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.476971	1.069721	1	0	1.069721	#N/A	#N/A
1	100%	1	0.998732	1	0	0.998732	0	-0.283953279
2	125%	1.238876	1.012746	1	0	1.012746	-1.1496	1.261703999
3	130%	1.29274	1.228304	1	0	1.228304	-0.87782	9.500174139
4	150%	1.578454	1.423086	1	0	1.423086	4.060195	-2.112379497
5	175%	1.932865	1.770587	1	0	1.770587	-2.91066	5.690666365
6	185%	2.168618	1.904639	1	0	1.904639	32.53572	-29.85469749
7	200%	2.408275	1.444246	1	0	1.444246	-6.13857	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications
(CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.476971
1	-0.04606	0.998732	0.141977	-0.09465	1
2	-2.18106	6.97093	-5.3974	1.607534	1.238876
3	-68.278	164.2663	-130.164	34.59333	1.29274
4	14.42776	-30.1291	22.09096	-5.14381	1.578454
5	-23.1836	44.49502	-27.2593	5.734214	1.932865
6	605.9441	-1010.52	562.184	-103.984	2.168618
7	-55.0453	83.29185	-40.9238	6.820634	2.408275

53063 Spokane County, Washington **404764 Population**

Zip Code	PctThresh	Spline	DataPoints
53063	50%	41.4%	41.4%
53063	55%	47.0%	
53063	60%	52.6%	
53063	65%	58.2%	
53063	70%	63.9%	
53063	75%	69.7%	
53063	80%	75.6%	
53063	85%	81.5%	
53063	90%	87.5%	
53063	95%	93.7%	
53063	100%	100.0%	100.0%
53063	105%	106.5%	
53063	110%	113.3%	
53063	115%	120.3%	
53063	120%	127.5%	
53063	125%	135.0%	135.0%
53063	130%	143.2%	143.2%
53063	135%	151.5%	
53063	140%	159.7%	
53063	145%	167.9%	
53063	150%	175.9%	175.9%
53063	155%	183.8%	
53063	160%	191.4%	
53063	165%	199.0%	
53063	170%	206.7%	
53063	175%	214.7%	214.7%
53063	180%	223.3%	
53063	185%	231.9%	231.9%
53063	190%	239.7%	
53063	195%	247.2%	
53063	200%	254.4%	254.4%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
49859	100%	1	87721	150%	1.759381
20621	50%	0.413586	107045	175%	2.146954
67301	125%	1.349827	115635	185%	2.31924
71421	130%	1.43246	126855	200%	2.544275

Spline Calc

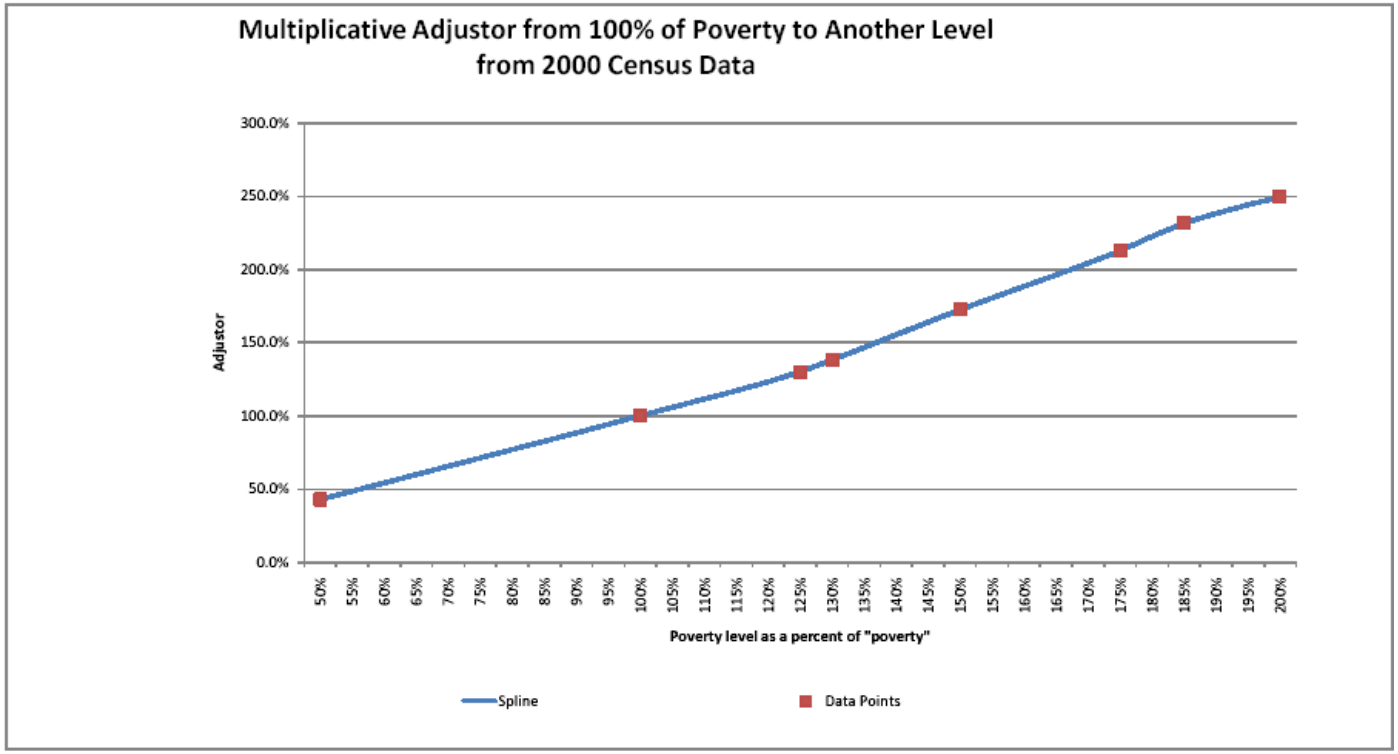
Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.413586	1.121193	1	0	1.121193	#N/A	#N/A
1	100%	1	1.276096	1	0	1.276096	0	0.619611055
2	125%	1.349827	1.515467	1	0	1.515467	1.042072	0.872899645
3	130%	1.43246	1.643585	1	0	1.643585	11.33845	-6.213727011
4	150%	1.759381	1.591335	1	0	1.591335	0.253232	-0.775741317
5	175%	2.146954	1.632026	1	0	1.632026	-1.31056	1.636090918
6	185%	2.31924	1.603856	1	0	1.603856	6.013347	-6.576753518
7	200%	2.544275	1.448418	1	0	1.448418	-2.0725	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications
(CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.413586
1	-0.17283	1.276096	-0.30981	0.206537	1
2	0.357722	-0.10432	0.859381	-0.11278	1.349827
3	122.5857	-286.91	225.0715	-58.5073	1.43246
4	1.393659	-3.03303	3.47078	-0.85748	1.759381
5	-8.73196	16.8171	-9.49523	1.964433	2.146954
6	120.9573	-201.677	113.1701	-20.9835	2.31924
7	-18.7748	29.08179	-13.8167	2.302781	2.544275

53065 Stevens County, Washington **39610 Population**

Zip Code	PctThresh	Spline	DataPoints
53065	50%	42.7%	42.7%
53065	55%	48.4%	
53065	60%	54.1%	
53065	65%	59.7%	
53065	70%	65.4%	
53065	75%	71.1%	
53065	80%	76.8%	
53065	85%	82.6%	
53065	90%	88.4%	
53065	95%	94.2%	
53065	100%	100.0%	100.0%
53065	105%	105.8%	
53065	110%	111.5%	
53065	115%	117.3%	
53065	120%	123.4%	
53065	125%	130.0%	130.0%
53065	130%	138.2%	138.2%
53065	135%	146.7%	
53065	140%	155.4%	
53065	145%	164.1%	
53065	150%	172.6%	172.6%
53065	155%	180.7%	
53065	160%	188.6%	
53065	165%	196.5%	
53065	170%	204.5%	
53065	175%	212.9%	212.9%
53065	180%	222.7%	
53065	185%	231.8%	231.8%
53065	190%	238.5%	
53065	195%	244.3%	
53065	200%	249.6%	249.6%



From qt_dec_2000_sf3_u_data table

Counts	Poverty	Adjustor	Counts	Poverty	Adjustor
6316	100%	1	10899	150%	1.725617
2699	50%	0.427327	13449	175%	2.129354
8211	125%	1.300032	14642	185%	2.318239
8727	130%	1.381729	15766	200%	2.4962

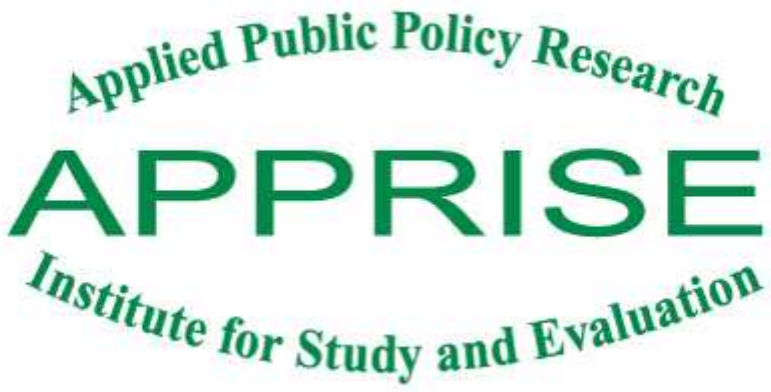
Spline Calc

Point No	X	Y	first der	Sign Fder	Sign switcl	First der*	second de	second der n
0	50%	0.427327	1.13197	1	0	1.13197	#N/A	#N/A
1	100%	1	1.172096	1	0	1.172096	0	0.160506044
2	125%	1.300032	1.383833	1	0	1.383833	-1.02116	2.715060631
3	130%	1.381729	1.675604	1	0	1.675604	18.34264	-6.67179989
4	150%	1.725617	1.665557	1	0	1.665557	1.415626	-1.516098185
5	175%	2.129354	1.741194	1	0	1.741194	-1.81975	2.424846569
6	185%	2.318239	1.457403	1	0	1.457403	14.53542	-20.21123623
7	200%	2.4962	1.050906	1	0	1.050906	-5.41996	0

Ref: Constrained Cubic Spline Interpolation for Chemical Engineering Applications (CJC Kruger, 2003)

Point No	a	b	c	d	Fit
0	#N/A	#N/A	#N/A	#N/A	0.427327
1	-0.14535	1.172096	-0.08025	0.053502	1
2	-3.17349	9.66571	-7.98303	2.490817	1.300032
3	176.7549	-412.395	321.8518	-83.3815	1.381729
4	5.767147	-12.5512	10.23592	-2.4431	1.725617
5	-12.3703	23.49589	-13.6437	2.829733	2.129354
6	331.7069	-555.754	311.3009	-57.9111	2.318239
7	-47.783	73.31702	-36.1331	6.022176	2.4962

Kruger, C.J.C. (2003). *Constrained Cubic Spine Interpolation for Chemical Engineer Applications.* Retrieved December 3, 2008 from http://www.korf.co.uk/spline.pdf



Washington State Energy Needs

Final Report

Prepared for the Washington Office of Community Trade and Economic Development

December 2007

Table of Contents

Executive Summary

The Washington Office of Community Trade and Economic Development (CTED) has been interested in developing information on LIHEAP-eligible households in Washington and the challenges that they face in meeting their energy needs to help them improve their LIHEAP program and create support for additional energy assistance in Washington State. Their research strategy has included a survey of LIHEAP recipients in Washington State, participation as a sponsor in APPRISE's National Multi-Sponsor Study of Ratepayer-Funded Programs, and additional research on the energy needs and energy assistance available to utility customers across the state. This report provides information obtained from the last component of the research, and draws on findings from the previous research.

Energy Needs and Energy Assistance

The Federal maximum LIHEAP standard is 150 percent of the poverty level or 60 percent of state median income, whichever is greater. States may choose the maximum of these two levels, or they may set a lower income limit to target available funds to households with lower income, but it cannot be lower than 110 percent of poverty. Most states have chosen to set their maximum standard at 150 percent of poverty. However, there are some states that have chosen higher levels and some that have chosen lower levels. The LIHEAP standard in Washington State is 125 percent of poverty. By setting the standard below the maximum, Washington limits the number of households who are eligible for assistance and targets benefits to those with the highest level of need.

Our analysis shows that 72 percent of households in Washington with income less than or equal to 125 percent of poverty have an energy burden of greater than five percent of income, and 46 percent of these households have an energy burden of greater than ten percent of income. The available energy assistance in Washington (LIHEAP and investor-owned utility bill payment assistance programs) was only enough to cover 23 percent of the difference between household energy bills and a five percent energy burden in 2005. When all households with income up to 150 percent of poverty are included in the analysis, only 19 percent of the gap is covered with the available funding.

Our 2005 survey of Washington LIHEAP recipients provides additional evidence on the need for energy assistance. The survey showed that even among those households that did receive LIHEAP assistance, 38 percent went without food, 81 percent reduced expenses for necessities, 35 percent kept their home at a temperature they felt was unsafe, and 15 percent had their electric service terminated.

Utilities

There are three investor-owned electric utilities and four natural gas utilities in Washington. Puget Sound Energy serves the majority of investor-owned utility electric and gas customers in the state. However, in addition to the investor-owned utilities, there are 21 PUDs, 14 municipal electric utilities, and 17 electric cooperatives that serve residential customers in Washington.

The investor-owned utilities serve 45 percent of electric residential customers, the PUDs serve 34 percent, the municipals serve 15 percent, and the cooperatives serve five percent.

Service Territory Analysis

In this report, we examine the percent of households that are eligible for LIHEAP. For households with income below 125 percent of poverty, we examine the main heating fuel used, the percent that have high energy burdens and high energy use, households with vulnerable members, single parent families, and households who speak foreign languages at home. We find that there are some large differences between the characteristics of the different service territories that have implications for the types of low-income energy assistance programs that are needed.

Low-Income Energy Programs

Many states around the country have low-income energy programs that are provided by individual utilities to supplement the assistance provided by LIHEAP and WAP. Washington does not have a statewide Universal Service Program or a comprehensive package of utility-funded programs. Because there are so many electric utilities in Washington, it is difficult to find one source of information that documents all of the low-income program offerings across the state and analyzes where there is unmet need for assistance. In the report we summarize information about low-income energy assistance programs that are offered by the utilities across the state.

We find that most of the investor-owned utilities offer a lump-sum bill payment assistance program for low-income customers. Many of the PUDs offer bill discount programs for low-income households with elderly or disabled members, but most do not offer general low-income assistance programs. Overall, about 75 percent of Washington's customers live in service territories that offer general low-income bill payment assistance programs.

Energy Prices

The price analysis shows that there are large differences in electric prices between the different utilities, and these differences can affect whether or not the low-income electric bill is affordable. The electric price ranges from 2.29¢ per kWh to 9.10¢ per kWh. While the lowest price electricity is quite affordable, as even most high use customers will be charged less than $30 per month, the highest price utility may cost a high-use customer as much as $110 per month.

Recommendations

Washington has a diverse electric supply, with 55 different investor-owned utilities, public utility districts, municipal utilities, and cooperatives supplying electricity to households across the state. Some of the service territories have quite different demographics, and the programs and prices offered by the different utilities further complicates the assessment of energy need. At the same time, there is no statewide affordability program to ensure that all low-income household energy needs are met, and previous research has shown that there is great unmet need for energy assistance. As such, we make the following recommendations for the types of programs that might best meet the need of low-income households in the state.

1. A statewide bill payment assistance program that based payments on net energy burden (after other program assistance was accounted for) would provide assistance to those households who have the greatest need based on the percent of income the household spends on energy, taking into account usage, prices, and other assistance programs. Our national research has shown that programs that provide customers with equal monthly payments are most likely to achieve the goals of increased affordability and improved payment patterns.

2. If it is not possible to achieve a statewide bill payment assistance program, the next best option may be to work with individual utilities that have the greatest need, the higher prices, and limited or no program availability. This strategy could fill in the greatest gaps in assistance.

3. Washington currently supplements the WAP/LIHEAP energy efficiency funding with the Energy Matchmaker program. Many of the utilities work with this program to provide additional energy efficiency assistance to low-income households. WA could improve statewide coverage of energy efficiency by working with utilities that do not currently match to participate in this program. There may also be room for improved targeting by coordinating the bill payment assistance programs and the energy efficiency programs.

4. Because of the variability in electric pricing across the state, households with income below 125 percent of poverty who have the lowest electric prices and use electric heat may have less need for assistance than households served by higher priced utilities with income between 125 and 150 percent of poverty. If Washington targets households with high energy burden for energy assistance, they can increase the state eligibility for LIHEAP to 150 percent of poverty and still serve the highest need households.

Energy prices are reaching historic highs around the county and low-income households are having increased difficulty paying their energy bills. Washington has an opportunity to address this issue in a systematic way by using practices that have proven effective in other jurisdictions and coordinating federal government benefits, state tax dollars, and ratepayer funds.

I. Introduction

The Washington Office of Community Trade and Economic Development (CTED) has been interested in developing information on LIHEAP-eligible households in Washington and the challenges that they face in meeting their energy needs to help them improve their LIHEAP program and create support for additional energy assistance in Washington State. Their research strategy has included a survey of LIHEAP recipients in Washington State, participation as a sponsor in APPRISE's National Multi-Sponsor Study of Ratepayer Funded Programs, and additional research on the energy needs and available energy assistance available to utility customers across the state. This report provides information obtained from the last component of the research, and draws on findings from the previous research.

The current study includes the following research components:

- Washington Population – We provide analysis on the characteristics of Washington's LIHEAP-eligible households through analysis of public use datasets, primarily the American Community Survey. These statistics can help policymakers understand he need for energy assistance in Washington state, and how the need varies across the state.

- Washington Energy Programs – Washington State has more than 60 electric utilities and several gas companies. Some of these utilities have several different low-income energy assistance programs and some do not offer any programs. We provide information on the types of programs that are available and the customers that these programs are offered to. This information helps policymakers understand where there are gaps in program availability and sufficiency.

- Washington Energy Costs – Electric prices vary widely between the different providers across the state. The large differences in prices have great implications for the affordability of energy for low-income households in the area. Information on prices will also help policymakers understand where bill payment assistance programs are needed.

- Updateable Spreadsheets – As a separate deliverable, APPRISE will provide CTED with a spreadsheet containing the information reported here, that can be updated when prices change to understand the impact of price changes on low-income households in the state.

- Recommendations – Based on the previous research and the analyses in this report, we will make recommendations for program characteristics that may best meet the needs of low-income households in Washington.

This report summarizes the analyses that are described above. A PowerPoint presentation that displays results in graphs and charts is also available.

II. Energy Needs and Energy Assistance

The purpose of this report is to examine how energy assistance needs vary across Washington State. However, to set the stage for this analysis, we first examine the aggregate needs and available energy assistance in the state as a whole. The methodology and approach used for the utility-level analysis shown in the following section is the same.

A. Data Sources

The primary data source for the information contained in this report is the 2005 American Community Survey (ACS).[1] The ACS is the Census Bureau's new approach to producing information about the characteristics of local communities. The ACS provides social, housing, and economic characteristics and is the largest household survey in the United States. The annual sample size for the ACS is about 3 million addresses. Each year, the ACS can provide estimates for geographic areas with populations of 65,000 or more. The ACS accumulates sample of 3-year and 5-year intervals to provide estimates for smaller geographic areas. In Washington, the ACS can provide estimates for the larger counties and for groups of smaller counties.

Geographic areas covered by ACS and counties do not exactly match up to the utility service territories. Only PUMAs where at least 50% of the households were in counties served by the utility were included in the utility's geographic area. This resulted in two statistics that help to assess the coverage of the PUMA.

1. The percent of a utility's customers that are in counties that are included in the calculation. That is, a small percentage of a utility's customers (in most cases) were in counties that were not included in the calculation because these counties were grouped with other counties, where the majority of that total population was not served by the utility studied.

2. The percent of customers in the calculation that are in counties that are in the utility's service area. That is, a small percentage of the customers that are included in the calculation are in counties that are not served by the utility studied, because counties that the utility does not serve are grouped with the counties that the utility does serve.

Table II-1 displays this information for the investor-owned utilities in Washington.

[1] 2006 ACS data became available in September 2007.

Table II-1
Utility Service Area Data Coverage

		Percent of Utility's Customers In Counties that are Included in the calculation	Percent of Customers in the calculation that are in Counties Serviced by the Utility
Electric Utilities	**Avista**	92%	79%
	Puget Sound Energy	98%	100%
	Pacific Power	90%	82%
Gas Utilities	**Avista**	89%	89%
	Cascade Natural Gas	95%	90%
	Puget Sound Energy	97%	100%

The table shows separate calculations for utilities that serve electric and gas customers, because the utilities sometimes have slightly different geographic areas for the two fuels. While we calculated separate statistics for the two fuels, we found that there were only very small and statistically insignificant differences between the two fuels service territories statistics, so only one statistic is presented for each utility.

The table above does not include the smaller utilities. Calculations for these utilities will be much less precise, especially for the smallest ones. Statistics in later sections of this report are shown for PUDs, municipals, and cooperatives that have 15,000 customers or more.

B. Energy Needs and Energy Assistance in Washington

The Federal maximum LIHEAP standard is 150 percent of the poverty level or 60 percent of state median income. States may choose the maximum of these two levels, or they may set a lower income limit to target available funds to households with lower income, but it cannot be lower than 110 percent of poverty. Most states have chosen to set their maximum standard at 150 percent of poverty. However, there are some states that have chosen higher levels and some that have chosen lower levels. The LIHEAP standard in Washington State is 125 percent of poverty. By setting the standard below the maximum, Washington limits the number of households who are eligible for assistance. A single person households with income of $11,963 or less was eligible for LIHEAP. For a family of four, the income limit was $24,188.

Table II-2 shows that 14 percent of the households in Washington have income below 125 percent of the poverty level. An additional four percent of the households in the state, or

approximately 100,000 households have income between 125 and 150 percent of the poverty level.

Table II-2
Low-Income Households in Washington

Poverty Group	Number of Households	Percent of Households
≤125%	353,335	14%
126% - 150%	98,927	4%
>150%	2,000,283	82%
All Households	2,452,545	100%

Analysts usually examine a household's energy burden, or the percent of income spent on energy, to determine whether the energy expenditure is affordable. Two important indicators of affordability have been developed.

- Affordable Energy Burden – Roger Colton of Fisher, Sheehan, and Colton has recommended using an affordability standard of 6% of income. He cites national research that suggests that a household can afford to spend about 30% of income on shelter costs and his own research that shows that about 20% of shelter costs are used for energy bills. Based on those statistics, he suggests that the maximum affordable level of energy expenditures for the average household would be about 6% of income.

- High Energy Burden – APPRISE has proposed an approach for defining "high energy burden" using a similar model. APPRISE notes that some researchers (Dolbeare, 2001) have defined a severe shelter burden as shelter costs that are 50% of income or more. APPRISE research shows that about 22% of shelter costs are for energy expenditures. Using that approach, APPRISE has defined a high energy burden as 11% of income.

Table II-3 displays the number and percentage of households with energy burden of greater than five percent of income and greater than ten percent of income. The table shows that 72 percent of households with income less than or equal to 125 percent of poverty have an energy burden of greater than five percent, and 46 percent of these households have an energy burden of greater than ten percent. An additional 52 percent of households with income between 126 and 150 percent of poverty have an energy burden of greater than five percent of income and 15 percent of these households have an energy burden of greater than ten percent of income.

Table II-3
Low-Income Energy Burden

Poverty Group	Energy Burden > 5%		Energy Burden >10%	
	# of Households	% of Households	# of Households	% of Households
≤125%	251,636	72%	158,004	46%
126% - 150%	51,371	52%	14,705	15%

Table II-4 presents information on energy assistance funding in Washington in 2005. The table shows that there was $41.6 million in LIHEAP funding in Washington in 2005, and $36.6 million was used for electric and gas assistance. Additionally, there was approximately $12.9 million in funding for investor-owned utility bill payment assistance programs. Therefore, the total low-income bill payment assistance in Washington in 2005 was just under $50 million.

Table II-4
Low-Income Energy Assistance in Washington

	2005 Funding (Millions)
LIHEAP	$41.6
LIHEAP – Electric and Gas Assistance	$36.6
IOU Energy Affordability Programs	$12.9
Total Electric and Gas Assistance	$49.5

Table II-5 examines the total energy bill for low-income households in Washington, the difference between household energy bills and a five or 15 percent bill, defined as the energy gap, and the percent of the gap that was covered by the energy assistance that was available in Washington. The table shows that the available energy assistance was only enough to cover 23 percent of the difference between household energy bills and a five percent energy burden. When all households with income up to 150 percent of poverty are included in the analysis, only 19 percent of the gap is covered with the available funding.

The table shows that the gap is much smaller if the need standard is set at a 15 percent energy burden. At this level, the available funding covers 52 percent of the gap for all households with income up to 125 percent of poverty, and 50 percent of the gap for all households with income up to 150 percent of poverty.

Table II-5
Low-Income Energy Gap

Poverty Group	Aggregate Low-Income Energy Bill	Energy Gap	Energy Assistance	Percent of Gap Met by Assistance
	(Millions)			
5% Need Standard				
≤125%	$360	$217	$49.5	23%
≤150%	$472	$257	$49.5	19%
15% Need Standard				
≤125%	$360	$96	$49.5	52%
≤150%	$472	$99	$49.5	50%

While it is somewhat more difficult to assess the need for energy efficiency programs, we develop a framework for this analysis here. Research on low-income energy efficiency programs has shown that programs that target higher users achieve higher energy savings and are more cost-effective. Table II-6 shows that the thresholds that we use are 8,000 annual kWh for electric baseload usage, 16,000 annual kWh for electric heating usage, and 1,200 therms for gas heating usage.

The ACS does not contain data on the amount of energy used by the household. However, it does contain data on the amount that the household spent on electric and gas bills. Using these data and the average electric and gas prices in Washington in 2005, we calculate estimates of the number of households with energy usage that exceeded these thresholds. Table II-6 shows that we estimate approximately 62,000 households with income less than or equal to 125 percent of poverty had high electric baseload bills, 84,000 had high electric heating bills, and 6,000 had high gas heating bills.

Table II-6
Low-Income Energy Usage

	High Usage Standard (Annual Usage)	Number of Households With High Bills Income ≤125%	Number of Households With High Bills Income ≤150%
Electric Baseload	8,000 kWh	62,003	82,628
Electric Heating	16,000 kWh	84,406	111,772
Gas Heating	1,200 therms	6,397	9,317

Table II-7 displays information on low-income energy efficiency funding in Washington in 2005. The table shows a total of over $22 million in energy efficiency funding through WAP, LIHEAP, and Washington's Energy Matchmaker program where the state matches utility weatherization expenditures. Given this funding, and an average estimated cost of $2,500, we estimate that approximately 6,320 households received energy efficiency services in 2005.

Table II-7
Low-Income Energy Efficiency Programs

	2005 Funding (Millions)	Households Served (Estimate)
DOE WAP	$4.6	1,840
LIHEAP	$5.7	2,280
Energy Matchmaker – Utilities & Other	$4.5	1,800
Energy Matchmaker – State Match	$7.4	2,960
Total	$22.2	8,880

Statistics in this section on household energy costs and energy burden provide information on the need for energy assistance in the state. However, research has shown that some households restrict their energy usage when they cannot afford to pay their bills, and therefore statistics on energy burden could under estimate the problem of unaffordable energy. APPRISE conducted a survey with LIHEAP recipients in 2005 to understand the need that these households faced. This study showed that there are many other indicators of need that indicate the problem is larger than that presented in the previous tables.

Table II-8 displays some of the findings from the 2005 survey of Washington LIHEAP recipients. This table shows that even among those households that did receive LIHEAP assistance, 38 percent went without food, 81 percent reduced expenses for necessities, 35 percent kept their home at a temperature they felt was unsafe, and 15 percent had their electric service terminated.

Table II-8
Other Indicators of Need for LIHEAP Recipients

	2005 NEADA Survey
Went without food for at least one day	38%
Went without medical or dental care	36%
Didn't fill a prescription or took less than a full dose	35%
Reported that someone became sick because the home was too cold	32%
Reduced expenses for necessities	81%
Received shutoff notices	47%
Kept home at a temperature they felt was unsafe	35%
Used the kitchen stove for heat	27%
Had electric service shut off	15%
Could not use main source of heat	37%
Could not use air conditioner	19%

This section documented the need for energy assistance in Washington state overall. The next sections of the report show how this need varies across the state.

III. Electric and Gas Utilities

This section examines the electric and gas utilities that serve households in Washington state. Washington is unique because of the number of small PUD, municipal, and cooperative electric utilities that server residential customers.

Table III-1 displays the investor-owned electric and natural gas companies that serve residential customers in Washington. There are three electric utilities and four natural gas utilities. Puget Sound Energy serves the majority of electric and gas customers in the state.

Table III-1
Investor-Owned Utilities in Washington

Investor-Owned Utilities - Electric			Investor-Owned Utilities – Natural Gas	
Utility	**Number of Residential Customers**		**Utility**	**Number of Residential Customers**
Avista	196,000		**Avista**	139,000
Pacific Power	124,000		**Cascade Natural Gas**	115,000
Puget Sound Energy	1,040,000		**Northwest Natural**	287,558
			Puget Sound Energy	713,000

Table III-2 displays the 20 public utility districts that serve residential customers in Washington. Most of these PUDs are small and many serve fewer than 30,000 customers. The largest one, however, Snohomish County PUD servers over 300,000 customers.

Table III-2
Electric PUD's in Washington

PUD	Number of Residential Customers
Benton County PUD	45,000
Chelan County PUD #1	41,000
Clallam County PUD	28,444
Clark Public Utilities	173,000
Cowlitz PUD	47,400
Douglas County PUD	16,931
Ferry County PUD	3,000
Franklin County PUD	20,000
Grant PUD	41,722
Grays Harbor PUD #1	41,517
Kittitas County PUD	3,690
Klickitat PUD	11,250

PUD	Number of Residential Customers
Lewis County PUD #1	30,000
Mason County PUD #1	5,249
Mason County PUD #3	31,914
Okanogan PUD	19,382
Pacific PUD #2	16,487
Pend Orielle PUD	8,500
Skamania County PUD	5,548
Snohomish County PUD	300,176

There are also 15 municipal electric utilities that serve residential customers in Washington. Many of these are smaller than the PUDs, and serve fewer than 10,000 customers. The largest municipal utility, Seattle City Light, however, servers over 375,000 customers.

Table III-3
Municipal Electric Utilities in Washington

Municipal	Number of Residential Customers
Blaine	4,400
Cashmere	1,177
Centralia	8,000
Cheney	4,256
Chewelah	1,265
Ellensburg	10,000
McCleary	1,016
Milton	3,332
Port Angeles	10,600
Richland	21,020
Ruston	418
Seattle	375,869
Steilacoom	2,803
Sumas	595
Tacoma	141,587

In additional to the 20 PUDs and the 15 municipal electric utilities, there are 17 electric cooperatives that serve residential customers in Washington. Most of the cooperatives serve fewer than 10,000 customers, and the largest one, Inland Power and Light serves only 35,000 customers.

Table III-4
Electric Cooperatives in Washington

Cooperative	Number of Residential Customers
Alder Mutual	271
Benton Rural Electric	14,183
Big Bend Electric	8,000
Clearwater Power	878
Columbia REA	4,200
Elmhurst Mutual	13,000
Inland Power & Light	35,000
Lakeview Light & Power	9,689
Modern Electric Water Company	9,940
Nespelem Valley Electric	1,820
Ohop Mutual	3,974
Okanogan Co-op	3,115
Orcas Power & Light	12,768
Parkland Light & Water	4,189
Peninsula Light	29,147
Tanner Electric	4,251
Vera Water & Power	9,193

Table III-5 provides a summary of the electric utilities that serve residential customers in Washington. The investor-owned utilities serve 45 percent of electric residential customers, the PUDs serve 30 percent, the municipals serve 20 percent, and the cooperatives serve five percent.

Table III-5
Summary of Electric Utilities in Washington

Utility Type	Number of Utilities	Number of Customers	Percent of Customers
Investor-Owned	3	1,360,000	45%
PUD	20	890,210	30%
Municipal	15	586,338	20%
Cooperative	17	163,618	5%

Table III-6 summarizes the sizes of the different types of electric utilities. Investor owned utilities range from 124,000 to one million customers, PUDs range from 3,000 to 300,000 customers, municipals range from 418 to 375,000 customers, and cooperatives range from 271 to 35,000 customers.

Table III-6
Electric Utility Sizes in Washington

Utility Type	Number of Customers		
	Mean	Largest	Smallest
Investor-Owned	453,333	1,040,000	124,000
PUD	44,511	300,176	3,000
Municipal	39,089	375,869	418
Cooperative	9,625	35,000	271

There are many fewer gas utilities in the state. Table III-7 shows that there are four investor-owned gas utilities that serve 99 percent of the residential customers and 2 municipal utilities that server fewer than one percent of the residential customers.

Table III-7
Summary of Gas Utilities in Washington

Utility Type	Number of Utilities	Number of Customers	Percent of Customers
Investor-Owned	4	1,264,558	99%
Municipal	2	10,000	<1%

The vast number of electric utilities poses a challenge for understanding the energy needs of households in Washington. The utilities offer different programs and have different prices. Additional, the demographics, as shown in the following section, differ in the various service areas. This means that the needs in the different areas are very different, and that it would be difficult to implement one program that would meet the needs of customers of the many utilities.

IV. Service Territory Analysis

This section examines the energy needs of low-income households in Washington by utility service territory. We examine the percent of households that are eligible for LIHEAP, the main heating fuel used, the percent that have high energy burdens and high energy use, households with vulnerable members, single parent families, and households who speak foreign languages at home.

Table IV-1 displays the percent of households with income below 125 percent of the poverty level. While 14 percent of households in Washington fall into this category, only 10 percent of households in the Puget Sound service territory fall into this category, but 24 percent of households in Pacific Power's service territory fall into this category.

Table IV-1
Percent of Households with Income Below 125% of the Poverty Level
Investor-Owned Utilities

	Percent with Income Below 125% of Poverty
Washington State	14%
Avista	17%
Cascade Natural Gas	14%
Northwest Natural Gas	16%
Pacific Power	24%
Puget Sound Energy	10%

Table IV-2 shows the percentage of households that have income below 125 percent of the poverty level in the PUD service territories. PUDs with 15,000 or more customers are shown. There is variability in the percent eligible for LIHEAP by PUD, ranging from 10 percent for Snohomish to 21 percent in Chelan, Douglas, and Okanogan.

Table IV-2
Percent of Households with Income Below 125% of the Poverty Level
Public Utility Districts

	Percent with Income Below 125% of Poverty
Benton	14%
Chelan	21%
Clallam	13%
Clark	12%
Cowlitz	16%
Douglas	21%

	Percent with Income Below 125% of Poverty
Franklin	14%
Grant	17%
Grays Harbor	19%
Lewis	13%
Mason #3	13%
Okanogan	21%
Pacific	19%
Snohomish	10%

Table IV-3 shows the percent of households with income below 125 percent of the poverty level for the three municipal utilities and the two cooperatives with more than 15,000 customers. Only nine percent of the households in Peninsula Light's service territory have income below 125 percent of the poverty level, but 17 percent of the households in Inland Power & Light's service territory have income below 12 percent of poverty.

Table IV-3
Percent of Households with Income Below 125% of the Poverty Level
Electric Municipals and Cooperatives

	Percent with Income Below 125% of Poverty
City of Richland	14%
Seattle City Light	11%
Tacoma Power	13%
Inland Power & Light	17%
Peninsula Light	9%

Table IV-4 displays the percent of households with income below 125 percent of the poverty level for the smallest county group available in the ACS. This table also shows how the demographics vary across Washington. Only nine percent of the households in King County and Thurston County have income below 125 percent of poverty, but 24 percent of the households in Yakima County have income below 125 percent of poverty.

Table IV-4
Percent of Households with Income Below 125% of the Poverty Level
PUMAs and Counties

Puma/County	Percent with Income Below 125% of Poverty
200 - Island, San Juan, Skagit	10%
300 - Chelan, Douglas, Kittitas, Okanogan	21%
400 - Adams, Ferry, Grant, Lincoln, Pend Oreile, Stevens	17%

Puma/County	Percent with Income Below 125% of Poverty
700 - Asotin, Columbia, Garfield, Walla Wall, Whitman	19%
800 - Benton, Franklin	14%
1100 - Cowlitz, Klickitat, Skamania, Wahkiakum	16%
1500 - Grays Harbor, Lewis, Pacific	19%
1600 - Clallam, Jefferson, Mason	13%
Clark	12%
King	9%
Kitsap	11%
Pierce	12%
Snohomish	10%
Spokane	16%
Thurston	9%
Whatcom	15%
Yakima	24%

Table IV-5 displays the percent of households that use electricity and gas for their main heating fuel for the state of Washington and the investor-owned utilities. In all of the utility service territories, the majority of the households use electricity for their main heating fuel. However, only 58 percent of households in Avista's utility territory use electric heat, compared to 70 percent in Pacific Power's territory.

Table IV-5
Main Heating Fuel
Investor-Owned Utilities

	Main Heating Fuel	
	Electric	**Gas**
Washington State	72%	16%
Avista	58%	25%
Cascade Natural Gas	68%	14%
Northwest Natural Gas	76%	16%
Pacific Power	70%	13%
Puget Sound Energy	67%	21%

Table IV-6 displays the main heating fuel in the public utility districts. In Grant and Snohomish PUD service territories, 67 percent of households use electric heat. However, in Benton and Franklin counties, 86 percent of households use electric heat. Only two percent of households in the Clallam PUD service territory use natural gas for heating, compared to 18 percent of the households in the Clark and Snohomish service territories.

Table IV-6
Main Heating Fuel
Public Utility Districts

	Main Heating Fuel	
	Electric	**Utility Gas**
Benton	86%	8%
Chelan	78%	4%
Clallam	70%	2%
Clark	73%	18%
Cowlitz	80%	5%
Douglas	78%	4%
Franklin	86%	8%
Grant	67%	5%
Grays Harbor	71%	3%
Lewis	72%	15%
Mason #3	70%	2%
Okanogan	78%	4%
Pacific	71%	3%
Snohomish	67%	18%

Table IV-7 displays the percent of households that use electricity and natural gas for heating in the municipal and cooperative electric utilities that have more than 15,000 customers. In the Inland Power and Light service territory, 58 percent of the households use electric heat and 25 percent use natural gas heat. However, in the City of Richland service territory, 86 percent use electric heat and 8 percent use natural gas heat.

Table IV-7
Main Heating Fuel
Electric Municipals and Cooperatives

	Main Heating Fuel	
	Electric	**Utility Gas**
City of Richland	86%	8%
Seattle City Light	67%	22%
Tacoma Power	71%	20%
Inland Power & Light	58%	25%
Peninsula Light	73%	12%

Table IV-8 displays the percent of low-income households with an energy burden greater than five percent and greater than ten percent in the investor-owned utility service territories.

In Washington as a whole, 71 percent of low-income households have an electric and gas energy burden of more than five percent. In the Northwest Natural Gas service territory, 80 percent of low-income households have an energy burden of greater than five percent. In Washington as a whole, 45 percent of low-income households have an energy burden of greater than ten percent. However, in the Pacific Power service territory, only 35 percent of low-income households have an energy burden of greater than ten percent.

Table IV-8
Percent of Low-Income Households with Energy Burden Greater than 5% and 10%
Investor-Owned Utilities

	Percent of Low-Income Households	
	Energy Burden > 5%	**Energy Burden > 10%**
Washington State	71%	45%
Avista	70%	43%
Cascade Natural Gas	72%	44%
Northwest Natural Gas	80%	43%
Pacific Power	65%	35%
Puget Sound Energy	73%	49%

Table IV-9 displays the percent of low-income households with energy burden that exceeds five percent and ten percent by PUD service territory. Households in the Benton, Clark, Franklin, Grays Harbor, Lewis, Pacific, and Snohomish service territories have the greatest percentage of households with high energy burdens.

Table IV-9
Percent of Low-Income Households with Energy Burden Greater than 5% and 10%
Public Utility Districts

	Percent of Low-Income Households	
	Energy Burden > 5%	**Energy Burden > 10%**
Benton	84%	54%
Chelan	67%	36%
Clallam	78%	43%
Clark	83%	58%
Cowlitz	75%	46%
Douglas	67%	36%
Franklin	84%	54%
Grant	72%	38%
Grays Harbor	79%	53%

	Percent of Low-Income Households	
	Energy Burden > 5%	Energy Burden > 10%
Lewis	79%	55%
Mason #3	75%	51%
Okanogan	67%	36%
Pacific	79%	53%
Snohomish	79%	53%

Table IV-10 displays the percent of low-income households with high energy burdens for the electric municipal and cooperative service territories with more than 15,000 customers. The table shows that a greater percent of households in the Richland and Peninsula service territories have need for energy assistance than in the Seattle City and Inland Power service territories.

Table IV-10
Percent of Low-Income Households with Energy Burden Greater than 5% and 10%
Electric Municipals and Cooperatives

	Percent of Low-Income Households	
	Energy Burden > 5%	Energy Burden > 10%
City of Richland	84%	54%
Seattle City Light	67%	42%
Tacoma Power	78%	58%
Inland Power & Light	70%	43%
Peninsula Light	82%	55%

Table IV-11 shows the percent of households in the investor-owned utilities with high energy use. The table shows that between 57 and 68 percent of customers in the different service territories have high electric baseload use, between 31 and 49 percent have high electric heating use, and between five and 16 percent have high gas heating use.

Table IV-11
Percent of Low-Income Households
With High Energy Use
Investor-Owned Utilities

	Percent of Low-Income Households		
	High Electric Baseload Use	High Electric Heating Use	High Gas Heating Use
Washington State	68%	38%	13%
Avista	61%	31%	10%
Cascade Natural Gas	68%	38%	12%

	Percent of Low-Income Households		
	High Electric Baseload Use	High Electric Heating Use	High Gas Heating Use
Northwest Natural Gas	65%	49%	5%
Pacific Power	57%	38%	11%
Puget Sound Energy	69%	34%	16%

Table IV-12 displays the percentage of low-income households with elderly members, disabled members, or young children in the household. These individuals are considered to be vulnerable because they are more susceptible to heat and cold-related illnesses. In the state overall, 67 percent of low-income households have a vulnerable member. However, in the Pacific Power service territory, 78 percent of low-income households have a vulnerable member.

Table IV-12
Percent of Low-Income Households
With Elderly, Disabled, or Young Children
Investor-Owned Utilities

	Percent of Low-Income Households with Vulnerable Members
Washington State	67%
Avista	72%
Cascade Natural Gas	72%
Northwest Natural Gas	72%
Pacific Power	78%
Puget Sound Energy	66%

Table IV-13 displays the percent of low-income households with vulnerable members by PUD service territory. The percent with vulnerable members ranges from 72 percent in Clallam, Mason, and Snohomish service territories to 80 percent in Grays Harbor and Pacific service territories.

Table IV-13
Percent of Low-Income Households
With Elderly, Disabled, or Young Children
Public Utility Districts

	Percent of Low-Income Households with Vulnerable Members
Benton	74%
Chelan	74%
Clallam	72%

	Percent of Low-Income Households with Vulnerable Members
Clark	74%
Cowlitz	79%
Douglas	74%
Franklin	74%
Grant	75%
Grays Harbor	80%
Lewis	74%
Mason #3	72%
Okanogan	74%
Pacific	80%
Snohomish	72%

Table IV-14 displays the percent of low-income households with vulnerable members in the larger electric municipal and cooperative service territories. While 60 percent of low-income households in Seattle City Light's service territory have vulnerable, over 70 percent in the other service territories have vulnerable members.

Table IV-14
Percent of Low-Income Households
With Elderly, Disabled, or Young Children
Electric Municipals and Cooperatives

	Percent of Low-Income Households with Vulnerable Members
City of Richland	74%
Seattle City Light	60%
Tacoma Power	73%
Inland Power & Light	72%
Peninsula Light	75%

Table IV-15 displays the percent of low-income households that are single parent households in the investor-owned utility service territories. While 18 percent in Avista's service territory are single parent households, 27 percent in Northwest Natural Gas's service territory are single parent families.

Table IV-15
Percent of Low-Income Households
That are Single Parent Households
Investor-Owned Utilities

	Percent of Low-Income Households That are Single Parent Households
Washington State	23%
Avista	18%
Cascade Natural Gas	20%
Northwest Natural Gas	27%
Pacific Power	23%
Puget Sound Energy	19%

Table IV-16 displays the percent of low-income households that are single parent households by PUD service territory. The percentage ranges from 14 percent in Clallam and Mason PUD service territories to 27 percent in Benton and Franklin service territories.

Table IV-16
Percent of Low-Income Households
That are Single Parent Households
Public Utility Districts

	Percent of Low-Income Households That are Single Parent Households
Benton	27%
Chelan	21%
Clallam	14%
Clark	22%
Cowlitz	17%
Douglas	21%
Franklin	27%
Grant	18%
Grays Harbor	20%
Lewis	22%
Mason #3	14%
Okanogan	21%
Pacific	20%
Snohomish	23%

Table IV-17 displays the percent of low-income households that are single parent households in the four largest electric municipal and cooperative service territories. While

27 percent in the Richland service territory are single parent families and 24 percent in the Tacoma Power service territory are single parent families, fewer than 20 percent in the other service territories are single parent families.

Table IV-17
Percent of Low-Income Households
That are Single Parent Households
Electric Municipals and Cooperatives

	Percent of Low-Income Households That are Single Parent Households
City of Richland	27%
Seattle City Light	15%
Tacoma Power	24%
Inland Power & Light	18%
Peninsula Light	14%

Table IV-18 displays the language spoken at home by low-income households. In Washington overall, 24 percent of households speak a language other than English in the home. About half of these are Spanish speaking and the other half are other foreign languages. In Pacific Power's service territory 42 percent speak a language other than English at home, and almost all of these households speak Spanish. However, in Avista's service territory, only 12 percent speak a language other than English at home.

Table IV-18
Language Spoken at Home
By Low-Income Households
Investor-Owned Utilities

	Percent of Low-Income Households		
	Non-English	Spanish	Foreign Language Other than Spanish
Washington State	24%	13%	11%
Avista	12%	8%	4%
Cascade Natural Gas	23%	17%	6%
Northwest Natural Gas	22%	9%	13%
Pacific Power	42%	40%	2%
Puget Sound Energy	24%	8%	16%

Table IV-19 displays the percent of low-income households who speak a language other than English at home by PUD service territory. In Clallam and Mason PUD service territories only seven percent of the households speak a language other than English at home, and most of these speak Spanish. However, in Benton and Franklin PUD service

territories, 34 percent speak a language other than English at home. Most of these households speak Spanish.

Table IV-19
Language Spoken at Home
By Low-Income Households
Public Utility Districts

	Percent of Low-Income Households		
	Non-English	Spanish	Foreign Language Other than Spanish
Benton	34%	29%	5%
Chelan	23%	21%	2%
Clallam	7%	5%	2%
Clark	21%	7%	14%
Cowlitz	10%	8%	2%
Douglas	23%	21%	2%
Franklin	34%	29%	5%
Grant	21%	19%	2%
Grays Harbor	9%	7%	2%
Lewis	15%	8%	7%
Mason #3	7%	5%	2%
Okanogan	23%	21%	2%
Pacific	9%	7%	2%
Snohomish	23%	8%	15%

Table IV-20 displays the percent of low-income households with energy burdens greater than five percent and ten percent in the four largest electric municipals and cooperative service territories. While only four percent of the households in Peninsula Light's service territory speak a language other than English, and all of these households speak something other than Spanish, 34 percent of households in Richland's service territory speak a language other than English, and most of these households speak Spanish.

Table IV-20
Percent of Low-Income Households with Energy
Burden Greater than 5% and 10%
Electric Municipals and Cooperatives

	Percent of Low-Income Households		
	Non-English	Spanish	Foreign Language Other than Spanish
City of Richland	34%	29%	5%
Seattle City Light	30%	9%	21%

	Percent of Low-Income Households		
	Non-English	**Spanish**	**Foreign Language Other than Spanish**
Tacoma Power	22%	10%	12%
Inland Power & Light	12%	8%	4%
Peninsula Light	4%	0%	4%

V. Low-Income Energy Programs

Many states around the country have low-income energy programs that are provided by individual utilities to supplement the assistance provided by LIHEAP. Washington does not have a statewide Universal Service Program or a comprehensive package of utility-funded programs. Because there are so many electric utilities in Washington, it is difficult to find one source of information that documents all of the low-income program offerings across the state and analyzes where there is unmet need for assistance. In this section of the report we summarize information about low-income energy assistance programs that are offered by the utilities across the state.

Table V-1 provides information on the low-income payment assistance programs that are offered by the electric and gas investor-owned utilities. All of the utilities except Northwest Natural Gas offer some form of bill payment assistance for low-income customers. Avista, Cascade Natural Gas, and Puget Sound Energy offer a low-income annual credit, and Pacific Power offers a low-income discount. The average total funding through investor-owned utilities for bill payment assistance is about $37 per low-income customer. However, the average for low-income customers in investor-owned utility service areas is $53.56.

Table V-1
Bill Payment Assistance Programs
Investor-Owned Utilities

	Low-Income Annual Credit	Low-Income Discount	Annual Funding
Avista	Yes	No	$3,200,000
Cascade Natural Gas	Yes	No	$900,000
Northwest Natural Gas	No	No	$0
Pacific Power	No	Yes	$300,000
Puget Sound Energy	Yes	No	$8,500,000
TOTAL			$12,900,000
$ Per WA Low-Income HH			$36.51
$ Per WA Low-Income HH in Investor-Owned Utility Service Areas			$53.56

Table V-2 provides additional information about the bill payment assistance programs offered by the investor-owned utilities.

Table V-2
Bill Payment Assistance Program Statistics
Investor-Owned Utilities

	Program	Year Initiated	# Served in 2006	2006 Funding	Eligibility
Avista	LIRAP	2001	7,000	$3.2 million	125%
Cascade Natural Gas		2006	Unknown	$900,000	150%
Pacific Power	LIBA	2001	2,618	$300,000	125%
Puget Sound Energy	HELP	2001	18,000	$8.5 million	150%

Table V-3 compares the bill payment assistance offered by the investor-owned utilities to other states around the country. The table shows that NJ provides the greatest amount of funding for low-income bill payment assistance, as it averages $181 per low-income household. Washington ranks twelfth, tied with Maine and Rhode Island. In one sense the assistance provided by Washington is overstated, as they only include customers with income up to 125 percent of poverty as low-income, compared to many states that include customers with income up to 150 percent of poverty, and NJ that includes customers with income up to 175 percent of poverty.

In another sense, the assistance provided by Washington is understated, as the investor-owned electric utilities only serve about 68 percent of low-income residential customers in the state. If spending is divided among these customers, WA's spending per household is $53.56 and ranks ninth. Therefore, Washington's coverage of low-income customers in the investor-owned utility areas is fairly good. However, customers served by electric utilities that are not investor owned and that have the higher electric prices may need additional assistance.

Table V-3
Comparison of Investor-Owned Utility
Bill Payment Assistance Program Funding in Washington
To Other States

Rank	State	Funds per Low-Income Household
1	NJ	$181
2	PA	$155
3	OH	$154
4	CA	$141
5	NH	$102
6	DC	$69
7	MI	$57
8	NV	$56
9	IL	$53
10	MD	$50

Rank	State	Funds per Low-Income Household
11	MA	$48
12	ME	$37
12	RI	$37
12	WA	$37

Table V-4 displays the bill payment assistance programs offered by the PUDs. The PUDs are much more likely to offer discounts to low-income households with senior and disabled members than to general low-income households. This leaves a gap for low-income bill payment assistance. However, the two largest PUDs, Clark Public Utilities and Snohomish County PUD both have low-income discounts.

Table V-4
Bill Payment Assistance Programs
Public Utility Districts

		Discounts		
PUD	**Customers**	**Low-Income**	**Senior**	**Disabled**
Benton County PUD	45,000	No	Yes	Yes
Chelan County PUD #1	41,000	No	Yes	Yes
Clallam County PUD	28,444	No	Yes	Yes
Clark Public Utilities	173,000	Yes	Yes	No
Cowlitz PUD	47,400	No	Yes	No
Douglas County PUD	16,931	No	No	No
Ferry County PUD	3,000	No	Yes	No
Franklin County PUD	20,000	No	Yes	Yes
Grant PUD	41,722	No	No	No
Grays Harbor PUD #1	41,517	No	Yes	Yes
Kittitas County PUD	3,690	No	No	No
Klickitat PUD	11,250	Yes	Yes	No
Lewis County PUD #1	30,000	No	No	No
Mason County PUD #1	5,249	No	No	No
Mason County PUD #3	31,914	No	Yes	Yes
Okanogan PUD	19,382	No	No	No
Pacific PUD #2	16,487	No	Yes	Yes
Pend Orielle PUD	8,500	No	No	No
Skamania County PUD	5,548	No	Yes	Yes
Snohomish County PUD	300,176	Yes	Yes	No

Table V-5 displays the bill payment assistance programs that are offered by the largest electric municipals and cooperatives. The table shows that Seattle City Light offers a general low-income discount, Richland, Tacoma, and Peninsula only offer senior and disabled low-income customer discounts, and Inland does not offer any discounts.

Table V-5
Bill Payment Assistance Programs
Electric Municipals and Cooperatives

		Discounts		
	Customers	**Low-Income**	**Senior**	**Disabled**
City of Richland	21,020	No	Yes	Yes
Seattle City Light	375,869	Yes	Yes	Yes
Tacoma Public Utilities	141,587	No	Yes	Yes
Inland Power & Light	35,000	No	No	No
Peninsula Light	29,147	No	Yes	Yes

Table V-6 shows that 74 percent of low-income customers are in service territories where low-income bill payment assistance programs are offered to electric customers and 76 percent are in territories where low-income bill payment assistance programs are offered to gas customers.

Table V-6
Percent of Low-Income Customers
In Service Area with Bill Assistance Program

	Percent of Low-Income Customers in Service Area With Bill Assistance Programs
Electric	74%
Gas	76%

Table V-7 compares energy efficiency program funding in Washington to that in other states around the country. Washington ranks sixth on the list, with programs spending about $21 per low-income household, compared to $105 in Wisconsin. Only the utility spending on Matchmaker is included in this amount, not the state annual match of $4.5 million, as other states also have state funding that is not included in this table.

Table V-7
Comparison of Investor-Owned Utility
Energy Efficiency Program Funding in Washington
To Other States

Rank	**State**	**Funds per Low-Income Household**
1	Wisconsin	$105

Rank	State	Funds per Low-Income Household
2	Massachusetts	$32
3	California	$25
4	Pennsylvania	$25
5	New Jersey	$24
6	Oregon	$21
6	Washington	$21
8	New York	$11
9	Michigan	$10
10	Ohio	$9

VI. Energy Prices

This section examines how electric and gas prices vary across Washington. The analysis shows that there are large differences between the different utilities, and these differences can affect whether or not the low-income electric bill is affordable.

Table VI-1 shows that there is a large range in the electric prices across the state. While the lowest price PUDs, Chelan and Douglas, charge less than three cents per kWh, the most expensive, Franklin PUD, charges over nine cents per kWh. There are also differences in the monthly base charges imposed by the utilities.

Table VI-1
Electric Prices by Utility

Utility	Type	Price per kWh
Avista	IOU	4.91
Pacific Power	IOU	4.57
Puget Sound Energy	IOU	7.43
Benton	PUD	7.46
Chelan	PUD	2.97
Clallam	PUD	6.90
Clark	PUD	7.86
Cowlitz	PUD	5.14
Douglas	PUD	2.29
Franklin	PUD	9.10
Grant	PUD	4.21
Grays Harbor	PUD	7.66
Lewis	PUD	5.51
Mason #3	PUD	6.50
Okanogan	PUD	5.13
Pacific	PUD	6.91
Snohomish	PUD	7.80
City of Richland	Municipal	5.70
Seattle City Light	Municipal	5.22
Tacoma Power	Municipal	6.59
Inland Power & Light	Cooperative	5.21
Peninsula Light	Cooperative	5.97

Table VI-2 analyses the impact of the difference in price for households that use 400 kWh per month, 800 kWh per month, and 1,200 kWh per month. The lowest price electricity is quite affordable, as even the high use customer will be charged less than $30 per month. However, the highest price utility will cost a high-use customer almost $110 per month.

Table VI-2
Electric Price Variability in Washington

		400 kWh	800 kWh	1200 kWh
Lowest Price	2.29¢	$9.16	$18.32	$27.48
Highest Price	9.10¢	$36.40	$72.80	$109.20
Average Price	5.96¢	$23.84	$47.68	$71.52

Table VI-3 shows that gas prices are relatively constant across the state, ranging from $1.18 to $1.26 per therm.

Table VI-3
Gas Prices in Washington

	Price per Therm
Avista	$1.19
Cascade Natural Gas	$1.18
Northwest Natural	$1.26
Puget Sound Energy	$1.25

VII. Summary of Findings and Recommendations

This section summarizes the data that was presented in this report and makes recommendations based on this analysis and the previous studies that were conducted.

Table VII-1 summarizes the information that was provided about the utility service territories in the last three sections of the report for the state of Washington, Chelan County PUD, and Clark County PUD.

The table shows that there are great differences between the characteristics of some of the different service territories that have implications for the types of low-income energy assistance programs that are needed. Some of the key differences between these two areas are:

- Chelan county has a much larger percent of the population that would be income-eligible for the program, under current LIHEAP standards in Washington.
- However, a greater percentage of Clark's low-income households show need for assistance, as shown by the percent of these households with an energy burden greater than five percent.
- Households in the Chelan PUD service territory have higher electric use, and greater need for energy efficiency programs.
- Households in the Chelan PUD service territory are more likely to speak Spanish at home. A full 21 percent speak Spanish at home, indicating that service delivery should include Spanish-speaking providers.
- Households in Clark PUD are more likely to speak other foreign languages at home. These households may be more difficult to serve.
- Clark PUD does offer a general low-income bill assistance program, but Chelan PUD does not.
- Chelan PUD electric rates are less than three cents per kWh, as compared to nearly eight cents for Clark. For this reason, these customers may not need a bill payment assistance program. These customers have rates that are essentially discounted about sixty percent, the equivalent of a generous bill discount program.

Table VII-1
Data Summary

	<125%	Electric Heat	Burden >5%	High Baseload Use	High Electric Heat Use
WA State	14%	72%	71%	68%	38%
Chelan PUD	21%	78%	67%	100%	88%
Clark PUD	12%	73%	83%	62%	21%

	Vulnerable	Single Family	Non-English	Spanish	Low-Income Program	Electric Price
WA State	67%	23%	24%	13%	Yes	6.50¢
Chelan PUD	74%	21%	23%	21%	No	2.97¢
Clark PUD	74%	22%	21%	7%	Yes	7.86¢

Washington has a diverse electric supply, with 55 different investor-owned utilities, public utility districts, municipal utilities, and cooperatives supplying energy to households across the state. Some of the service territories have quite different demographics, and the programs and prices offered by the different utilities further complicates the assessment of energy need. At the same time, there is no statewide affordability program to ensure that all low-income household energy needs are met, and previous research has shown that there is great unmet need for energy assistance. As such, we make the following recommendations for the types of programs that might best meet the need of low-income households in the state.

1. A statewide bill payment assistance program that based payments on net energy burden (after other program assistance was accounted for) would provide assistance to those households who have the greatest need based on the percent of income the household spends on energy, taking into account usage, prices, and other assistance programs. Our national research has shown that programs that provide customers with equal monthly payments are most likely to achieve the goals of increased affordability and improved payment patterns.

2. If it is not possible to achieve a statewide bill payment assistance program, the next best option may be to work with individual utilities that have the greatest need, the higher prices, and limited or no program availability. This strategy could fill in the greatest gaps in assistance.

3. Washington currently supplements the WAP/LIHEAP energy efficiency funding with the Energy Matchmaker program. Many of the utilities work with this program to provide additional energy efficiency assistance to low-income households. WA could improve statewide coverage of energy efficiency by working with utilities that do not currently match to participate in this program. There may also be room for improved targeting by coordinating the bill payment assistance programs and the energy efficiency programs.

4. Because of the variability in electric pricing across the state, households with income below 125 percent of poverty who have the lowest electric prices and use electric heat may have less need for assistance than households served by higher priced utilities with income between 125 and 150 percent of poverty. If Washington targets households with high energy burden for energy assistance, they can increase the state eligibility for LIHEAP to 150 percent of poverty and still serve the highest need households.

Energy prices are reaching historic highs around the county and low-income households are having increased difficulty paying their energy bills. Washington has an opportunity to address

this issue in a systematic way by using practices that have proven effective in other jurisdictions and coordinating federal government benefits, state tax dollars, and ratepayer funds.

Exhibit K-3 Quest Penalty Funds

In response to Titus Data Request #1 to the Energy Project:

2. Agency percentage allocations for LIRAP are most accurately obtained from the company, rather than building the data back up from individual agency budgets. With regard to LIHEAP percentages, the percentage of the state's LIHEAP allocation received by each agency does not change significantly from year to year. For 2006 the allocations were as follows:

Agency	LIHEAP	% of LIHEAP Total	Qwest Funds	% of Qwest Total	Agency Total
Community Action Partnership (ID)	$160,008	0.48%	$31,744	0.49%	$191,752
Community Action Center (Whitman Co.)	$546,642	1.65%	$121,984	1.89%	$668,626
North Columbia Comm. Action Council	$825,369	2.49%	$162,965	2.52%	$988,334
Rural Resources Community Action	$642,927	1.94%	$125,631	1.94%	$768,558
Spokane Neighborhod Action Programs	$3,675,758	11.09%	$722,319	11.18%	$4,398,077
Washington Gorge Action Programs	$233,997	0.71%	$45,285	0.70%	$279,282
Avista agency total	$6,084,701	18.36%	$1,209,928	18.73%	$7,294,629
State Total	$33,147,663		$6,460,001		

3. In addition to the previous response CTED provided the following information regarding the allocation and application of the Qwest penalty funds. Qwest funds used for bill assistance purposes by agencies serving Avista's customers are detailed in the table responding to question #2. Qwest funds used for energy efficiency were allocated as follows below:

Agency	Amount	% Used for Avista*	% of Total Used for Gas
Community Action Center (Whitman)	$20,362	75-80%	19-24%
Community Action Partnership (Asotin)	$5,504	100%	50%
Gorge Action	$8,656	NA	NA
North Columbia Community Action	$28,587	NA	25%
Rural Resources	$23,004	50%	0%
Spokane Neighborhood Action Prog.	$125,485	85%	60%

*Estimated

Exhibit K-4 Schedule 191 LI DSM Tariff Calculations

							LIHEAP/LIRAP	696						
							Limited Income DSM	696						
	Usage						**Schedule 101**	828						
	200401	200402	200403	200404	200405	200406	200407	200408	200409	200410	200411	200412	12 Month Total	
RevClsDesc	18.23%	17.26%	12.46%	9.22%	5.66%	3.38%	2.25%	1.82%	2.08%	3.82%	8.12%	15.70%		
LIHEAP/LIRAP	127	120	87	64	39	24	16	13	15	27	56	109	696	
Sch 191 Surcharge	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119		
Sch 191 Revenue	$ 1.42	$ 1.34	$ 0.97	$ 0.72	$ 0.44	$ 0.26	$ 0.18	$ 0.14	$ 0.16	$ 0.30	$ 0.63	$ 1.22	$	8
Limited Income DSM	127	120	87	64	39	24	16	13	15	27	56	109	696	
Sch 191 Surcharge	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119		
Sch 191 Revenue	$ 1.42	$ 1.34	$ 0.97	$ 0.72	$ 0.44	$ 0.26	$ 0.18	$ 0.14	$ 0.16	$ 0.30	$ 0.63	$ 1.22	$	8
Schedule 101	151	143	103	76	47	28	19	15	17	32	67	130	828	
Sch 191 Surcharge	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119	$ 0.01119		
Sch 191 Revenue	$ 1.69	$ 1.60	$ 1.15	$ 0.85	$ 0.52	$ 0.31	$ 0.21	$ 0.17	$ 0.19	$ 0.35	$ 0.75	$ 1.45	$	9
LIHEAP/LIRAP	$ 1.42	$ 1.34	$ 0.97	$ 0.72	$ 0.44	$ 0.26	$ 0.18	$ 0.14	$ 0.16	$ 0.30	$ 0.63	$ 1.22	$	7.79
Limited Income DSM	$ 1.42	$ 1.34	$ 0.97	$ 0.72	$ 0.44	$ 0.26	$ 0.18	$ 0.14	$ 0.16	$ 0.30	$ 0.63	$ 1.22	$	7.79
Schedule 101	$ 1.69	$ 1.60	$ 1.15	$ 0.85	$ 0.52	$ 0.31	$ 0.21	$ 0.17	$ 0.19	$ 0.35	$ 0.75	$ 1.45	$	9.26

Exhibit K-4 Schedule 191 LI DSM Tariff Calculations

	Usage											
	200501	200502	200503	200504	200505	200506	200507	200508	200509	200510	200511	200512	12 Month Total
RevClsDesc	18.23%	17.26%	12.46%	9.22%	5.66%	3.38%	2.25%	1.82%	2.08%	3.82%	8.12%	15.70%	
LIHEAP/LIRA	127	120	87	64	39	24	16	13	15	27	56	109	696
	$ 0.01119	$ 0.00943	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	
	$ 1.42	$ 1.13	$ 0.69	$ 0.51	$ 0.31	$ 0.19	$ 0.12	$ 0.10	$ 0.11	$ 0.21	$ 0.45	$ 0.86	$ 6
Limited Incor	127	120	87	64	39	24	16	13	15	27	56	109	696
	$ 0.01119	$ 0.00943	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	
	$ 1.42	$ 1.13	$ 0.69	$ 0.51	$ 0.31	$ 0.19	$ 0.12	$ 0.10	$ 0.11	$ 0.21	$ 0.45	$ 0.86	$ 6
Schedule 101	151	143	103	76	47	28	19	15	17	32	67	130	828
	$ 0.01119	$ 0.00943	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	$ 0.00790	
	$ 1.69	$ 1.35	$ 0.82	$ 0.60	$ 0.37	$ 0.22	$ 0.15	$ 0.12	$ 0.14	$ 0.25	$ 0.53	$ 1.03	$ 7

LIHEAP/LIR	$ 1.42	$ 1.13	$ 0.69	$ 0.51	$ 0.31	$ 0.19	$ 0.12	$ 0.10	$ 0.11	$ 0.21	$ 0.45	$ 0.86	$ 6.10
Limited Inco	$ 1.42	$ 1.13	$ 0.69	$ 0.51	$ 0.31	$ 0.19	$ 0.12	$ 0.10	$ 0.11	$ 0.21	$ 0.45	$ 0.86	$ 6.10
Schedule 10	$ 1.69	$ 1.35	$ 0.82	$ 0.60	$ 0.37	$ 0.22	$ 0.15	$ 0.12	$ 0.14	$ 0.25	$ 0.53	$ 1.03	$ 7.26

Exhibit K-4 Schedule 191 LI DSM Tariff Calculations

	Usage											
	200601	200602	200603	200604	200605	200606	200607	200608	200609	200610	200611	200612	12 Month Total
RevClsDesc	18.23%	17.26%	12.46%	9.22%	5.66%	3.38%	2.25%	1.82%	2.08%	3.82%	8.12%	15.70%	
LIHEAP/LIRAP	127	120	87	64	39	24	16	13	15	27	56	109	696
	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.01795	$ 0.01795	
	$ 0.52	$ 0.49	$ 0.36	$ 0.26	$ 0.16	$ 0.10	$ 0.06	$ 0.05	$ 0.06	$ 0.11	$ 1.01	$ 1.96	$ 5
Limited Income	127	120	87	64	39	24	16	13	15	27	56	109	696
	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.01795	$ 0.01795	
	$ 0.52	$ 0.49	$ 0.36	$ 0.26	$ 0.16	$ 0.10	$ 0.06	$ 0.05	$ 0.06	$ 0.11	$ 1.01	$ 1.96	$ 5
Schedule 101	151	143	103	76	47	28	19	15	17	32	67	130	828
	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.00412	$ 0.01795	$ 0.01795	
	$ 0.62	$ 0.59	$ 0.42	$ 0.31	$ 0.19	$ 0.12	$ 0.08	$ 0.06	$ 0.07	$ 0.13	$ 1.21	$ 2.33	$ 6

LIHEAP/LIRAP	$ 0.52	$ 0.49	$ 0.36	$ 0.26	$ 0.16	$ 0.10	$ 0.06	$ 0.05	$ 0.06	$ 0.11	$ 1.01	$ 1.96	$ 5.16
Limited Income	$ 0.52	$ 0.49	$ 0.36	$ 0.26	$ 0.16	$ 0.10	$ 0.06	$ 0.05	$ 0.06	$ 0.11	$ 1.01	$ 1.96	$ 5.16
Schedule 101	$ 0.62	$ 0.59	$ 0.42	$ 0.31	$ 0.19	$ 0.12	$ 0.08	$ 0.06	$ 0.07	$ 0.13	$ 1.21	$ 2.33	$ 6.14

Exhibit K-4 Schedule 191 LI DSM Tariff Calculations

	Usage												
	200701	200702	200703	200704	200705	200706	200707	200708	200709	200710	200711	200712	12 Month Total
RevClsDesc	18.23%	17.26%	12.46%	9.22%	5.66%	3.38%	2.25%	1.82%	2.08%	3.82%	8.12%	15.70%	
LIHEAP/LIRA	127	120	87	64	39	24	16	13	15	27	56	109	696
	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	
	$ 2.28	$ 2.16	$ 1.56	$ 1.15	$ 0.71	$ 0.42	$ 0.28	$ 0.23	$ 0.26	$ 0.48	$ 1.01	$ 1.96	
Limited Incon	127	120	87	64	39	24	16	13	15	27	56	109	696
	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	
	$ 2.28	$ 2.16	$ 1.56	$ 1.15	$ 0.71	$ 0.42	$ 0.28	$ 0.23	$ 0.26	$ 0.48	$ 1.01	$ 1.96	
Schedule 101	151	143	103	76	47	28	19	15	17	32	67	130	828
	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	
	$ 2.71	$ 2.57	$ 1.85	$ 1.37	$ 0.84	$ 0.50	$ 0.33	$ 0.27	$ 0.31	$ 0.57	$ 1.21	$ 2.33	

LIHEAP/LIRA	$ 2.28	$ 2.16	$ 1.56	$ 1.15	$ 0.71	$ 0.42	$ 0.28	$ 0.23	$ 0.26	$ 0.48	$ 1.01	$ 1.96	$ 12.49
Limited Incor	$ 2.28	$ 2.16	$ 1.56	$ 1.15	$ 0.71	$ 0.42	$ 0.28	$ 0.23	$ 0.26	$ 0.48	$ 1.01	$ 1.96	$ 12.49
Schedule 101	$ 2.71	$ 2.57	$ 1.85	$ 1.37	$ 0.84	$ 0.50	$ 0.33	$ 0.27	$ 0.31	$ 0.57	$ 1.21	$ 2.33	$ 14.86

Exhibit K-4 Schedule 191 LI DSM Tariff Calculations

	Usage												
	200801	200802	200803	200804	200805	200806	200807	200808	200809	200810	200811	200812	12 Month Total
RevClsDesc	18.23%	17.26%	12.46%	9.22%	5.66%	3.38%	2.25%	1.82%	2.08%	3.82%	8.12%	15.70%	
LIHEAP/LIRAP	127	120	87	64	39	24	16	13	15	27	56	109	696
	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	
	$ 2.28	$ 2.16	$ 1.56	$ 1.15	$ 0.71	$ 0.42	$ 0.28	$ 0.23	$ 0.26	$ 0.48	$ 1.01	$ 1.96	
Limited Income DSI	127	120	87	64	39	24	16	13	15	27	56	109	696
	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	
	$ 2.28	$ 2.16	$ 1.56	$ 1.15	$ 0.71	$ 0.42	$ 0.28	$ 0.23	$ 0.26	$ 0.48	$ 1.01	$ 1.96	
Schedule 101	151	143	103	76	47	28	19	15	17	32	67	130	828
	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	0.01795	
	$ 2.71	$ 2.57	$ 1.85	$ 1.37	$ 0.84	$ 0.50	$ 0.33	$ 0.27	$ 0.31	$ 0.57	$ 1.21	$ 2.33	

LIHEAP/LIRAP	$ 2.28	$ 2.16	$ 1.56	$ 1.15	$ 0.71	$ 0.42	$ 0.28	$ 0.23	$ 0.26	$ 0.48	$ 1.01	$ 1.96	$ 12.49
Limited Income DS	$ 2.28	$ 2.16	$ 1.56	$ 1.15	$ 0.71	$ 0.42	$ 0.28	$ 0.23	$ 0.26	$ 0.48	$ 1.01	$ 1.96	$ 12.49
Schedule 101	$ 2.71	$ 2.57	$ 1.85	$ 1.37	$ 0.84	$ 0.50	$ 0.33	$ 0.27	$ 0.31	$ 0.57	$ 1.21	$ 2.33	$ 14.86

Exhibit K-5 Avista Population Estimate

The number of Schedule 101 residential customers gas only. Accounts were open prior to 1-1-07 and still open as of 12-31-07

Zip Code	# Of Accounts
98620	598
98648	239
98857	10
99001	202
99003	17
99004	1,316
99005	464
99006	278
99014	6
99016	456
99019	5
99021	282
99022	158
99023	96
99025	253
99026	949
99027	165
99029	1
99031	3
99036	36
99037	2,518
99101	1
99109	585
99110	2
99111	12
99113	1
99114	20
99122	28
99134	7
99141	4
Sum	8,712

Zip Code	# Of Accounts
99143	2
99148	79
99159	7
99161	5
99163	55
99164	1
99169	9
99171	11
99179	2
99201	48
99202	84
99203	21
99204	46
99205	44
99206	3,554
99207	40
99208	72
99212	47
99214	1
99216	2,113
99217	272
99218	12
99223	237
99224	318
99326	114
99341	3
99402	3
99403	74
Sum	7,274

Total 15,986

Schedule 101 residential customers (gas only) who were LIHEAP participants during 2007. Accounts were open prior to 1-1-07 and still open as of 12-31-07

Zip Code	# of Accts
98620	29
98648	4
99001	28
99003	2
99004	20
99005	6
99006	6
99016	10
99026	4
99037	30
99109	57
99161	2
99201	2
99202	32
99205	2
99206	84
99207	2
99212	2
99216	64
99217	2
99224	2
Sum	390
%	2.4%

Exhibit K-5 Avista Population Estimate

Washington electric only residential accounts. Accounts were open prior to 1-1-07 and still open as of 12-31-07

ZIP	# of Accts
98857	2
99001	106
99003	573
99004	229
99005	508
99006	1,055
99008	206
99009	423
99012	366
99013	463
99014	115
99016	1,004
99018	83
99019	652
99020	33
99021	646
99022	1,070
99025	413
99026	334
99027	993
99029	276
99030	259
99031	75
99032	156
99033	375
99034	20
99037	11
99039	63
99040	297
99101	650
99102	92
99103	144
99104	7
99107	8
99109	1,071
99110	134
99111	628
99113	100
99114	4,015
99117	125
99122	339
99125	92
99126	367
99127	9
99128	96
99129	350
99130	322
99131	97
Sum	19,452

ZIP	# of Accts
99134	97
99137	220
99138	720
99141	1,987
99143	74
99146	35
99148	1,025
99149	109
99151	79
99157	388
99158	204
99159	179
99160	68
99161	244
99163	3,007
99164	24
99167	348
99169	230
99170	163
99171	143
99173	627
99174	86
99176	40
99179	79
99181	1,009
99185	599
99201	1,411
99202	2,401
99203	1,756
99204	2,529
99205	3,598
99206	1,720
99207	3,174
99208	3,608
99211	1
99212	2,431
99216	1,121
99217	1,602
99218	1,142
99223	2,522
99224	1,936
99335	3
99341	177
99344	2,682
99371	141
99402	204
99403	2,115
Sum	48,058

Total 67,510

Exhibit K-5 Avista Population Estimate

Washington electric & gas residential accounts.
Accounts were open prior to 1-1-07 and still open as of 12-31-07

Zip	# of Accts
99001	214
99003	306
99004	7
99005	1,290
99006	939
99014	2
99016	2,315
99019	2,052
99021	1,364
99022	1,040
99025	604
99026	455
99027	1,044
99029	157
99031	86
99032	126
99037	32
99101	8
99102	148
99109	292
99110	5
99111	775
99113	128
99114	1,412
99122	411
99125	115
99134	130
99141	543
Sum	16,000

Zip	# of Accts
99143	117
99148	380
99159	265
99161	336
99163	3,178
99164	2
99169	533
99170	160
99171	189
99179	89
99181	27
99201	1,793
99202	3,359
99203	6,064
99204	1,259
99205	11,764
99206	3,849
99207	6,645
99208	11,879
99212	4,831
99216	1,852
99217	3,091
99218	3,160
99223	7,087
99224	1,670
99341	118
99402	313
99403	5,057
Sum	79,067

Total 95,067

Exhibit K-5 Avista Population Estimate

Table K1 Limited Income Households in Avista's Territory	Customer Type				
Threshold	Gas-Only	Combo Gas-Electric	Gas	Electric-Only	Total
125% of Poverty	2,324	15,324	17,648	13,267	30,915
Total Avista Population	15,986	95,067	111,053	67,510	178,563
% Limited Income	14.5%	16.1%	15.9%	19.7%	17.3%

Exhibit K-6 Limited Income Decoupling Deferrals

Limited Income Customers	17,648
Average LI Annual Usage (therms)	696
Total LI 2007 Annual Usage (therm	12,283,008
Total Schedule 101 2007 Usage	115,583,967
LI % of Schedule 101 Usage	10.6%

Summary

Table K-12 Limited Income Decoupling Deferral Cost		
	2007	***2008***
Limited Income	$95,655	$71,573
Schedule 101	$900,119	$673,508
Proportion of Schedule 101	**10.6%**	

Exhibit K-7 DSM and Bill Assistance Participation

Data Request Set #9

1. For 2007, please provide the quantity of participants for Washington gas customers for each of the following:

- Limited Income gas DSM programs
- LIRAP bill assistance
- LIHEAP bill assistance
- Customers participating in one or more of the three methods of assistance above.

RESPONSE

# of Participants – Limited Income Natural Gas DSM programs (please note that these customer counts for do not include DSM-funded 'light touches', such as weather-stripping in LIRAP, ConEd packages and the like.

A. Calendar Year 2007 – **161** Participants
B. Heating Season (May 1, 2006-April 30, 2007) - **215** Participants

LIRAP bill assistance

A. Calendar Year 2007 – **2,166** Participants
B. Heating Season (May 1, 2006-April 30, 2007) – **2,740** Participants

LIHEAP bill assistance

A. Calendar Year 2007 – **1,970** Participants
B. Heating Season (May 1, 2006-April 30, 2007) – **2,664** Participants

Customers participating in one or more of the three methods of assistance above

A. Calendar Year 2007 – **54** accounts who received LI DSM also received either a LIRAP Heat or LIHEAP grant.
B. Heating Season (May 1, 2006-April 30, 2007) - **59** accounts who received LI DSM also received either a LIRAP Heat or LIHEAP grant.

Keep in mind that during the Heating Season, customers can only get either a LIRAP heat grant, or a LIHEAP grant, not both. So, for the heating season noted above, **5,560** unique accounts received LI DSM, LIRAP heat, or LIHEAP assistance (215-59+2740+2664). This same calculation can not be completed for the calendar year because accounts could have received multiple grants given the spread over two heating seasons.

Exhibit K-8 LIRAP Distribution

DJ 213 - Revenue Grants given to Agencies

DJ 213 - Revenue Grants given to Agencies

	Electric Billed Revenue	Gas Billed Revenue	Electric By Year	Gas By Year
May-01	$ 140,325.23	$ 70,368.32		
Jun-01	$ 126,671.57	$ 38,339.98		
Jul-01	$ 130,358.22	$ 27,041.08		
Aug-01	$ 135,604.94	$ 21,881.08		
Sep-01	$ 137,217.98	$ 22,574.55		
Oct-01	$ 133,652.48	$ 36,925.57		
Nov-01	$ 133,085.03	$ 79,014.64		
Dec-01	$ 154,018.39	$ 124,715.03	**$ 1,090,933.84**	**$ 420,860.25**
Jan-02	$ 174,650.74	$ 166,387.86		
Feb-02	$ 164,564.67	$ 154,742.11		
Mar-02	$ 158,144.55	$ 145,217.68		
Apr-02	$ 145,198.51	$ 110,916.31		
May-02	$ 132,758.63	$ 68,913.90		
Jun-02	$ 128,607.22	$ 41,555.17		
Jul-02	$ 127,243.02	$ 25,108.44		
Aug-02	$ 140,100.17	$ 20,943.45		
Sep-02	$ 139,825.82	$ 23,539.40		
Oct-02	$ 132,201.23	$ 38,338.34		
Nov-02	$ 145,494.51	$ 96,872.94		
Dec-02	$ 161,388.49	$ 131,734.28	**$ 1,750,177.56**	**$ 1,024,269.89**
Jan-03	$ 168,374.38	$ 142,685.92		
Feb-03	$ 150,923.16	$ 128,598.55		
Mar-03	$ 154,354.74	$ 132,312.34		
Apr-03	$ 145,341.74	$ 100,852.12		
May-03	$ 137,988.29	$ 72,067.81		
Jun-03	$ 138,170.45	$ 42,294.96		
Jul-03	$ 135,122.94	$ 25,017.26		
Aug-03	$ 149,355.96	$ 20,688.00		
Sep-03	$ 146,713.62	$ 27,610.85		
Oct-03	$ 137,234.03	$ 48,502.02		
Nov-03	$ 144,510.48	$ 125,519.58		
Dec-03	$ 172,310.17	$ 221,075.68	**$ 1,780,399.95**	**$ 1,087,225.08**
Jan-04	$ 187,287.48	$ 265,292.42		
Feb-04	$ 165,873.34	$ 215,676.30		
Mar-04	$ 154,460.63	$ 176,107.29		
Apr-04	$ 141,070.11	$ 108,271.13		
May-04	$ 131,712.04	$ 73,409.78		
Jun-04	$ 131,012.82	$ 54,546.85		
Jul-04	$ 138,489.40	$ 36,682.42		
Aug-04	$ 162,649.15	$ 32,148.96		
Sep-04	$ 145,715.90	$ 37,346.52		
Oct-04	$ 137,131.81	$ 54,073.27		
Nov-04	$ 143,499.11	$ 122,198.37		
Dec-04	$ 167,825.65	$ 191,205.60	**$ 1,806,727.43**	**$ 1,366,958.90**
Jan-05	$ 184,821.98	$ 233,647.30		
Feb-05	$ 173,984.31	$ 183,810.08		
Mar-05	$ 155,190.90	$ 118,781.11		
Apr-05	$ 144,736.52	$ 93,566.26		
May-05	$ 137,490.28	$ 55,129.05		
Jun-05	$ 136,321.94	$ 36,892.34		
Jul-05	$ 138,591.26	$ 27,856.70		
Aug-05	$ 150,851.07	$ 22,155.96		
Sep-05	$ 147,140.44	$ 24,622.18		
Oct-05	$ 145,357.19	$ 45,212.68		
Nov-05	$ 144,424.81	$ 80,382.69		
Dec-05	$ 182,266.41	$ 169,022.15	**$ 1,841,177.12**	**$ 1,091,078.50**
Jan-06	$ 360,945.21	$ 303,220.77		
Feb-06	$ 170,461.72	$ 168,599.38		
Mar-06	$ 165,853.91	$ 169,854.56		
Apr-06	$ 150,878.45	$ 124,103.87		
May-06	$ 140,314.20	$ 84,578.28		
Jun-06	$ 141,858.12	$ 58,204.21		
Jul-06	$ 146,350.93	$ 49,995.76		
Aug-06	$ 158,437.15	$ 46,341.31		
Sep-06	$ 162,101.07	$ 51,433.25		
Oct-06	$ (44,599.20)	$ 259,851.19		
Nov-06	$ 166,694.99	$ 97,842.17		
Dec-06	$ 196,971.96	$ 166,196.15	**$ 1,916,268.53**	**$ 1,580,220.89**
Jan-07	$ 39,109.20	$ 932,169.19		
Feb-07	$ 190,909.94	$ 179,461.67		
Mar-07	$ 161,276.78	$ 125,534.74		
Apr-07	$ 148,496.67	$ 86,862.50		
May-07	$ 138,222.47	$ 56,829.56		
Jun-07	$ 144,779.30	$ 36,057.14		
Jul-07	$ 145,239.52	$ 24,949.24		
Aug-07	$ 164,697.85	$ 20,619.14		
Sep-07	$ 154,120.21	$ 24,280.59		
Oct-07	$ 144,270.48	$ 42,544.59		
Nov-07	$ 155,008.76	$ 83,540.38		
Dec-07	$ 186,359.33	$ 155,938.69	**$ 1,772,490.52**	**$ 1,768,787.42**
Jan-08	$ 212,721.71	$ 191,477.47		
Feb-08	$ 257,336.22	$ 236,554.15		
Mar-08	$ 212,768.42	$ 158,926.30		
Apr-08	$ 208,371.72	$ 146,476.11		
May-08	$ 187,561.11	$ 96,217.25		
Jun-08	$ 180,920.07	$ 50,115.06		
Jul-08	$ 184,937.55	$ 34,282.71		
Aug-08	$ 208,852.29	$ 28,010.90		
Sep-08	$ 207,035.00	$ 31,720.96	**$ 1,860,504.09**	**$ 973,780.91**
Oct-08				
	$ 13,818,679.04	$ 9,313,181.84	**$ 13,818,679.04**	**$ 9,313,181.84**

Exhibit K-9 Williams Pipeline Settlement

With respect to Titus DR # 3 of the Energy Project:

With regard to the [Williams] pipeline settlement funds we are able to provide the following information:

The settlement funds were set up to return funds to rate payers according to three different income levels. Tier 1 were households with incomes below 126% of the federal poverty guidelines (FPG); Tier 2 served households with incomes from 126% to 200% of the FPG; Tier 3 served households with incomes above 200% FPG. Different levels of assistance were available for the different tiers. Tier 1 corresponds to the population served by the utility's low-income energy efficiency programs. The funds were expended from October 2004 through December 2006.

Three agencies in Avista's service territory used funds for energy efficiency purposes by providing funds to purchase energy efficient refrigerators.

Whitman CAC

Tier 1	56 units	$35,500.75
Tier 2	40 units	$19,645.63
Tier 3	25 units	$10, 301

Spokane Neighborhood Action Programs

Tier 1	244 units	$146,809.19
Tier 2	180 units	$108,211.54
Tier 3	734 units	$283,476.72

Rural Resources

Tier 1	44 units	$20,724

Two agencies provided bill payment assistance with the funds.

Spokane Neighborhood Action Programs

Tier 2	63 units	$33,827.31

North Columbia CAC

Tier 1	119 units	$50,800
Tier 2	10 units	$2,040

Exhibit K-10 Average LIRAP-LIHEAP Participant Schedule 159 Surcharge

LIHEAP/LIRAP Customer	696
Average LI Annual Usage (tl	696
Total LI Annual Usage (therr	696

Typical 101 Usage Profile		LI Usage
Jan	17.9%	124
Feb	16.8%	117
Mar	13.0%	90
Apr	9.4%	65
May	5.7%	40
Jun	3.3%	23
Jul	2.2%	15
Aug	1.8%	13
Sep	2.1%	15
Oct	3.8%	26
Nov	8.3%	57
Dec	15.8%	110

	Limited Income		
2007-2008	Usage	Decoupling Recovery Rate	Decoupling Recovery Revenue
Nov	57	0.00257	$0.15
Dec	110	0.00257	$0.28
Jan	124	0.00257	$0.32
Feb	117	0.00257	$0.30
Mar	90	0.00257	$0.23
Apr	65	0.00257	$0.17
May	40	0.00257	$0.10
Jun	23	0.00257	$0.06
Jul	15	0.00257	$0.04
Aug	13	0.00257	$0.03
Sep	15	0.00257	$0.04
Oct	26	0.00257	$0.07
2007 Totals			**$ 1.79**

	Limited Income		
2008-2009	Usage	Decoupling Rate	Decoupling Recovery Revenue
Nov	57	0.00593	$0.34
Dec	110	0.00593	$0.65
Jan	124	0.00593	$0.74
Feb	117	0.00593	$0.69
Mar	90	0.00593	$0.53
Apr	65	0.00593	$0.39
May	40	0.00593	$0.23
Jun	23	0.00593	$0.14
Jul	15	0.00593	$0.09
Aug	13	0.00593	$0.07
Sep	15	0.00593	$0.09
Oct	26	0.00593	$0.16
2008 Totals			**$3.13**

Average LIRAP/LIHEAP Participant Schedule 159 Surcharge		
Nov '07 to Oct '08	$	1.79
Nov '08 to Oct '09		$3.13

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION Complainant, v. AVISTA CORPORATION d/b/a AVISTA UTILITIES Respondent.	)	DOCKET UE-080416 and DOCKET UG-080417 MULTIPARTY SETTLEMENT STIPULATION

I. PARTIES

1. This Multiparty Settlement Stipulation is entered into by Avista Corporation ("Avista" or the "Company"), the Staff of the Washington Utilities and Transportation Commission ("Staff"), Northwest Industrial Gas Users ("NWIGU"), and The Energy Project, jointly referred to herein as the "Stipulating Parties." The Industrial Customers of Northwest Utilities ("ICNU"), while a signatory, only joins in those portions of the Stipulation identified below. The Public Counsel Section of the Washington Office of Attorney General ("Public Counsel") does not join in. The Stipulating Parties agree that this Multiparty Settlement Stipulation is in the public interest and should be accepted as a full resolution of all issues in these Dockets. ICNU agrees to resolve the issues identified below, but opposes the position that this Multiparty Settlement should resolve all

issues in these Dockets. The Stipulating Parties understand this Multiparty Settlement Stipulation is subject to Commission approval.

II. INTRODUCTION

2. On March 4, 2008, Avista filed with the Commission certain tariff revisions designed to effect general rate increases for electric service (Docket UE-080416) and natural gas service (Docket UG-080417) in the State of Washington. Avista requests an increase in electric rates of $36.6 million, or 10.3 percent, and an increase in natural gas rates of $6.6 million or 3.3 percent. On March 6, 2008, the Commission entered Order 01 suspending the tariff revisions and consolidating Dockets UE-080416 and UG-080417 for hearing and determination pursuant to WAC 480-07-320. A Prehearing Conference Order (Order 02) issued on April 3, 2008, which, inter alia, established a procedural schedule. On July 25, 2008, the Company filed supplemental pre-filed direct testimony and exhibits to reflect a revised electric service revenue requirement of $47.4 million; the Company, however, did not otherwise revise its tariff filing to reflect these changes. Representatives of all parties appeared at the August 20, 2008 Settlement Conference, which was held for the purpose of narrowing the contested issues in this proceeding. Subsequently, the parties participated in telephonic Settlement Conferences on August 29, 2008, September 4, 2008, September 8, 2008, and September 9, 2008.

3. The Stipulating Parties have reached a Multiparty Settlement Stipulation on all issues in this proceeding and wish to present their agreement for the Commission's consideration. The Stipulating Parties therefore adopt the following Multiparty Settlement Stipulation in the interest of expediting the disposition of this proceeding.

4. ICNU joins with the following identified portions of the Stipulation: Power Supply-Related Adjustments (Section III. A. (a.)); Cost of Capital (Section III. A. (m.)); Rate Spread/Rate Design (Section III. B.); Low Income Bill Assistance Funding (Section III. C.); Demand Side Management (DSM) Expenditures (Section III. D.); and Prudency of Energy Efficiency Expenditures (Section III. E.). ICNU expressly reserves the right to contest other issues that have been resolved among the Stipulating Parties and shall not be foreclosed from raising such additional issues as may be properly within the scope of this proceeding.

III. AGREEMENT

A. Revised Revenue Requirement

5. The Stipulating Parties have agreed to a number of revenue requirement adjustments to both the filed electric and natural gas cases. These are described in the tables set forth immediately below:

SUMMARY TABLE OF ADJUSTMENTS TO ELECTRIC REVENUE REQUIREMENT

000s of Dollars

		Revenue Requirement	Rate Base
Amount As Filed		**$ 36,617**	**$ 950,944**
Adjustments:			
*	Power Supply-Related Adjustments		
	Hydro filtering	(1,597)	0
	WNP-3 Contract (Use of 5-year average availability)	(136)	0
	Fuel (Natural Gas) (Use of $8.30/Dth and include actual short-term transaction through August 25, 2008)	8,486	0
	Colstrip (Correct Colstrip fuel price)	(877)	0
	Noxon Generation Upgrade (Pro Form 2009 capital upgrade project)	1,557	8,714
*	Cost of Capital		
	Adjust return on equity to 10.20%	(4,229)	0
	Adjust cost of debt to 6.51%	1,017	0
	Relicensing/Litigation[1]		
	Relicensing and confidential litigation costs deferred for later recovery, with carrying charge (5.0%); Include amortization of Montana riverbed litigation costs with accrued interest	(8,053)	(37,044)
	Capital Additions		
	Pro form in the capital cost and expenses associated with the major generation and transmission project upgrades	60	14,299
	Customer Deposits		
	Remove customer deposits from Rate Base; include interest as operating expense	(189)	(2,155)
	Federal/Deferred Income Tax Expense		
	Adjust federal and deferred federal income tax expense	405	0
	Incentives		
	Adjust incentives to actual	(415)	0
	Officers' Salaries		
	Adjust officers' salaries for correction of error	(140)	0
	Union and Non-Executives' Salaries		
	Remove union and non-executive 2009 wage increase	(1,188)	0
	Colstrip Generation O&M Expenses		
	Reduce mercury emissions O&M costs	(699)	0
	Administrative and General Expenses		
	Remove sponsorship costs	(109)	0
	Production Property		
	Flow through impact of Production & Transmission adjustments	2,174	4,549
	Restate Debt Interest		
	Flow through impact of Rate Base adjustments	(146)	0
Total Adjustments		**(4,079)**	**(11,637)**
Adjusted Amounts		**$ 32,538**	**$ 939,307**

[1] Please see Andrews' (EMA-1T) unredacted testimony at Pages 23-24.

[*] Denotes concurrence of ICNU

SUMMARY TABLE OF ADJUSTMENTS TO NATURAL GAS REVENUE REQUIREMENT 000s of Dollars		Revenue Requirement	Rate Base
Amount As Filed		**$ 6,587**	**$ 172,957**
Adjustments:			
Cost of Capital			
	Adjust return on equity to 10.20%	(778)	0
	Adjust cost of debt to 6.51%	194	0
Natural Gas Inventory			
	Natural gas inventory included in Rate Base as originally filed	0	0
Capital Additions			
	Remove pro forma capital additions	(666)	(2,506)
Customer Deposits			
	Remove customer deposits from Rate Base; include interest as operating expense	(109)	(1,248)
Federal Income Tax Expense			
	Remove tax deduction	48	0
Incentives			
	Adjust incentives to actual	(109)	0
Officers' Salaries			
	Adjust officers' salaries for correction of error	(37)	0
Union and Non-Executives' Salaries			
	Remove union and non-executive 2009 wage increase	(320)	0
Restate Debt Interest			
	Flow through impact of Rate Base adjustments	(42)	0
Total Adjustments		**(1,819)**	**(3,754)**
Adjusted Amounts		**$ 4,768**	**$ 169,203**

Attached as Appendix 1 are the electric and natural gas Summary of Revenue Requirement Adjustments schedules showing adjusted pro forma results incorporating these agreed-upon adjustments.

a.) Power Supply-Related Adjustments:

(i) Hydro filtering –This adjustment removes the power supply expense from the 50-year average for months when the hydro generation was either higher or lower by more than one standard deviation from the average generation for that month.

(ii) WNP-3 Contract – This adjustment increases the amount of energy purchased under the WNP-3 contract by including 2007 energy purchased in the 5-year average. Increasing the amount of WNP-3 power purchased lowers power supply expense because the WNP-3 price is lower than market power prices in the AURORA model.

(iii) Adjust (Natural Gas) Fuel Costs – This adjustment reflects a pro forma period natural gas price of $8.30/Dth for natural gas-fired generation for the unhedged portion of the 2009 generation. This adjustment also includes the actual 2009 calendar-year wholesale electric and natural gas transactions entered into through August 25, 2008.

(iv) Correct Colstrip Fuel Cost Error – This adjustment corrects a mathematical error in the calculation of the Colstrip coal cost. The correction is designed to properly reflect the 2009 pro forma period fuel price.

(v) Noxon Generation Upgrade – The Noxon upgrade, scheduled for completion in March of 2009, is designed to increase that unit's efficiency by 5%, and provide additional capacity of 7.5 MW. The Company's original filing included the additional generation expected from the upgrade (2.33 average megawatts of additional energy in an average water year) within the Company's Dispatch Model for the rate year, but inadvertently excluded the capital investment for this project from its revenue requirement. The Stipulating Parties agree, for settlement purposes, to include the capital investment and increased generation for ratemaking purposes.

(vi) Modification to Energy Recovery Mechanism (ERM) – This adjustment

incorporates an element of asymmetry in the ERM by giving customers a greater share of the benefits when power expenses are lower than the authorized level. The adjustment changes the sharing level in the second ERM band ($4 million to $10 million) to 75% customer/25% Company when power supply expenses are lower (rebate direction), while maintaining the 50%/50% sharing in the second band when power supply expenses are higher (surcharge direction). This adjustment does not affect the pro forma power supply expense.

b.) Capital Additions:

Capital additions for electric operations shall include capital costs and expenses associated with the major generation and transmission project upgrades. Capital additions for natural gas operations shall include capital costs and expenses associated with the Jackson Prairie expansion project. These capital additions include projects completed during 2007, and projects expected to be completed and transferred to plant-in-service by December 31, 2008, in time for new rates to be in effect. The capital costs have been averaged for their appropriate pro forma period with the associated depreciation expense and property tax, as well as the appropriate accumulated depreciation and deferred income tax rate base offsets.

c.) Customer Deposits:

Customer deposits shall be removed from rate base, and interest on the customer deposits will be included as an operating expense for electric and natural gas operations.

d.) **Federal/Deferred Income Tax Expense:**

The Company's Schedule M tax computation deduction that was incorrectly included in the Company's calculation of taxable income in determining federal income tax expense shall be removed. Also, the proper level of deferred tax expense (DFIT) based on the proper allocation percentage used to calculate allocated DFIT for the test period has been reflected.

e.) **Incentives:**

The incentive calculation shall reflect the actual expenses for the test period instead of the six-year average proposed by the Company.

f.) **Officers' Salaries:**

This adjustment corrects the Company's pro forma adjustment of officers' salaries for an error identified by the Company.

g.) **Union and Non-Executives' Salaries:**

The pro formed 2009 wage increase for union and non-executives shall be removed.

h.) **Colstrip Mercury Emission O&M:**

This adjustment reduces the pro formed 2009 O&M costs associated with the mercury control abatement project at Colstrip. The original system expense amount of the mercury control O&M costs was estimated to be approximately $3 million annually or $250,000 monthly, and this process had been anticipated to start in July 2009. The plan was revised to start this mercury abatement process in November 2009, for a total cost of approximately $465,000 for two months.

i.) **Administrative and General Expenses:**

This adjustment removes non-utility expenses that should have been excluded from utility results within the Company's test period, in its original filing. These expenses are related to costs expended by the Company for sponsorship agreements in support of community affairs.

j.) **Production Property:**

This adjustment corrects an erroneous value in the calculation of the production property adjustment contained within the Company's original filing, representing approximately $2.1 million of this adjustment. The remaining portion of the adjustment is directly linked to all other adjustments in this Multiparty Settlement Stipulation that affect production and transmission related revenues, expenses, and rate base.

k.) **Weather Normalization:**

The Stipulating Parties agree that the use of a rolling 25-year average of normal heating and cooling degree days in the calculation of the weather adjustment is for settlement purposes only, and shall not be deemed as precedent for any other proceeding.

l.) **Natural Gas Inventory:**

The pro formed Jackson Prairie working gas inventory (AMA balance for 2009 pro forma period) shall be included in rate base.

m.) Cost of Capital:

The Stipulating Parties agree to a 10.2% return on equity, and adopt the capital structure as filed by the Company. The cost of debt has been adjusted from 6.38% to 6.51% to reflect actual cost of debt through July 2008 with pro forma adjustments to update the debt cost through December 31, 2008.

Agreed-upon Cost of Capital	Percent of Total Capital	Cost	Component
Total Debt	53.70%	6.51%	3.50%
Common Equity	46.30%	10.20%	4.72%
TOTAL	100.00%		8.22%

n.) Accounting Treatment for Certain Costs:

(i.) Spokane River Relicensing – The Company included in its filing the processing costs associated with its Spokane River relicensing efforts, which expenditures included actual life-to-date costs from April 2001 through December 31, 2007, and 2008 pro forma expenditures through December 31, 2008. (See Andrews' Direct Testimony at page 23.) Although the Company anticipates receiving a final license from the Federal Energy Regulatory Commission ("FERC") in the near future, that has yet to occur. The relicensing costs will remain in CWIP (Construction Work in Progress), and the Company will continue to accrue AFUDC until issuance of the license, at which time the relicensing costs will be transferred to

plant in service and depreciation will begin to be recorded. The Stipulating Parties have agreed that the costs were prudently incurred and have agreed, that once the Company receives the license, to defer as a regulatory asset (in Account 182.3 – Other Regulatory Assets) Washington's share of the depreciation/amortization associated with the aforementioned relicensing costs and related protection, mitigation, or enhancement expenditures, together with a carrying charge on the deferral, as well as a carrying charge on the amount of relicensing costs not yet included in rate base. The annual carrying charge for deferrals and rate base not yet included in establishing rates shall be 5.0%. Any costs that exceed the pro formed costs in this case would be addressed in a separate filing.

(ii.) Confidential Litigation – Company witness Andrews describes the confidential litigation at pages 23 and 24 of her pre-filed direct testimony (unredacted). Although the matter is still pending and has yet to be finally resolved, it is expected to reach resolution in the near future. The Stipulating Parties have agreed that the pro forma costs in this case are prudent and have agreed to defer as a regulatory asset (in Account 182.3 – Other Regulatory Assets) Washington's share of the depreciation/amortization associated with the aforementioned costs with a carrying charge on the deferral as well as a carrying charge on the amount of costs not yet included in rate base for subsequent recovery in rates. The annual carrying charge shall be 5.0%. Any costs that exceed the pro formed costs in this case would be addressed in a separate filing.

(iii.) Montana Riverbed Litigation – On November 11, 2007, Avista filed an Application with the Commission (Docket No.UE-072131) requesting an accounting order authorizing deferral of settlement lease payments and interest accruals relating to the recent settlement of a lawsuit in the State of Montana over the use of the riverbed related to the Company's ownership of the Noxon Rapids and Cabinet Gorge hydroelectric projects located on the Clark Fork River. The Commission, in its Order No. 01, authorized the deferral of settlement lease payments together with interest, at the weighted cost of debt, until the matter was addressed in this general rate filing. The Stipulating Parties have agreed to the Company's requested amortization of costs, together with recovery of accrued interest on the Washington share of deferrals at the weighted cost of debt, net of related deferred tax benefit.

6. ERM Authorized Level of Expense. Appendix 2 sets forth the agreed-upon level of power supply expense, retail load and revenue credit resulting from this Stipulation, that will be used in the monthly Energy Recovery Mechanism ("ERM") calculations.

7. Decoupling Baseline. Pursuant to the Commission's order adopting the Avista decoupling pilot, In Re Petition of Avista Corp., Order 04, Docket UG-060518, para. 49, the baseline for the decoupling mechanism has been updated so as to use the test year employed in this rate case proceeding. (See Settlement Agreement, Docket UG-060518, supra, section III. C. (6.)). The update of the baseline is reflected in Appendix 3.

B. Rate Spread/Rate Design:

8. The Stipulating Parties agree to apply a uniform percentage increase across the electric

service schedules for purposes of recovering Avista's revenue requirement. Appendix 4 shows the impact on each electric and natural gas service schedule of the spread of the proposed increase. The residential basic charge for electric and natural gas residential customers would be increased from $5.50 to $5.75 per month.

9. For Extra Large General Service Schedule 25 Rate Design, the Stipulating Parties agree with the following rate design recommendations for Schedule 25: The Company's proposed Schedule 25 demand charges should be adopted. The first and second energy block rates shall be increased by a uniform percentage. The increase applied to the third energy block rate shall be 2.0 percent less than the percentage increase applied to the first and second block rates as shown on Page 2 of Appendix 4. This Schedule 25 rate design formula shall apply to the final revenue requirement in this case, regardless of whether it is different from the revenue requirement in Appendix 4.

10. For natural gas, the Stipulating Parties agree that the final revenue requirement shall be spread across natural gas service schedules in the same proportion to the Company's filed rate spread proposal as set forth in column (d), Page 1 of 3, Exhibit (BJH-7). (See Appendix 4, Page 3)

C. Low Income Bill Assistance Funding:

11. The Stipulating Parties agree to adjust the LIRAP portion of the tariff riders (Schedules 91 and 191) to provide an increase in annual funding of $500,000. With this increase, the annual funding level for electric low income customers will be $2,864,000, and for natural gas customers will be $1,580,000. Appendix 5 identifies the tariff rider adjustments to schedule 91 and 191 (in ¢/kwh or ¢/therm) to reflect increased levels of funding for LIRAP and DSM (as discussed below).

D. Demand Side Management (DSM) Expenditures:

12. The Stipulating Parties agree to increase low income DSM by $350,000 over and above existing funding level of $1,132,000, and to adjust the Tariff Rider Adjustment Schedules (91 and 191) accordingly. For purposes of program administration, the total funding level of $1,482,000 for low income DSM includes amounts that may be dedicated to energy-related health and safety measures, the expenditures for which shall not exceed fifteen (15%) percent of overall actual low-income DSM expenditures. The Company and The Energy Project agree to work with participating low income agencies on the development of contract provisions to assure that the combined portfolio of electric and natural gas low-income DSM expenditures remain cost-effective. The Company will provide the External Energy Efficiency ("Triple-E") board with enhanced reporting on the status of the limited income portfolio on a quarterly basis and as part of the biannual meetings of the board.

E. Prudency of Energy Efficiency Expenditures:

13. The Stipulating Parties agree that Avista's expenditures for electric and natural gas efficiency programs for the period January 1, 2007 through December 31, 2007 have been prudently incurred.

F. Effective Date:

14. As an integral part of this settlement, the Stipulating Parties have agreed that the new rates shall be implemented on January 1, 2009, and will support a modification of the procedural schedule to accommodate such a date. ICNU is not in agreement with the proposed effective date for new rates.

IV. EFFECT OF THE MULTIPARTY SETTLEMENT STIPULATION

15. Binding on Parties. The Stipulating Parties agree to support the terms of the Multiparty

Settlement Stipulation throughout this proceeding, including any appeal, and recommend that the Commission issue an order adopting the Multiparty Settlement Stipulation contained herein. The Stipulating Parties understand that this Multiparty Settlement Stipulation is subject to Commission approval. The Stipulating Parties agree that this Multiparty Settlement Stipulation represents a compromise in the positions of the Stipulating Parties. As such, conduct, statements and documents disclosed in the negotiation of this Multiparty Settlement Stipulation shall not be admissible evidence in this or any other proceeding.

16. Integrated Terms of Multiparty Settlement. The Stipulating Parties have negotiated this Multiparty Settlement Stipulation as an integrated document. Accordingly, the Stipulating Parties recommend that the Commission adopt this Multiparty Settlement Stipulation in its entirety. Each Stipulating Party has participated in the drafting of this Multiparty Settlement Stipulation, so it should not be construed in favor of, or against, any particular Party.

17. Procedure. The Stipulating Parties shall cooperate in submitting this Multiparty Settlement Stipulation promptly to the Commission for acceptance. The Stipulating Parties shall make available a witness or representative in support of this Multiparty Settlement Stipulation. The Stipulating Parties agree to cooperate, in good faith, in the development of such other information as may be necessary to support and explain the basis of this Multiparty Settlement Stipulation and to supplement the record accordingly.

The Stipulating Parties agree to stipulate into evidence the prefiled direct testimony and exhibits of the Company as they relate to the stipulated issues, together with such evidence in support of the Stipulation as may be offered at the time of the hearing on the Multiparty Settlement.

If the Commission rejects all or any material portion of this Multiparty Settlement Stipulation, or adds additional material conditions, each Stipulating Party reserves the right, upon written notice to the Commission and all parties to this proceeding within seven (7) days of the date of the Commission's Order, to withdraw from the Multiparty Settlement Stipulation. If any Stipulating Party exercises its right of withdrawal, this Multiparty Settlement Stipulation shall be void and of no effect, and the Stipulating Parties will support a joint motion for an expedited procedural schedule to address the issues that would otherwise have been settled herein.

18. Advance Review of News Releases. All Stipulating Parties agree:

(i.) to provide all other Stipulating Parties the right to review in advance of publication any and all announcements or news releases that any other Stipulating Party intends to make about the Multiparty Settlement Stipulation. This right of advance review includes a reasonable opportunity for a Stipulating Party to request changes to the text of such announcements. However, no Stipulating Party is required to make any change requested by another Stipulating Party; and

(ii.) to include in any news release or announcement a statement that Staff's recommendation to approve the settlement is not binding on the Commission itself. This subsection does not apply to any news release or announcement that otherwise makes no reference to Staff.

19. No Precedent. The Stipulating Parties enter into this Multiparty Settlement Stipulation to avoid further expense, uncertainty, and delay. By executing this Multiparty Settlement Stipulation, no Stipulating Party shall be deemed to have accepted or consented to the facts, principles, methods

or theories employed in arriving at the Multiparty Settlement Stipulation, and, except to the extent expressly set forth in the Multiparty Settlement Stipulation, no Stipulating Party shall be deemed to have agreed that such a Multiparty Settlement Stipulation is appropriate for resolving any issues in any other proceeding.

20. Public Interest. The Stipulating Parties agree that this Multiparty Settlement Stipulation is in the public interest.

21. Execution. This Multiparty Settlement Stipulation may be executed by the Stipulating Parties in several counterparts and as executed shall constitute one Multiparty Settlement Stipulation.

Entered into this 15th day of September, 2008

Company: By: _____

David J. Meyer
VP, Chief Counsel for Regulatory and
Governmental Affairs

Staff: By: _____

Gregory J. Trautman
Assistant Attorney General

or theories employed in arriving at the Multiparty Settlement Stipulation, and, except to the extent expressly set forth in the Multiparty Settlement Stipulation, no Stipulating Party shall be deemed to have agreed that such a Multiparty Settlement Stipulation is appropriate for resolving any issues in any other proceeding.

20. Public Interest. The Stipulating Parties agree that this Multiparty Settlement Stipulation is in the public interest.

21. Execution. This Multiparty Settlement Stipulation may be executed by the Stipulating Parties in several counterparts and as executed shall constitute one Multiparty Settlement Stipulation.

Entered into this 15th day of September, 2008

Company: By: _____

David J. Meyer
VP, Chief Counsel for Regulatory and
Governmental Affairs

Staff: By: _____

Gregory J. Trautman
Assistant Attorney General

NWIGU: By: _____

Chad M. Stokes
Cable Huston Benedict
Haagensen & Lloyd LLP

ICNU: By: _____

S. Bradley Van Cleve
Davison Van Cleve, P.C.

The Energy Project: By: _____

Ronald Roseman
Attorney at Law

NWIGU: By: _____

Chad M. Stokes
Cable Huston Benedict
Haagensen & Lloyd LLP

ICNU: By: S. Bradley Van Cleve

S. Bradley Van Cleve
Davison Van Cleve, P.C.

The Energy Project: By: _____

Ronald Roseman
Attorney at Law

Exhibit K-11 UG-080416 Settlement Agreement and Appendix 5

NWIGU: By: _____

Chad M. Stokes
Cable Huston Benedict
Haagensen & Lloyd LLP

ICNU: By: _____

S. Bradley Van Cleve
Davison Van Cleve, P.C.

The Energy Project: By: _____

Ronald Roseman
Attorney at Law

APPENDIX 5
Avista Corporation
Rate Adjustments to Schedules 91 and 191
to Reflect Increased Levels of Funding for LIRAP/DSM

A. Schedule 91 (Electric) Tariff Rider Adjustment:
The Schedule 91 (electric) rates are revised to reflect the provisions in Section C, Paragraph 11 and Section D, Paragraph 12 of the Multiparty Settlement Stipulation related to LIRAP and DSM funding.

	DSM Rate (¢/kWh) [1]		LIRAP Rate (¢/kWh) [1]	
Schedule	Current	Proposed	Current	Proposed
1	$0.00181	$0.00186	$0.00048	$0.00053
11 & 12	$0.00256	$0.00263	$0.00068	$0.00074
21 & 22	$0.00189	$0.00194	$0.00050	$0.00055
25	$0.00124	$0.00127	$0.00033	$0.00036
31 & 32	$0.00167	$0.00173	$0.00044	$0.00048
*41-48	--	--	--	--

B. Schedule 191 (Natural Gas) Tariff Rider Adjustment:
The Schedule 191 (natural gas) rates are revised to reflect the provisions in Section C, Paragraph 11 and Section D, Paragraph 12 of the Multiparty Settlement Stipulation related to LIRAP and DSM funding.

	DSM Rate ($/Therm) [2]		LIRAP Rate ($/Therm) [2]	
Schedule	Current	Proposed	Current	Proposed
101	$0.01795	$0.01837	$0.00808	$0.00962
111 & 112	$0.01580	$0.01617	$0.00698	$0.00831
121 & 122	$0.01479	$0.01514	$0.00645	$0.00768
131 & 132	$0.01429	$0.01463	$0.00624	$0.00743

* The rates for street and area lights (Schedules 41-48) will also increase to correspond with the overall percentage increase in ¢/kWh for other schedules reflected in the table above.

(1) These energy charges are designed to provide an additional $280,000 of annual DSM funding and an additional $247,000 of annual LIRAP funding.

(2) These therm charges are designed to provide an additional $70,000 of annual DSM funding and an additional $253,000 of annual LIRAP funding.

DAVIDSON COMPANIES
D.A. Davidson & Co.
member SIPC

Institutional Equity Research

AVISTA CORP.

November 2, 2006

AVA – NYSE

Rating:
NEUTRAL

Price: (11/1/06) $25.24

Price Targets:
12-18 month: $25.50
5-year: $30.00

Industry:
Utilities

James L. Bellessa, Jr., CFA
406.791.7230
jbellessa@dadco.com

Bryan H. Nicholls
Research Associate
406.791.7240
bnicholls@dadco.com

FY (Dec)	2005A[1]	2006E	Y-O-Y Growth	2007E	Y-O-Y Growth
Revenue ($M)	$1,359.6	$1,525.6	12%	$1,571.3	3%
Previous		$1,529.3		$1,580.6	
Price/Revenue ratio	.9x	.8x		.8x	
EPS Revised	**$0.92**	**$1.47**	59%	**$1.52**	4%
Previous		$1.49		$1.68	
Price/EPS ratio	27.4x	17.2x		16.6x	
EBITDA ($M)	$238.9	$285.1	19%	$300.2	5%
EV/EBITDA ratio	9.9x	8.3x		7.9x	

Quarterly Data:	EPS	EPS Previous	Revenue ($M)	Revenue Previous	EBITDA ($M)
3/31/06A	**$0.64**	-	$499.2	-	$93.4
6/30/06A	**$0.27**	-	$287.4	-	$64.0
9/30/06A	**$0.20**	$0.16	$293.0	$292.7	$55.7
12/31/06E	**$0.36**	$0.42	$446.0	$450.0	$72.0

[1] Includes a 2Q'05 gain of $0.04/sh. from South Lake Tahoe divestiture.

Valuation Data

Long-term growth rate (E)	5%
Total Debt/Cap (9/30/06)	59.3%
Cash per share (9/30/06)	$1.19
Book value per share (9/30/06)	$16.66
Dividend (yield)	$0.58 (2.3%)
Return on Equity (T-T-M)	10%

Trading Data

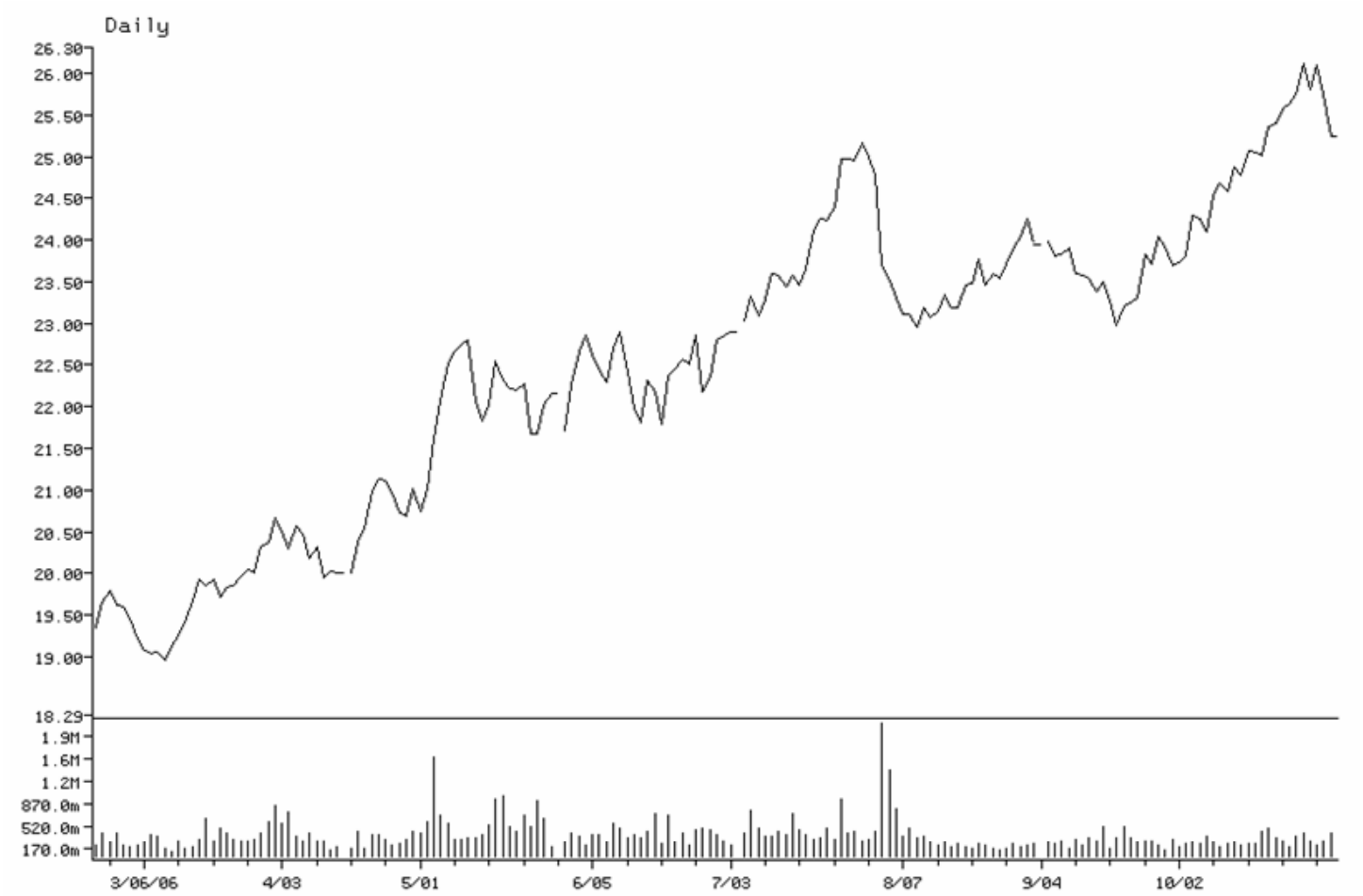
Shares outstanding (M)	49.1
Market Capitalization ($M)	$1,240
52-week range	$16.76 - $26.30
Average daily volume (3 mos.) (K)	304
Float	97%
Index Membership	S&P 600 SmallCap

Lowering 2006, 2007 and 2008 EPS Estimates. Maintaining Target Price and NEUTRAL Rating.

- Avista Corp. reported 3Q'06 EPS of $0.20, compared to a loss of $0.19 a year ago and our forecast of $0.16.
- Quarterly results benefited from an improved gross margin at the utility and $0.03 per share in net tax benefits which we did not anticipate. Also, Advantage IQ continued to progress nicely.
- For 2006, we are lowering our EPS forecast from $1.49 to $1.47, due to reduced expectations for fourth quarter utility and energy marketing results. In 4Q'05 the company's utility business benefited from very cold weather and above average streamflows, which may not repeat this year to the same degree.
- For 2007, we are lowering our EPS forecast of $1.68 to $1.52. Our 2008 EPS projection is being lowered from $1.79 to $1.74.
- We are maintaining our target price of $25.50, or 16x the average of our 2007 and 2008 EPS estimates for Avista Utilities and Advantage IQ plus 10x the average of our 2007 and 2008 EPS estimate of Avista Energy and "Other."
- A higher-than-average multiple may be warranted. The company may be close to exiting the energy trading business, with proceeds being used to pay down debt and to fund capital spending, which should help the company to restore an investment grade credit rating and expand the utility's rate base and future earnings power. Our **NEUTRAL** rating is reaffirmed.

Company Description:
Spokane, WA -- Avista Corporation is an energy-focused company which operates as an electric and gas utility, an energy trading unit, and a utility Internet-billing service business. A hydro generation based system provides ratepayers some of the lowest utility rates in the nation, despite rate increases in the past few years.

Price Chart



Source: ILX

Quarterly Results Achieved as Projected, with Tax Benefits as Frosting

Avista Corp. reported 3Q'06 EPS of $0.20, compared to a loss of $0.19 a year earlier and our forecast of $0.16.

Quarterly results benefited from an improved gross margin at the utility and $0.03 per share in net tax benefits which we did not anticipate. Also, Advantage IQ continued to progress nicely.

The 3Q'05 result included a $0.16 per share mark-to-market loss on Avista Energy's natural gas portfolio. This year there was a mark-to-market gain of $0.03 per share. Year-to-date mark-to-market losses of $3.7 million are expected to reverse in the future, with the bulk of the related energy commodity contracts being settled in the first half of 2007, assuming no significant change in the pricing of natural gas.

Management continues to indicate an exit strategy is being considered for Avista Energy, since this business does not have sufficient financial wherewithal to maximize the valuation creation opportunity envisioned. Moreover, Avista Energy's approximate $200 million in equity has been generating sub par returns in recent periods and the returns implied for this business in management's 2006 and 2007 guidance are only about 5%-8%.

The quarter's breakdown of earnings by business segment is displayed in Table 1.

Table 1: Business Segment EPS (Contribution to earnings per diluted share)

	3Q05	3Q06
Avista Utilities	($0.04)	$0.01
Energy Marketing & Resource Management	($0.17)	$0.18
Avista Advantage	$0.03	$0.04
Other	($0.00)	($0.02)
SUBTOTAL (before cumulative effect of accounting change)	($0.19)	$0.20
Cumulative effect of accounting change	0.00	0.00
TOTAL (earnings per diluted share)	**($0.19)**	**$0.20**

Avista Utilities earned $0.01 per share compared to a loss of $0.04 a year ago. The third quarter is typically the utility's seasonally lowest period. Approximately $0.03 per share of the quarter's positive earnings swing is attributed to adjustments for resolution of certain Internal Revenue Service audits at the utility business.

The utility business benefited from gross margin improvements, customer growth, and a general rate increase in Washington that went into effect on January 1, 2006. (Annual electric rates were increased by $21.4 million (+7.5%) and natural gas rates by $1.0 million (+0.6%).) As expected during the quarter, the utility depleted some of the Washington Energy Recovery Mechanism (ERM) deadband benefit it had garnered during the first half, reducing the benefit by about $0.05 per share. The utility business was also held back by higher interest expenses.

Overall utility revenues rose 3% to $229 million. Electric revenues declined 1% to $172 million due to a drop in wholesale revenues, which was mostly offset by higher retail sales (+4.7% in kWh) and customer growth (+2.3%). Natural gas revenues rose 19% to $58 million, primarily due to higher costs of purchased gas being passed along to ratepayers, as well as higher wholesale natural gas revenues and increased customers (+2.9%).

Avista Energy reported earnings of $0.18 (rounded up in our model from the company's reported $0.17), compared to a loss of $0.17 per share a year ago. Results were aided by positive portfolio valuation adjustments of $0.03 versus negative adjustments of $0.16 per share a year ago. Gross margin (operating revenues less resource costs) of $17.9 million improved from a negative $9.6 million a year ago, as the effects of the mark-to-market gains more than offset lower volumes of electricity and gas that were traded.

Advantage IQ, previously known as Avista Advantage, posted EPS of $0.04 compared to $0.03 last year. This unit, which outsources billing services, saw revenues climb 27% while the dollar volume of bills processed increased by approximately 22%. Billed sites rose 36,000, or 22%, to 196,000.

Avista's "Other" business segment reported a loss of $0.02 per share, compared with a slight loss of than $0.01 per share a year ago. Improved performance of Advanced Manufacturing and Development (doing business as METALfx) was more than offset by income tax adjustments of $0.4 million, or nearly $0.01 per share.

Decoupling Pilot Program Approved Through Settlement

In late October, Avista, along with the Staff of the WUTC and other intervenors, entered into a settlement agreement regarding the implementation of a natural gas decoupling mechanism (Mechanism). The mechanism would be effective January 1, 2007, with the proposed term of the pilot program running through June 2009. Monthly deferred revenue entries would be recorded and compared with therm sales volumes, adjusted for new customer usage, for the corresponding months from 2004, Avista's most recent test year. The difference between the corresponding periods captures the effect of conservation and price elasticity and would be multiplied by an approved margin rate to calculate the fixed distribution costs that are either under-recovered or over-recovered. Ninety percent of the margin difference, either positive or negative, will be deferred for later recovery or rebate.

On or before September 1, 2007, Avista will file a proposed decoupling surcharge or rebate based on the amount of deferred revenues, which were recorded during the 30-month test period and subjected to various earnings and DSM tests. The decided upon rate adjustment would recover or rebate the deferred revenue over a 12-month period, in conjunction with Avista's annual purchased gas adjustment. We have yet to factor in the potential of the decoupling mechanism into our earnings model due to the fact it requires WUTC approval and because its complexity will require more time to digest.

Lowering 2006, 2007 and 2008 Estimates

For 2006, we are lowering our EPS forecast from $1.49 to $1.47 due to reduced expectations for fourth quarter utility and energy marketing results. In 4Q'05 the company benefited from very cold weather and above average streamflows, which may not repeat this year to the same degree. If, however, our 2006 utility EPS forecast of $1.17 is attained, it would exceed the company's guidance range of $1.10-$1.15, which the company now admits will be at the upper end of the range if normal weather and precipitation occur for November and December. Also, in last year's fourth quarter the company absorbed $1.7 million, or $0.02 per share, of ERM deadband expenses, which could be matched or exceeded this year. Although, management believes, if the next two months remain normal, the company will end 2006 with an ERM deadband benefit for the first time since the ERM was established in 2002. Last year, ERM deadband expense was $9.9 million, a drag of $0.12 per share. Year-to-date, the ERM benefit stands at $3.4 million, a $0.05 contribution per share.

Management's 2006 consolidated EPS guidance range remains at $1.30-$1.45. The company's assumptions behind its forecast include normal weather and water conditions in November and December, with segment forecasts as follows: Avista Utilities -- $1.00-$1.15 (we are at $1.17); Energy Marketing & Resource Management -- $0.20-$0.30 (we are at $0.23, including a $0.07 after tax drag from mark-to-market accounting); Advantage IQ – at least $0.12 (we are at $0.13); Other – a loss of $0.05 (we are at a loss of $0.06).

For 2007, we are lowering our EPS forecast of $1.68 to $1.52. We are forecasting utility results of $1.17 helped by customer growth and modest Production/Transmission Update rate relief starting in April, offset by expectations of more normal hydro and weather conditions. The biggest downward swing in our 2007 earnings forecast is derived from Avista Energy EPS, which we are now forecasting at $0.26 versus $0.35 previously. Advantage IQ should move up slightly to $0.14 due to contemplated initiatives that may limit near-term earnings growth, while enhancing long-term prospects.

Our 2008 EPS projection is being lowered from $1.79 to $1.74.

Maintaining Target Price and Rating

We are maintaining our target price of $25.50, or 16x the average of our 2007 and 2008 EPS estimates for Avista Utilities and Advantage IQ plus 10x the average of our 2007 and 2008 EPS estimate of Avista Energy and "Other."

A higher-than-average multiple may be warranted. The company may be close to exiting the energy trading business, with proceeds being used to pay down debt and fund capital spending, which should help the company to restore an investment grade credit rating and expand the utility's rate base and future earnings power. At the current share price, we are maintaining our **NEUTRAL** rating on the stock of Avista Corp.

James L. Bellessa, Jr., CFA
Vice President and Senior Research Analyst
406.791.7230

Bryan H. Nicholls
Research Associate
406.791.7240

Avista Corporation Balance Sheet
$ thousands -- Fiscal year ends 12/31

	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/31/2005	9/30/2006
ASSETS:						
CURRENT ASSETS:						
Cash and cash equivalents	$171,221	$186,269	$144,598	$114,492	$51,551	$58,303
Temporary investments	1,872		18,903	0	0	0
Accounts and notes receivable, net	388,083	320,836	318,848	325,755	502,947	188,035
Energy commodity assets	477,037	365,477	253,676	284,231	918,609	360,237
Materials and supplies, fuel stock and natural gas stored	21,776	22,047	22,428	26,108	54,123	
Utility energy commodity derivative assets					69,494	
Funds held for customers					38,269	
Deposits with counterparties					59,354	
Prepayments and other current assets	19,364	78,931				
Deferred income taxes / Taxes receivable	32,348	0	11,455	12,288	14,519	
Assets held for sale from discontinued operations - Avista Communications	21,316	105	0	28,479	11,850	
Other current assets			93,671	108,989	49,652	375,629
Total current assets	1,133,017	973,665	863,579	900,342	1,770,368	982,204
NET UTILITY PROPERTY:						
Utility Plant in service	2,277,779	2,370,811	2,606,012	2,666,445	2,847,043	
Construction work in progress	54,964	17,581	49,615	51,260	64,291	
Total	2,332,743	2,388,392	2,655,627	2,717,705	2,911,334	
Less Accumulated Depreciation and amortization	(767,101)	(824,688)	(741,626)	(761,642)	(784,917)	
Total net utility property	1,565,642	1,563,704	1,914,001	1,956,063	2,126,417	2,181,468
OTHER PROPERTY AND INVESTMENTS:						
Investment in exchange power, net	43,314	40,833	38,383	35,933	33,483	
Non-utility properties and investments, net	230,800	199,579	89,133	78,564	77,731	
Non-current energy commodity assets	383,497	348,309	242,359	254,657	511,280	
Investment in affiliated trusts			13,403	13,403	13,403	
Other property and investments, net	13,620	12,702	17,958	19,721	15,058	
Total other property and investments	671,231	601,423	401,236	402,278	650,955	447,805
DEFERRED CHARGES:						
Regulatory assets for deferred income tax	149,033	139,138	131,763	123,159	114,109	106,851
Other regulatory assets	192,760	29,735	44,381	39,044	26,660	30,997
Utility energy commodity derivative assets	1,889	60,322	34,517	55,825	46,731	25,286
Power and natural gas deferrals	265,063	166,782	171,342	148,206	147,622	112,114
Unamortized debt expense	41,222	51,128	48,825	53,413	48,522	43,800
Other deferred charges	17,366	28,236	30,431	25,493	17,110	19,084
Total deferred charges	667,333	475,341	461,259	445,140	400,754	338,132
TOTAL ASSETS:	$4,037,223	$3,614,133	$3,640,075	$3,703,823	$4,948,494	$3,949,609
LIABILITIES AND CAPITALIZATION:						
CURRENT LIABILITIES:						
Accounts payable	$367,899	$339,637	$298,285	$325,194	$511,427	$201,926
Energy commodity liabilities	373,837	304,781	229,642	253,527	906,794	327,997
Customer fund obligations					38,237	
Deposits from counterparties			97,811	6,015	13,724	
Current portion of long term debt	1,827	71,896	29,711	85,432	39,524	170,760
Current portion of preferred stock-cumulative			1,750	1,750	1,750	26,250
Short term borrowings	75,099	30,000	80,525	68,517	63,494	62,000
Interest accrued	18,583	20,307	18,504	18,632	18,643	
Regulatory liability for utility derivatives					66,047	
Other current liabilities	84,587	173,157	96,324	114,973	70,248	304,327
Liabilities of discontinued operations- Avista Communications	6,642	1,052				
Total current liabilities	928,474	940,830	852,552	874,040	1,729,888	1,093,260
NON-CURRENT LIABILITIES AND DEFERRED CREDITS:						
Non-current liabilities	46,601					
Deferred revenue	35,824					
Non-current energy commodity liabilities	299,980	314,204	192,731	215,055	488,644	325,494
Regulatory liability for utility plant retirement costs			167,061	175,575	186,635	194,571
Utility energy commodity derivative liabilities	159,418	50,058	33,060	33,490	46,643	
Deferred income taxes	517,428	454,147	492,799	488,471	488,934	465,034
Other non-current liabilities and deferred credits	18,720	106,218	82,455	121,028	106,979	120,150
Total non-current liabilities and deferred credits	1,077,971	924,627	968,106	1,033,619	1,317,835	1,105,249
LONG-TERM DEBT:						
Total long-term debt	1,175,715	902,635	925,012	901,556	989,990	819,039
Long-term debt to affiliated trusts			113,403	113,403	113,403	113,403
COMPANY-OBLIGATED MANDITORILY REDEEMABLE PREFERRED TRUST SECURITIES:	100,000	100,000				
PREFERRED STOCK- CUMULATIVE:	35,000	33,250	29,750	28,000	26,250	
CONVERTIBLE PREFERRED STOCK:						
COMMON EQUITY:	720,063	712,791	751,252	753,205	771,128	818,658
TOTAL CAPITALIZATION:	2,030,778	1,748,676	1,819,417	1,796,164	1,900,771	1,751,100
TOTAL CAPITALIZATION AND LIABILITIES:	$4,037,223	$3,614,133	$3,640,075	$3,703,823	$4,948,494	$3,949,609
*As originally reported						
Common Shares Outstanding (000's)	47,633	48,044	48,344	48,472	48,593	49,143

Avista Corporation Consolidated Statements of Income

$ thousands -- Fiscal year ends 12/31	2004	1Q05	2Q05	3Q05	4Q05	2005	1Q06	2Q06	3Q06P	4Q06E	2006E	1Q07E	2Q07E	3Q07E	4Q07E	2007E	2008E
REVENUES:	**$1,151,581**	$362,664	$272,832	$265,679	$458,432	**$1,359,607**	$499,202	$287,394	$293,001	$446,000	**$1,525,597**	$504,133	$310,316	$312,367	$444,440	**$1,571,256**	**$1,592,289**
OPERATING EXPENSES:																	
Resource costs	**618,595**	222,157	130,975	167,025	295,433	**815,590**	321,732	140,282	159,044	288,457	**909,515**	319,278	154,883	183,833	275,006	**933,000**	**921,329**
Other Operating Expenses	**257,872**	58,985	58,395	58,984	63,398	**239,762**	62,038	64,787	63,082	67,415	**257,322**	63,870	64,505	64,890	68,275	**261,540** 0	**264,800**
Depreciation and amortization	**78,425**	22,706	21,388	21,368	21,449	**86,911**	22,428	21,424	21,614	22,360	**87,826**	22,600	22,840	23,080	23,320	**91,840**	**95,200**
Taxes other than income taxes	**67,374**	20,633	16,064	14,374	18,342	**69,413**	22,066	18,323	15,170	18,138	**73,697**	23,138	19,138	15,138	19,138	**76,552**	**78,585**
Exit Costs - Avista Energy's Eastern Energy Business																	
Asset impairment and restructuring charges																	
Total operating expenses	**1,022,266**	324,481	226,822	261,751	398,622	**1,211,676**	428,264	244,816	258,910	396,370	**1,328,360**	428,886	261,366	286,941	385,739	**1,362,932**	**1,359,914**
Gain on sale of natural gas distribution property			3,209	884		**4,093**											
INCOME FROM OPERATIONS	**129,315**	38,183	49,219	4,812	59,810	**152,024**	70,938	42,578	34,091	49,630	**197,237**	75,247	48,950	25,426	58,701	**208,323**	**232,375**
OTHER INCOME:																	
Interest Expense	**(87,265)**	(21,828)	(21,312)	(21,583)	(21,789)	**(86,512)**	(22,145)	(22,209)	(22,269)	(21,625)	**(88,248)**	(21,725)	(21,825)	(21,925)	(22,025)	**(87,500)**	**(90,000)**
Interest Expense to Affiliate Trust	**(5,782)**	(1,450)	(1,516)	(1,582)	(1,654)	**(6,202)**	(1,704)	(1,765)	(1,575)	(1,575)	**(6,619)**	(1,575)	(1,575)	(1,575)	(1,575)	**(6,300)**	**(6,300)**
Capitalized Interest	**1,393**	292	295	392	710	**1,689**	525	645	400	400	**1,970**	400	400	400	400	**1,600**	**1,800**
Net interest expense	**(91,654)**	(22,986)	(22,533)	(22,773)	(22,733)	**(91,025)**	(23,324)	(23,329)	(23,444)	(22,800)	**(92,897)**	(22,900)	(23,000)	(23,100)	(23,200)	**(92,200)**	**(94,500)**
Other income (deductions), net	**8,390**	1,822	1,840	3,511	2,857	**10,030**	2,475	2,078	2,736	1,800	**9,089**	1,800	1,800	1,800	1,800	**7,200**	**7,500**
Total other income (expense), net	**(83,264)**	(21,164)	(20,693)	(19,262)	(19,876)	**(80,995)**	(20,849)	(21,251)	(20,708)	(21,000)	**(83,808)**	(21,100)	(21,200)	(21,300)	(21,400)	**(85,000)**	**(87,000)**
INCOME BEFORE INCOME TAXES:	**46,051**	17,019	28,526	(14,450)	39,934	**71,029**	50,089	21,327	13,383	28,630	**113,429**	54,147	27,750	4,126	37,301	**123,323**	**145,375**
INCOME TAXES:	**26,500**	6,830	9,922	(5,414)	14,523	**25,861**	18,517	7,868	3,310	10,593	**40,288**	20,034	10,267	1,527	13,801	**45,630**	**53,789**
NET INCOME FROM CONTINUING OP'S:	**19,551**	10,189	18,604	(9,036)	25,411	**45,168**	31,572	13,459	10,073	18,037	**73,141**	34,112	17,482	2,599	23,500	**77,694**	**91,586**
INCOME (LOSS) FROM DISCONTINUED OP'S	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**0**
NET INCOME BEFORE ACC'T CHANGE	**19,551**	10,189	18,604	($9,036)	25,411	**45,168**	31,572	13,459	$10,073	18,037	**73,141**	34,112	17,482	$2,599	23,500	**77,694**	**91,586**
EFFECTS OF ACC'T CHANGE	**(460)**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**0**
NET INCOME	**$19,091**	$10,189	$18,604	($9,036)	$25,411	**$45,168**	$31,572	$13,459	$10,073	$18,037	**$73,141**	$34,112	$17,482	$2,599	$23,500	**$77,694**	**$91,586**
DEDUCT - Preferred stock dividend requirement	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	**0**
INCOME AVAILABLE FOR COMMON	**$19,091**	$10,189	$18,604	($9,036)	$25,411	**$45,168**	$31,572	$13,459	$10,073	$18,037	**$73,141**	$34,112	$17,482	$2,599	$23,500	**$77,694**	**$91,586**
EARNING PER SHARE, DILUTED	**$0.40**	$0.21	$0.38	($0.19)	$0.52	**$0.92**	$0.64	$0.27	$0.20	$0.36	**$1.47**	$0.68	$0.34	$0.05	$0.46	**$1.52**	**$1.74**
LESS - LOSS FROM DISCONTINUED OP'S	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**
LESS - EFFECT OF ACC'T CHANGE	**(0.01)**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**
NET EARNINGS PER SHARE	**$0.39**	$0.21	$0.38	($0.19)	$0.52	**$0.92**	$0.64	$0.27	$0.20	$0.36	**$1.47**	$0.68	$0.34	$0.05	$0.46	**$1.52**	**$1.74**
DIVIDENDS PER COMMON SHARE	**$ 0.52**	$ 0.135	$ 0.135	$ 0.135	$ 0.140	**$ 0.55**	$ 0.140	$ 0.140	$ 0.145	$ 0.145	**$ 0.57**	$ 0.145	$ 0.150	$ 0.150	$ 0.150	**$ 0.595**	**$ 0.620**
Avg. common shares outstanding, diluted (000)	**48,886**	48,901	48,904	48,538	48,997	**48,979**	49,305	49,694	49,902	50,202	**49,776**	50,502	50,802	51,102	51,402	**50,952**	**52,602**

	2004	1Q05	2Q05	3Q05	4Q05	2005	1Q06	2Q06	3Q06	4Q06E	2006E	1Q07E	2Q07E	3Q07E	4Q07E	2007E	2008E
SEGMENT BREAKDOWN OF EPS (Continuing Operations)																	
Avista Utilities	**$0.87**	$0.39	$0.38	($0.04)	$0.34	**$1.07**	$0.53	$0.34	$0.01	$0.29	**$1.17**	$0.53	$0.33	($0.03)	$0.34	**$1.17**	**$1.26**
Energy Trading and Marketing	**$0.20**	($0.17)	($0.01)	($0.17)	$0.17	**($0.18)**	$0.10	($0.09)	$0.18	$0.05	**$0.23**	$0.12	($0.00)	$0.06	$0.08	**$0.26**	**$0.33**
Avista Advantage	**$0.01**	$0.02	$0.02	$0.03	$0.02	**$0.08**	$0.03	$0.03	$0.04	$0.03	**$0.13**	$0.03	$0.03	$0.04	$0.04	**$0.14**	**$0.19**
Avista Ventures and Other	**($0.15)**	($0.03)	($0.01)	($0.00)	($0.01)	**($0.05)**	($0.02)	($0.01)	($0.02)	($0.01)	**($0.06)**	($0.01)	($0.01)	($0.01)	($0.01)	**($0.05)**	**($0.04)**
Total income available for common stock	**$0.93**	$0.21	$0.38	($0.19)	$0.52	**$0.92**	$0.64	$0.27	$0.20	$0.36	**$1.47**	$0.68	$0.34	$0.05	$0.46	**$1.52**	**$1.74**

Required Disclosures

D.A. Davidson & Co. expects to receive, or intends to seek, compensation for investment banking services from this company in the next three months.

D.A. Davidson & Co. is a full service investment firm that provides both brokerage and investment banking services. James L. Bellessa, Jr., CFA and Bryan H. Nicholls, the research analysts principally responsible for the preparation of this report, will receive compensation that is based upon (among other factors) D.A. Davidson & Co.'s investment banking revenue. However, D.A. Davidson & Co.'s analysts are not directly compensated for involvement in specific investment banking transactions.

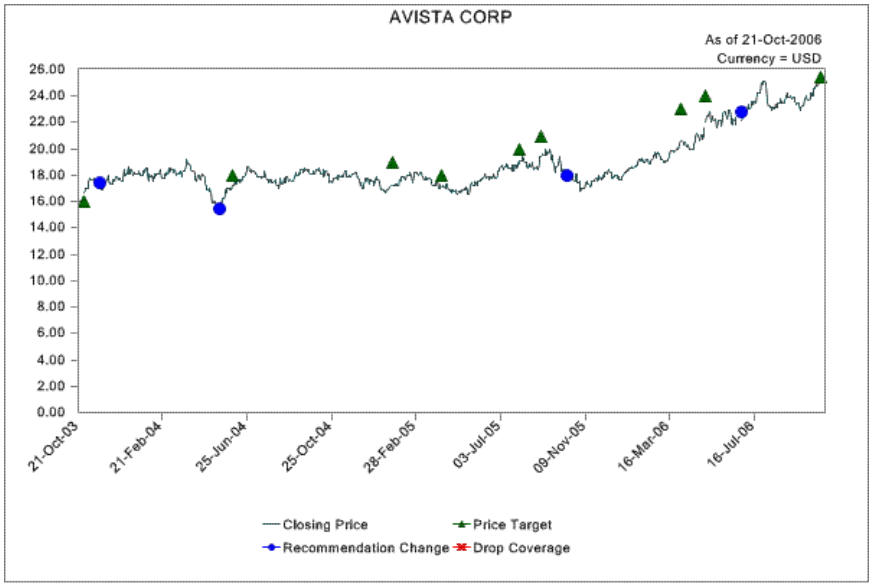
We, James L. Bellessa, Jr., CFA and Bryan H. Nicholls, attest that (i) all the views expressed in this research report accurately reflect our personal views about the common stock of the subject company, and (ii) no part of our compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

Ratings Information

D.A. Davidson & Co. Ratings	Buy	Neutral	Underperform
Risk adjusted return potential	Over 15% total return expected on a risk adjusted basis over next 12-18 months	>0-15% return potential on a risk adjusted basis over next 12-18 months	Likely to remain flat or lose value on a risk adjusted basis over next 12-18 months

Distribution of Ratings (as of 9/30/06)	Buy	Hold	Sell
Corresponding Institutional Research Ratings and Distribution	Buy 50%	Neutral 43%	Underperform 7%
Corresponding Private Client Research Ratings and Distribution	Outperform 70%	Market Perform 30%	Underperform 0%
Distribution of Combined Ratings	53%	41%	6%

Distribution of companies from whom D.A. Davidson & Co. has received compensation for investment banking services in last 12 mos.			
Institutional Coverage	7%	4%	0%
Private Client Coverage	0%	0%	0%
Distribution of Combined Investment Banking	5%	3%	0%



D.A. Davidson & Co. Institutional Research Rating Scale (maintained since 7/9/02)
Buy, Neutral, Underperform

AVISTA CORP

Currency = USD

Date	Closing Price	Recommendation Change	Date	Closing Price	Price Target
26-Jun-2006	22.85	NEUTRAL	17-Oct-2006	25.03	25.50
12-Oct-2005	17.94	BUY	03-May-2006	21.61	24.00
17-May-2004	15.51	NEUTRAL	31-Mar-2006	20.65	23.00
19-Nov-2003	17.46	UNDERPERFORM	31-Aug-2005	19.44	21.00
			27-Jul-2005	18.94	20.00
			04-Apr-2005	17.38	18.00
			21-Jan-2005	17.25	19.00
			04-Jun-2004	17.26	18.00
			27-Oct-2003	16.35	16.00

Target prices are our Institutional Research Department's evaluation of price potential over the next 12-18 months and 5 years, based upon our assessment of future earnings and cash flow, comparable company valuations, growth prospects and other financial criteria. Certain risks may impede achievement of these price targets including, but not limited to, broader market and macroeconomic fluctuations and unforeseen changes in the subject company's fundamentals or business trends.

Other Disclosures

Information contained herein has been obtained by sources we consider reliable, but is not guaranteed and we are not soliciting any action based upon it. Any opinions expressed are based on our interpretation of data available to us at the time of the original publication of the report. These opinions are subject to change at any time without notice. Investors must bear in mind that inherent in investments are the risks of fluctuating prices and the uncertainties of dividends, rates of return and yield. Investors should also remember that past performance is not necessarily an indicator of future performance and D.A. Davidson & Co. makes no guarantee, express or implied, as to future performance. Investors should note this report was prepared by D.A. Davidson & Co.'s Institutional Research Department for distribution to D.A. Davidson & Co.'s institutional investor clients and assumes a certain level of investment sophistication on the part of the recipient. Readers, who are not institutional investors or other market professionals, should seek the advice of their individual investment advisor for an explanation of this report's contents, and should always seek such advisor's advice before making any investment decisions. Further information and elaboration will be furnished upon request.

Avista Files for Lower Than Anticipated Annual Natural Gas Adjustment in Washington

PR Newswire, Sept 15, 2008

Lower natural gas prices allow for re-filing of annual adjustment in Idaho

SPOKANE, Wash., Sept. 15 /PRNewswire-FirstCall/ -- Avista today filed its annual purchased gas cost adjustment (PGA) with the Washington Utilities and Transportation Commission (WUTC) requesting an overall increase in natural gas rates of 0.7 percent or $1.3 million in annual revenues. Also today, the company re-filed a request with the Idaho Public Utility Commission (IPUC) to lower the requested PGA for Idaho customers to 4.0 percent or $3.3 million in annual revenues, down from the 14.2 percent filed in August 2008. Annual PGA filings pass through changes in the cost of natural gas Avista acquires to serve customers and do not increase company earnings.

In a separate annual decoupling rate adjustment filing with the WUTC, Avista has requested a 0.3 percent increase in the company's natural gas rates for residential and small commercial customers, also effective Nov. 1. The decoupling mechanism allows Avista to recover a portion of its fixed costs not recovered because of reduced energy usage by customers. The recovery of fixed costs allows Avista to increase focus on energy efficiency programs and services for customers.

If both the PGA and decoupling filings are approved by the WUTC, a residential customer in Washington using an average of 70 therms of natural gas per month could expect to see a $0.67 increase, for a revised total monthly bill of $85.83 effective Nov. 1, 2008. The actual increase will vary based on customer usage. Avista serves approximately 144,000 natural gas customers in Washington.

If the amended PGA filing is approved by the IPUC, an Idaho natural gas customer using 65 therms of natural gas per month could expect to see an increase of $2.96, for a revised monthly bill of $78.10 effective Oct. 1, 2008. The actual increase will vary based on customer usage. Avista serves 72,000 natural gas customers in Idaho.

"The dramatic increase in prices this past spring and recent decrease shows the volatility in the natural gas market and its link to crude oil prices. Based on spring and summer prices, we were anticipating that both Washington and Idaho customers could see a significant increase in their monthly natural gas bills this winter. We're pleased this adjustment is far less than earlier projected especially as the heating season approaches," said Kevin Christie, Avista director of natural gas supply.

Natural gas prices per dekatherm over the past 12 months are reflected in the chart.

About 75 percent of an average residential customer's monthly bill is the cost of natural gas and pipeline transportation. The remaining 25 percent is Avista's fixed costs to provide natural gas service over its distribution system.

Avista follows a structured natural gas purchasing plan that also allows for flexibility based on market prices and conditions. Currently, about two-thirds of estimated customer demand for the upcoming year is either pre-purchased or placed in storage. Storage is a valuable asset that allows Avista to purchase typically lower-cost gas during the spring and summer months and store it for use during the heating season when wholesale gas prices are typically highest.

Avista offers a number of billing options, energy efficiency programs, incentives and rebates to help customers proactively manage their natural gas consumption. Information on Avista's energy efficiency offerings and no-cost conservation information is available at http://www.everylittlebit.com/. In addition, Avista's Comfort Level Billing option gives customers the opportunity to smooth seasonal energy bill highs and lows by averaging energy bills over 12 months.

Avista Corp. is an energy company involved in the production, transmission and distribution of energy as well as other energy-related businesses. Avista Utilities is our operating division that provides service to 351,000 electric and 310,000 natural gas customers in three Western states. Avista's primary, non-regulated subsidiary is Advantage IQ. Our stock is traded under the ticker symbol "AVA." For more information about Avista, please visit http://www.avistacorp.com/. Avista Corp. and the Avista Corp. logo are trademarks of Avista Corporation. All other trademarks mentioned in this document are the property of their respective owners.

This news release contains forward-looking statements regarding the company's current expectations. Forward-looking statements are all statements other than historical facts. Such statements speak only as of the date of the news release and are subject to a variety of risks and uncertainties, many of which are beyond the company's control, which could cause actual results to differ materially from the expectations. These risks and uncertainties include, in addition to those discussed herein, all of the factors discussed in the company's Annual Report on Form 10-K for the year ended Dec. 31, 2007, and the Quarterly Report on Form 10-Q for the quarter ended June 30, 2008.

To unsubscribe from Avista's news release distribution, send reply message to Shirley.wolf@avistacorp.com.

CONTACT: Avista 24|7 Media Access, +1-509-495-4174, or media, Debbie Simock, +1-509-495-8031, debbie.simock@avistacorp.com, or investors, Jason Lang, +1-509-495-2930, jason.lang@avistacorp.com, both of Avista

Web site: http://www.avistacorp.com/