



# AVISTA CORPORATION 2007 NATURAL GAS INTEGRATED RESOURCE PLAN

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# **TAC Member List**

## **Appendix 1.1**

## 2007 IRP TAC Member List

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<u>Name</u>	<u>Organization</u>
Bob Jenks	Oregon CUB
Bonnie Tatom	OPUC
Bruce Folsom	Avista
Bryan Lanspery	IPUC
Dan Kirschner	Northwest Gas Association
Dave Allred	Northwest Pipeline
Dave Sloan	Gas Transmission Northwest
Doug Kilpatrick	WUTC
Elizabeth Klumpp	WCTED
Greg Rahn	Avista
Inara Scott	Northwest Natural
Jon Powell	Avista
Kathy Bernarnd	Cascade Natural Gas Company
Kelly Irvine	Avista
Kerry Shroy	Avista
Ken Boni	Avista
Ken Zimmerman	OPUC
Kevin Christie	Avista
Linda Gervais	Avista
Lynn Anderson	IPUC
Lynn Kittilson	OPUC
Nicolas Garcia	WUTC
Paula Pyron	Northwest Industrial Gas Users
Phillip Popoff	Puget Sound Energy
Randy Barcus	Avista
Scott Russell	Gas Transmission Northwest
Steven Johnson	Washington Attorney General's Office
Terrence Browne	Avista
Terri Carlock	IPUC
Terry Morlan	Northwest Power and Conservation Council
Yohannes Mariam	WUTC

# **Natural Gas Demand Forecast Detail**

## **Appendix 2.1**

# Appendix 2.1 - Natural Gas Demand Forecast Detail

## Overview

Avista presented their 2005 Natural Gas Forecast to the Technical Advisory Committee (TAC). What follows in narrative is the process of preparing the company base customer growth forecast. The first step is a framework-forecast of the national economy, followed by regional economic forecasts consistent with the national outlook. The employment and population forecasts are the key drivers for the natural gas customer forecast.

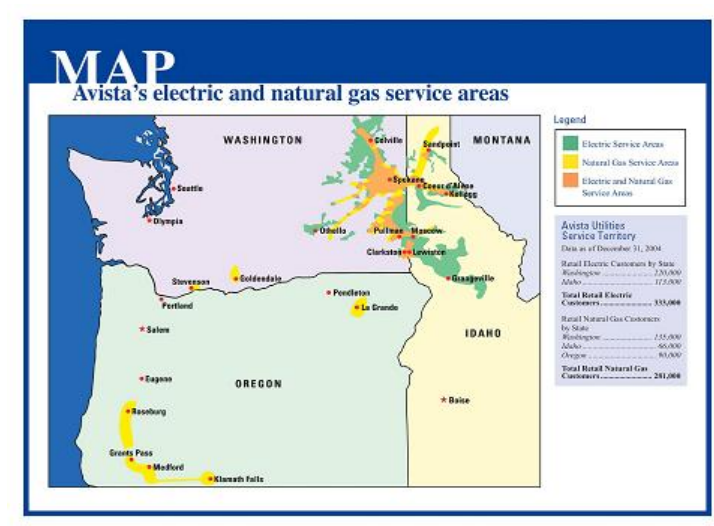
## National Economic Outlook

Avista has contracted for national economic forecasts with Global Insight, Inc. for several years. The most recent twenty-five year long term forecast was used as the basis for the 2007 effort. The following narrative has Avista remarks and Global Insight forecasts (used with permission) which are consistent with the presentation at the TAC in May 2007, with a focus on the near term national outlook.

The U.S. Gross Domestic Product is expected to rebound to levels in the 2.5 to 3.0 percent range after a slowdown in 2007. Longer term the rate settles in at 2.5 percent.

## Regional Economic Outlook

Avista serves natural gas in eastern Washington, northern Idaho, and in portions of five counties in Oregon. The principal county in Washington is Spokane, while in Idaho there are two counties; Kootenai and Bonner are barometers of service area growth. Kootenai County includes Coeur d'Alene, Post Falls, Hayden and a host of smaller municipalities and Bonner County is anchored by Sandpoint. The primary cities in Spokane County are the City of Spokane, City of Spokane Valley and Liberty Lake. In Oregon, the counties (principal city) of Jackson (Medford), Josephine (Grants Pass), Douglas (Roseburg), Klamath (Klamath Falls) and Union (La Grande) round out the service territory. The map below shows the breadth of the service area.



Global Insight, Inc. has also been providing county-level forecasts to Avista for several years. These forecasts are consistent with and driven by their national forecast.

The economic concepts provided are forecast forward for 30 years. Below we report forecast data ending in the year 2028, the twenty-year horizon.

Overall, the results of the economic forecasts suggest the following impacts on Avista’s customer growth: Near term the strength in the construction boom will be mirrored with strong customer growth, while longer term, underlying employment and population growth will drive customer growth.

The following table indicates a listing of 21 counties served by Avista Natural Gas. We purchased economic forecasts for the 15 principal counties.

<b>Table of Counties Served (All or Portions)</b>		
<b>Washington</b>	<b>Idaho</b>	<b>Oregon</b>
Adams*	Benewah	Douglas
Asotin	Bonner	Jackson
Franklin*	Boundary	Josephine
Grant*	Latah	Klamath
Klickitat*	Nez Perce	Union
Lincoln*	Shosone	
Skamania*		
Spokane		
Stevens		
Whitman		

\*Did not purchase economic data, few customers served

The charts that follow are the actual employment, population, population age 65 and over, number of households and personal income forecasts used to produce the natural gas forecasts by state, by customer class (residential, commercial and industrial) and by rate schedule (firm – small, medium and large-sized customers).

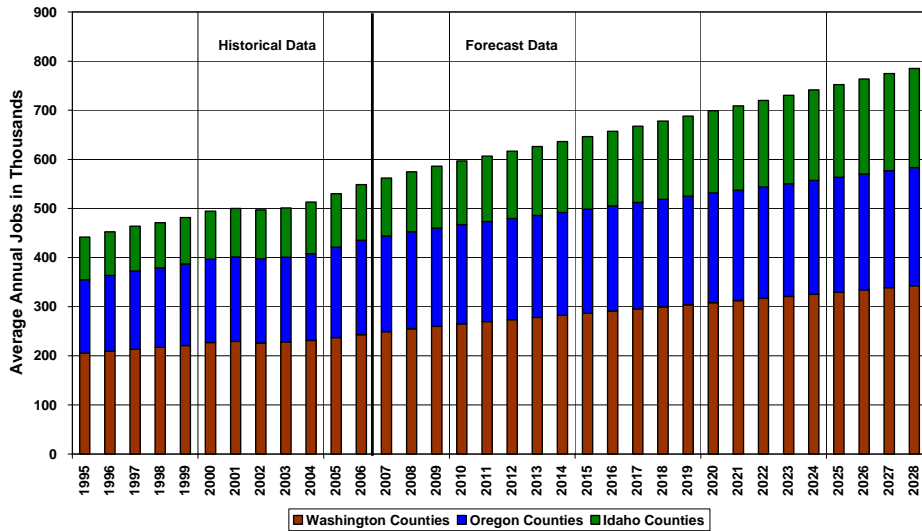
Although the forecasts are prepared in detail by county, the charts aggregate the data by State.

The first chart is Non-Farm Employment. During the last decade, fairly consistent growth in jobs was observed except during the job recession and economy restructuring in the 2001-2002 period. The resumption of job growth in 2003 has accelerated through early 2007, and although expected to moderate it’s rate of growth, is expected to grow modestly through the forecast period.

The ten year average compounded growth rate in jobs for these 15 counties was 1.9 percent from 1997-2007, and is forecast to be 1.6 percent for the period 2008-2028.

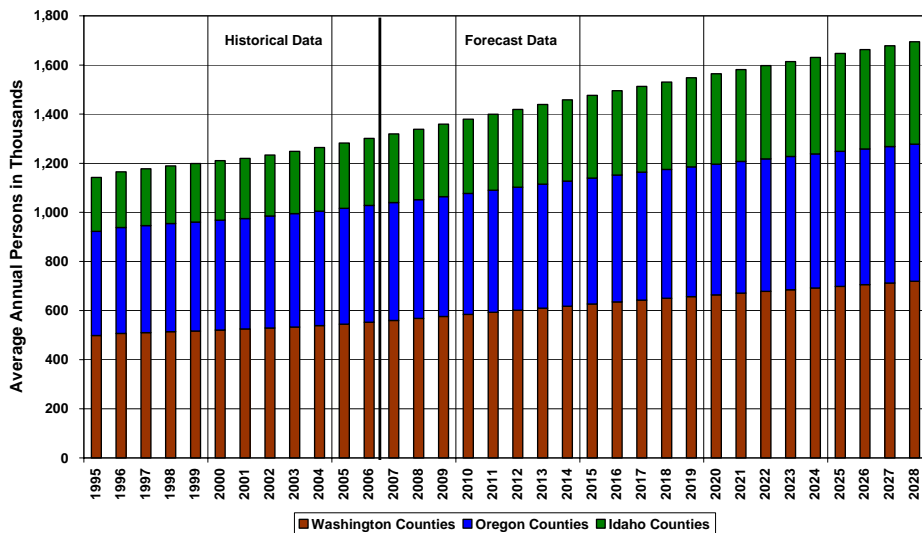


### Service Area Non-Farm Employment Fifteen Principal Counties Served



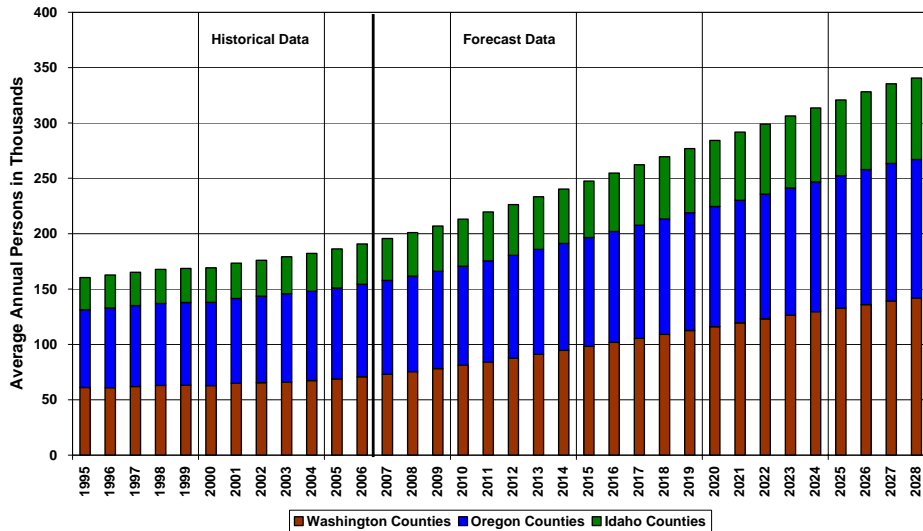
Next is Oregon resident population. Resident population growth was 1.1 percent compounded from 1997-2007, and is expected to rise to 1.2 percent from 2008-2028. Migration into these counties of retirement-age persons is the primary influence on growth.

### Service Area Population Fifteen Principal Counties Served



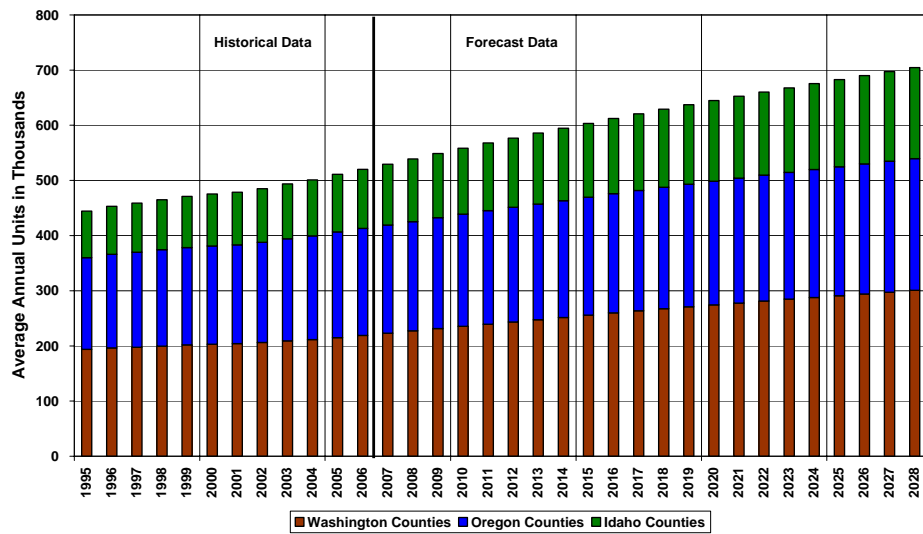
The next chart is persons 65 years and over. Between 1997 and 2007, the compounded growth rate was 1.7 percent. From 2008 to 2028, it accelerates to 2.7 percent. The 2007 estimate of the percentage of persons 65 and over in Avista's service area is 15 percent. By 2028 this estimate grows to 20 percent.

### Service Area 65 and Over Population Fifteen Principal Counties Served



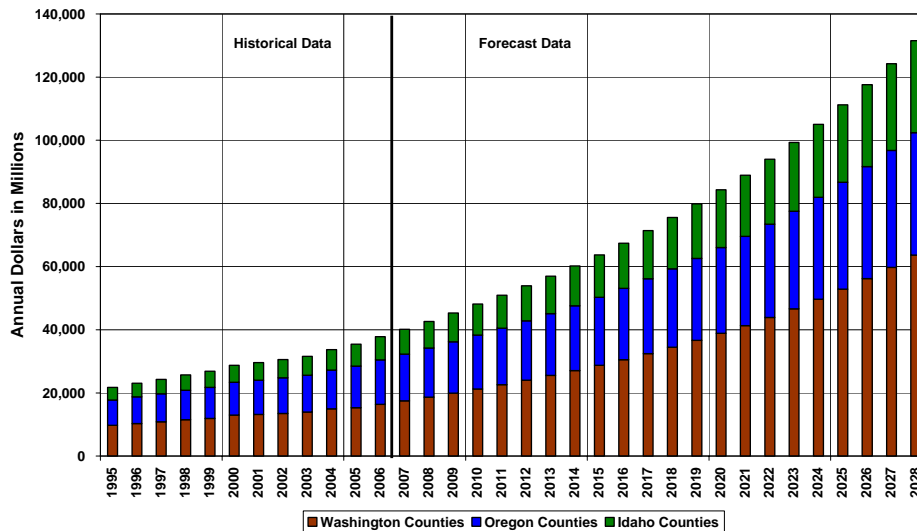
The next economic variable used in the preparation of Avista’s forecast is number of resident households in the service area. The household growth rate was 1.4 percent from 1997-2007, and is forecast at 1.3 percent for the 2008 to 2028 period.

### Service Area Households Fifteen Principal Counties Served



The final economic variable used is the estimate of personal income. Besides wage and salary income, personal income includes rental income, transfer payments (like social security from all of the age 65 and over population, plus dividends and interest payments). Between 1997 and 2007, personal income grew at a compounded average rate of 5.2 percent. The forecast period has this growth rate increasing modestly to 5.8 percent, consistent with the proportion of persons 65 years and older and the expectation these individuals will be receiving supplemental payments from retirement sources.

## Service Area Personal Income Fifteen Principal Counties Served



### Price Elasticity

Avista participated in a National study of price elasticity conducted for the American Gas Association by a consulting group. As a benefit of our participation, the consultants provided separate price elasticity estimates for each of the three states. The study was discussed at the May 2, 2007 Technical Advisory Committee meeting in Portland, Oregon.

<b>Price Elasticity</b>		
American Gas Association, March 2007 Study Frederick Joutz and Robert P. Trost		
<u>Avista Specific Estimates</u>		
	<u>Long Run</u>	<u>Short Run</u>
Washington	-0.14	-0.12
Oregon	-0.13	-0.08
Idaho	-0.10	-0.05

### Heating Degree Days

Heating degree day data is obtained from the National Weather Service. Avista uses the most recent 30-year period, which goes from 1971-2000. For Oregon, Avista uses four weather stations as the weather basis, corresponding to the areas within which natural gas services are provided, all of which are official National Weather Service stations. Heating degree day weather patterns between these areas are uncorrelated.

At the May 2, 2007 Technical Advisory Committee meeting, Avista presented some data and information regarding trends in heating degree days for its service area. Although not adopting a “Global Warming” baseline for forecasting, our willingness to discuss the subject was well received. It was decided that for

this IRP no action on adjusting forecasts for the warmer trends observed in recent years is necessary. However, as this issue continues to garner discussion further analysis will be warranted.

### **Base Case Forecasts of Customers Served**

Base case customer forecasts for residential customers are consistent with our economic forecasts. The relationship has been changing over the last decade, and the forecasts take into account the most recent trends. As shown on the next figure, the number of residential customers per household grew rapidly between 1997 and 2001. About half of this growth was due to fuel switching of existing homes from other heating sources to natural gas.

After 2001, the number of customers switching to natural gas decreased, as the number of homes available to switch declined combined with dramatically higher natural gas retail prices to reduce the market demand.

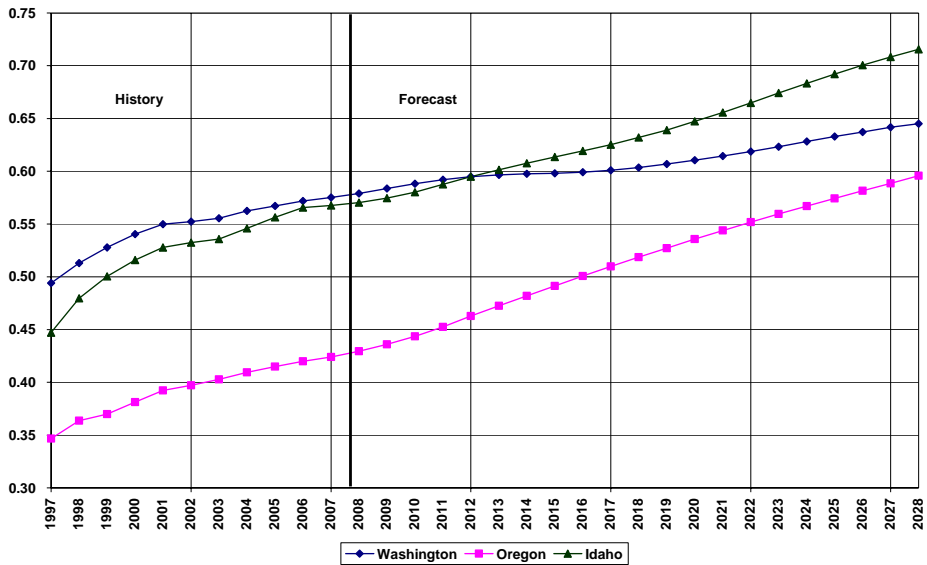
To produce the customer forecast, we look at recent trends in housing construction and the likelihood those homes will be served with natural gas. For example, in Washington, the number of single family homes being constructed has declined, with apartment dwellings taking a larger market share. Multi-family housing has traditionally been served with electricity only, limiting the number of available dwellings for natural gas service.

However, in the areas outside of the urban core of Spokane, including the rest of Washington, much of Idaho and Oregon, housing construction activity has maintained very high levels of single family homes, whether detached-style homes on individual lots or attached-style homes, like duplexes, townhomes, or condominiums. This market is traditionally served with natural gas water and space heat, and many of these homes now are being built with natural gas clothes dryers, gas ranges and ovens and natural gas fire places.

Because growth management laws are in place in all of Avista's natural gas service areas, we assume these construction trends in the urban growth areas will be served with natural gas, and do not anticipate any switching to electricity. We have an effort under way to encourage multi-family builders, who typically are building apartments for rental purposes to include natural gas appliances, but this forecast does not assume this effort will lead to a change in construction practices. We will continue to monitor activity in the multi-family housing segment.

The forecast assumes that the trends of the last five years continue into the future, adjusted for the sharp building cycle presently under way and based on the household forecasts provided by Global Insight. The chart shows the number of residential customers per household. The reason this ratio is increasing in the forecast period is because the ratio of homes being added is higher than the current ratio. This is largely driven by the assumption of nearly 100 percent of new homes having at least one natural gas service. Also, outside of the Medford and Spokane metropolitan areas, the multi-family construction market is very small. The only exception would be in Pullman and Moscow where growth in university enrollments is leading to apartment construction activity in those special areas. To a lesser extent, La Grande, Klamath Falls, and Ashland are seeing student growth-driven apartment construction, but to a small extent.

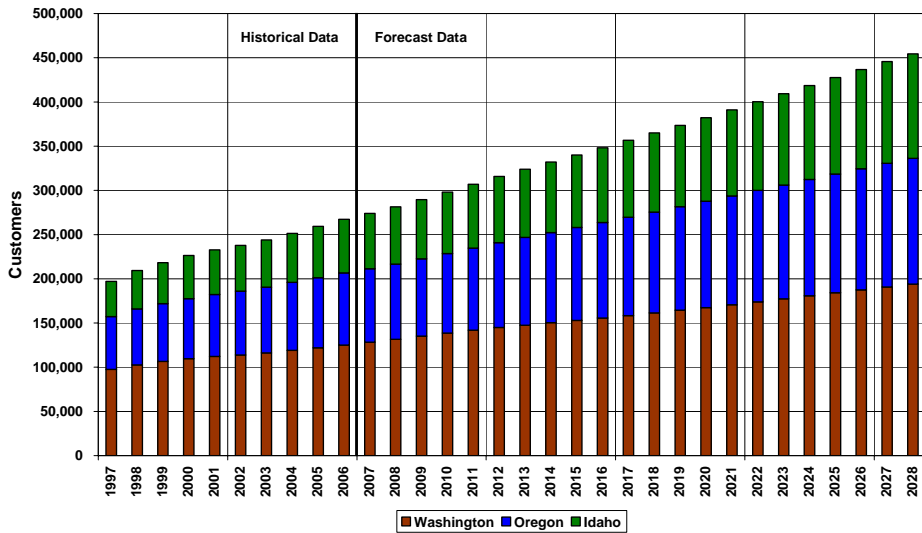
### Residential Customers per Household Trends by State



The residential customer forecast is the product of the customers-per-household forecast and the household forecast from Global Insight.

Note: 2007 data includes 4 months actual, 8 months estimated

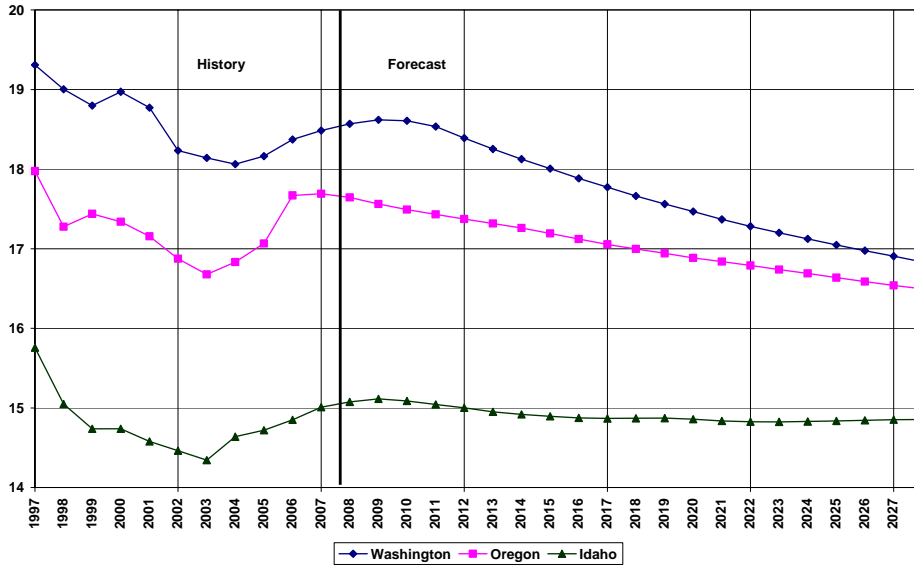
### Residential Customers Served Average During the Year--All Residential Customers are Core Load



Core commercial customers served are based on job forecasts for each county, as well as the number of residential customers. The figure below shows ratio of non-farm workers per commercial customer. The previous ten years show declines in numbers of workers early in the period, followed by a buildup until recently. This build up is due to an increase in the number of big-box retail stores, which have moved from the very large metro areas into the smaller metro areas served by Avista. We believe that build out is largely complete. We do not anticipate new large mall-type complexes will be built in to any great extent. Therefore, in a few more years we expect the number of workers will again begin to decline as smaller shops and strip-mall developments fill into the neighborhood developments. We have taken into account

the known shopping areas that have been either permitted or have those proposed that have a high probability of being built in the near term forecast. As shown in the chart, although declines are forecast, they are very modest levels and reflect the particular characteristics of the existing mix of commercial developments in each state.

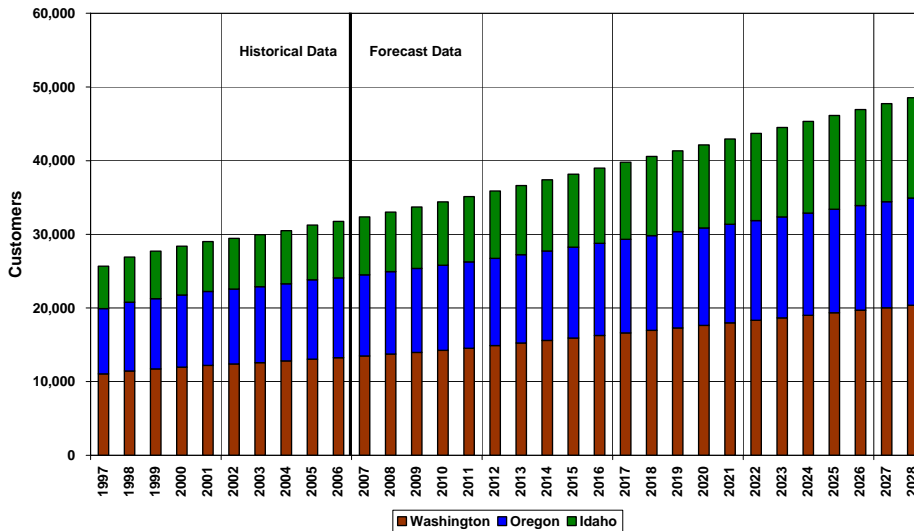
**Non-Farm Employment per Commercial Customer Trends by State**



The commercial customer forecast is based on job forecasts multiplied times the forecasted ratio of workers per customer as described above.

Note: 2007 data includes 4 months actual, 8 months estimated

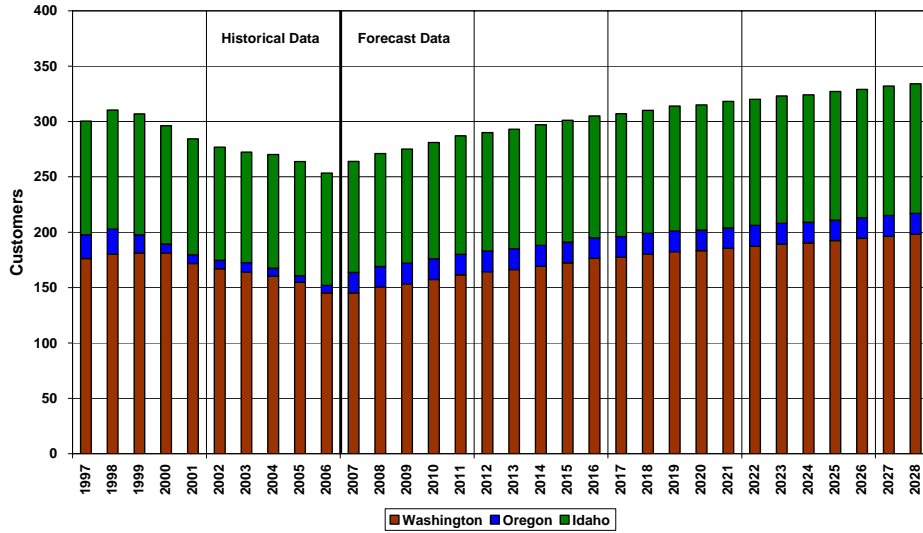
**Core Commercial Customers Served**  
Average During the Year



Core industrial customers served are based on manufacturing job forecasts for each county. The number of manufacturing workers is expected to be growing slowly over the forecast period, leading to little change in the number of core firm industrial customers.

Note: 2007 data includes 4 months actual, 8 months estimated

### Core Industrial Customers Served Average During the Year



# **Customer Forecast**

## **Appendix 2.2**



Appendix 2.2 - Customer Forecast - Number by Region  
Expected Case

	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR Res	MFR Com	Medford Firm Ind	MFR Total	Roseburg Res	Roseburg Com	Roseburg Firm Ind	ROS Total	KLA Res	KLA Com	KLA Firm Ind	KLA Total	LGD Res	LGD Com	LGD Firm Ind	LGD Total
Nov-07	193,203	21,592	247	215,042	50,373	6,448	9	56,830	13,163	2,145	2	15,310	13,882	1,606	5	15,493	6,449	882	5	7,336
Dec-07	194,376	21,688	250	216,314	50,851	6,481	9	57,341	13,285	2,153	2	15,440	14,056	1,626	4	15,686	6,514	882	2	7,398
Jan-08	194,726	21,642	248	216,617	51,074	6,498	9	57,571	13,327	2,159	2	15,488	14,110	1,643	4	15,757	6,554	883	1	7,438
Feb-08	194,827	21,768	252	216,847	51,144	6,505	9	57,658	13,367	2,160	2	15,529	14,146	1,654	5	15,805	6,565	883	1	7,449
Mar-08	195,157	21,737	250	217,144	51,241	6,520	9	57,770	13,419	2,163	2	15,584	14,174	1,655	5	15,834	6,555	884	1	7,440
Apr-08	195,051	21,713	250	217,014	51,252	6,487	9	57,748	13,340	2,149	2	15,472	14,134	1,648	5	15,787	6,547	880	1	7,428
May-08	195,373	21,719	250	217,342	51,220	6,491	9	57,720	13,303	2,167	2	15,472	14,039	1,635	5	15,679	6,524	880	2	7,406
Jun-08	195,700	21,751	253	217,704	51,047	6,481	9	57,530	13,219	2,163	2	15,384	13,926	1,631	5	15,562	6,486	881	2	7,369
Jul-08	195,531	21,716	256	217,503	50,866	6,475	9	57,350	13,220	2,158	2	15,380	13,890	1,637	5	15,532	6,486	881	2	7,369
Aug-08	195,802	21,822	253	217,877	50,731	6,479	9	57,219	13,161	2,152	2	15,380	13,890	1,637	5	15,532	6,486	881	2	7,369
Sep-08	196,377	21,910	255	218,702	50,891	6,503	9	57,403	13,127	2,149	2	15,278	13,799	1,640	5	15,444	6,338	885	3	7,226
Oct-08	197,952	21,935	252	220,139	51,263	6,490	9	57,762	13,270	2,152	2	15,424	14,002	1,621	5	15,628	6,450	887	7	7,219
Nov-09	198,723	22,073	254	221,050	51,773	6,573	9	58,355	13,513	2,170	2	15,685	14,232	1,649	5	15,873	6,549	887	5	7,441
Dec-08	199,896	22,169	256	222,321	52,301	6,606	9	58,916	13,635	2,173	2	15,932	14,406	1,656	4	16,066	6,614	887	2	7,503
Jan-09	200,476	22,129	252	222,828	52,374	6,609	9	58,992	13,727	2,203	2	15,932	14,406	1,656	4	16,066	6,614	887	2	7,503
Feb-09	200,548	22,255	256	223,059	52,494	6,616	9	59,119	13,767	2,204	2	15,973	14,406	1,671	4	16,135	6,654	888	1	7,544
Mar-09	200,878	22,224	254	223,356	52,641	6,631	9	59,281	13,819	2,207	2	16,028	14,524	1,682	5	16,183	6,665	888	1	7,544
Apr-09	200,772	22,200	254	223,226	52,702	6,602	9	59,309	13,740	2,193	2	16,028	14,484	1,676	5	16,212	6,655	889	1	7,545
May-09	201,094	22,206	257	223,554	52,720	6,602	9	59,331	13,703	2,211	2	16,028	14,389	1,663	5	16,057	6,624	885	2	7,511
Jun-09	201,421	22,238	257	223,916	52,547	6,592	9	59,148	13,619	2,207	2	15,828	14,276	1,659	5	15,940	6,586	886	2	7,474
Jul-09	201,452	22,203	260	223,915	52,366	6,586	9	58,961	13,670	2,202	2	15,874	14,290	1,665	5	15,960	6,586	886	2	7,474
Aug-09	201,723	22,309	257	224,289	52,231	6,590	9	58,830	13,670	2,202	2	15,874	14,290	1,665	5	15,960	6,586	886	2	7,474
Sep-09	202,458	22,397	259	225,114	52,391	6,614	9	59,014	13,577	2,196	2	15,772	14,199	1,668	5	15,872	6,428	890	3	7,331
Oct-09	203,873	22,422	256	226,551	52,813	6,601	9	59,423	13,720	2,196	2	15,918	14,402	1,649	5	16,056	6,500	892	7	7,324
Nov-09	204,644	22,560	258	227,462	53,373	6,684	9	60,066	13,963	2,214	2	16,179	14,632	1,664	5	16,301	6,649	892	5	7,546
Dec-09	205,817	22,656	260	228,733	53,951	6,717	9	60,677	14,085	2,217	2	16,304	14,806	1,684	4	16,494	6,714	892	2	7,608
Jan-10	206,317	22,665	258	229,240	54,024	6,706	9	60,739	14,227	2,245	2	16,474	14,806	1,697	4	16,561	6,754	892	1	7,647
Feb-10	206,418	22,791	262	229,471	54,144	6,713	9	60,866	14,267	2,246	2	16,515	14,896	1,708	5	16,609	6,765	892	1	7,658
Mar-10	206,748	22,760	260	229,768	54,291	6,728	9	61,028	14,319	2,249	2	16,570	14,924	1,709	5	16,638	6,755	893	1	7,649
Apr-10	206,642	22,736	260	229,638	54,252	6,695	9	60,956	14,240	2,235	2	16,477	14,884	1,702	5	16,591	6,747	889	1	7,649
May-10	206,964	22,742	260	229,966	54,270	6,699	9	60,978	14,203	2,253	2	16,458	14,789	1,689	5	16,483	6,724	889	2	7,615
Jun-10	207,291	22,774	263	230,328	54,097	6,689	9	60,795	14,119	2,249	2	16,370	14,676	1,685	5	16,366	6,686	890	2	7,578
Jul-10	207,422	22,739	266	230,427	53,916	6,683	9	60,608	14,170	2,244	2	16,416	14,740	1,691	5	16,436	6,663	892	2	7,578
Aug-10	207,933	22,845	263	230,801	53,781	6,687	9	60,477	14,171	2,238	2	16,351	14,635	1,685	5	16,325	6,638	894	3	7,435
Sep-10	208,428	22,933	265	231,626	53,941	6,711	9	60,661	14,227	2,235	2	16,314	14,649	1,694	5	16,348	6,624	897	7	7,428
Oct-10	209,843	22,958	262	233,063	54,413	6,698	9	61,120	14,400	2,238	2	16,460	14,852	1,675	5	16,532	6,650	896	7	7,553
Nov-10	210,614	23,096	264	233,974	55,023	6,814	9	61,813	14,463	2,256	2	16,721	15,082	1,690	5	16,770	6,749	896	5	7,650
Dec-10	211,787	23,192	266	235,245	55,651	6,814	9	62,474	14,585	2,259	2	16,846	15,262	1,710	4	16,977	6,814	896	2	7,712
Jan-11	212,288	23,226	264	235,778	56,651	6,814	9	63,465	14,827	2,279	2	17,108	15,366	1,717	4	17,081	6,854	896	1	7,762
Feb-11	212,389	23,352	268	236,009	56,794	6,792	9	62,602	14,867	2,280	2	17,149	15,396	1,728	5	17,129	6,865	896	1	7,762
Mar-11	212,719	23,321	266	236,306	56,941	6,814	9	62,764	14,919	2,283	2	17,204	15,424	1,729	5	17,158	6,855	897	1	7,753
Apr-11	212,613	23,297	266	236,176	56,902	6,785	9	62,692	14,840	2,269	2	17,111	15,384	1,722	5	17,111	6,847	893	1	7,741
May-11	213,262	23,335	269	236,504	56,920	6,775	9	62,714	14,803	2,287	2	17,092	15,289	1,709	5	17,003	6,824	893	2	7,719
Jun-11	213,262	23,335	269	236,504	56,920	6,775	9	62,714	14,803	2,287	2	17,092	15,289	1,709	5	17,003	6,824	893	2	7,719
Jul-11	213,262	23,335	269	236,504	56,920	6,775	9	62,714	14,803	2,287	2	17,092	15,289	1,709	5	17,003	6,824	893	2	7,719
Aug-11	213,564	23,406	272	236,866	56,747	6,775	9	62,531	14,719	2,283	2	17,004	15,176	1,705	5	16,886	6,786	894	2	7,682
Sep-11	214,299	23,406	269	237,239	56,566	6,773	9	62,344	14,770	2,278	2	16,985	15,240	1,711	5	16,956	6,663	896	2	7,561
Oct-11	215,714	23,494	271	239,604	56,431	6,784	9	62,317	14,711	2,272	2	16,985	15,135	1,705	5	16,845	6,638	898	3	7,539
Nov-11	216,485	23,519	268	239,501	56,113	6,784	9	62,397	14,711	2,269	2	16,948	15,149	1,714	5	16,868	6,624	901	7	7,552
Dec-11	217,658	23,573	270	240,412	56,773	6,867	9	63,649	14,820	2,272	2	17,094	15,352	1,695	5	17,052	6,750	900	7	7,652
Jan-12	218,665	23,753	272	242,683	57,451	6,900	9	64,360	15,063	2,290	2	17,355	15,582	1,710	5	17,297	6,849	900	5	7,754
Feb-12	217,968	23,832	267	241,964	57,640	6,878	9	64,527	15,185	2,293	2	17,480	15,756	1,730	4	17,490	6,914	900	2	7,816
Mar-12	218,307	23,930	269	242,506	57,712	6,885	9	64,606	15,573	2,317	2	17,849	15,874	1,738	4	17,553	6,960	900	1	7,861
Apr-12	218,198	23,905	269	242,372	57,824	6,867	9	64,700	15,627	2,320	2	17,892	15,874	1,751	5	17,602	6,961	901	1	7,863
May-12	218,529	23,911	269	242,709	57,842	6,871	9	64,722	15,506	2,325	2	17,853	15,874	1,743	5	17,583	6,953	897	1	7,851
Jun-12	218,864	23,944	272	243,080	57,663	6,861	9	64,533	15,418	2,320	2	17,832	15,737	1,730	5	17,472	6,930	897	2	7,829
Jul-12	218,896	23,908	275	243,079	57,476	6,855	9	64,340	15,471	2,315	2	17,789	15,621	1,732	5	17,352	6,891	898	2	7,791
Aug-12	219,174	24,017	272	243,463	57,337	6,859	9	64,204	15,409	2,309	2	17,721	15,587	1,726	5	17,424	6,766	900	2	7,668
Sep-12	219,929	24,107	274	244,310	57,502	6,883	9	64,394	15,374	2,306	2	17,682	15,593	1,735	5	17,333	6,726	902	3	7,646

Appendix 2.2 - Customer Forecast - Number by Region  
Expected Case

	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR Res	MFR Com	MFR Firm Ind	MFR Total	ROS Res	ROS Com	ROS Firm Ind	ROS Total	KLA Res	KLA Com	KLA Firm Ind	KLA Total	LGD Res	LGD Com	LGD Firm Ind	LGD Total
Nov-13	227,546	24,892	276	252,714	60,550	7,037	9	67,595	16,460	2,364	2	18,826	16,457	1,752	5	18,214	7,076	908	5	7,989
Dec-13	228,779	24,993	278	254,050	61,273	7,070	9	68,352	16,593	2,367	2	18,962	16,641	1,772	4	18,417	7,143	908	2	8,053
Jan-14	228,206	25,044	274	253,524	61,172	7,048	9	68,229	16,851	2,391	2	19,244	16,656	1,781	4	18,421	7,187	908	1	8,096
Feb-14	228,314	25,180	278	253,772	61,249	7,055	9	68,314	16,896	2,392	2	19,291	16,675	1,793	4	18,472	7,199	908	1	8,108
Mar-14	228,669	25,147	276	254,091	61,411	7,071	9	68,490	16,955	2,396	2	19,353	16,705	1,794	5	18,504	7,188	909	1	8,096
Apr-14	228,555	25,121	276	253,952	61,368	7,037	9	68,437	16,864	2,381	2	19,249	16,662	1,786	5	18,453	7,180	905	1	8,086
May-14	228,901	25,127	276	254,304	61,388	7,041	9	68,437	16,824	2,400	2	19,225	16,559	1,773	5	18,337	7,156	905	2	8,063
Jun-14	229,252	25,162	279	254,693	61,198	7,030	9	68,237	16,728	2,396	2	19,126	16,456	1,769	5	18,210	7,116	906	2	8,024
Jul-14	229,286	25,124	282	254,692	60,999	7,024	9	68,032	16,786	2,390	2	19,178	16,506	1,775	5	18,286	6,987	908	2	7,897
Aug-14	229,577	25,238	279	255,095	60,851	7,028	9	67,888	16,719	2,384	2	19,105	16,392	1,769	5	18,166	6,961	910	3	7,874
Sep-14	230,367	25,333	281	255,982	61,026	7,053	9	68,089	16,843	2,381	2	19,063	16,407	1,778	5	18,190	6,946	913	7	7,866
Oct-14	231,888	25,360	278	257,527	61,599	7,040	9	68,648	16,843	2,381	2	19,229	16,407	1,778	5	18,390	7,078	912	7	7,997
Nov-14	233,717	25,509	280	258,506	62,324	7,126	9	69,459	16,680	2,403	2	19,524	16,872	1,758	5	18,655	7,182	912	5	8,099
Dec-14	233,978	25,613	282	259,873	63,068	7,160	9	70,237	17,258	2,406	2	19,666	17,064	1,795	4	18,863	7,250	912	2	8,164
Jan-15	233,178	25,650	278	259,106	62,951	7,147	9	69,972	17,088	2,438	2	19,972	17,088	1,808	4	18,840	7,323	913	1	8,237
Feb-15	233,289	25,790	282	259,360	63,030	7,155	9	70,194	17,580	2,439	2	20,021	17,088	1,821	5	18,945	7,325	913	1	8,249
Mar-15	233,651	25,755	280	259,687	63,196	7,170	9	70,376	17,642	2,442	2	20,086	17,119	1,821	5	18,945	7,316	910	1	8,239
Apr-15	233,535	25,729	280	259,544	63,152	7,136	9	70,297	17,548	2,427	2	19,977	17,075	1,813	5	18,893	7,316	910	1	8,227
May-15	233,889	25,735	280	259,904	63,173	7,140	9	70,322	17,504	2,446	2	19,953	16,969	1,800	5	18,774	7,291	910	2	8,203
Jun-15	234,248	25,771	283	260,302	62,977	7,129	9	70,116	17,405	2,442	2	19,849	16,844	1,795	5	18,644	7,251	911	2	8,163
Jul-15	234,282	25,732	286	260,300	62,773	7,123	9	69,905	17,465	2,437	2	19,904	16,915	1,802	5	18,722	7,119	913	2	8,034
Aug-15	234,580	25,849	283	260,712	62,620	7,127	9	69,756	17,396	2,430	2	19,828	16,798	1,795	5	18,599	7,093	915	3	8,010
Sep-15	235,387	25,946	285	261,618	62,801	7,153	9	69,963	17,355	2,427	2	19,784	16,814	1,805	5	18,624	7,078	918	7	8,136
Oct-15	236,941	25,974	282	263,197	63,391	7,139	9	70,539	17,525	2,430	2	19,957	17,039	1,785	5	18,829	7,212	917	7	8,136
Nov-15	237,788	26,126	284	264,198	64,136	7,226	9	71,371	17,812	2,453	2	20,263	17,295	1,801	5	19,100	7,318	917	5	8,240
Dec-15	239,076	26,232	286	265,595	64,902	7,261	9	72,172	17,956	2,453	2	20,411	17,488	1,822	4	19,314	7,388	917	2	8,306
Jan-16	238,249	26,257	282	264,787	64,780	7,257	9	72,046	18,237	2,488	2	20,726	17,461	1,839	4	19,304	7,460	918	1	8,379
Feb-16	238,362	26,364	284	265,047	64,861	7,265	9	72,777	18,286	2,489	2	20,777	17,502	1,851	5	19,338	7,472	918	1	8,391
Mar-16	238,732	26,364	284	265,380	65,032	7,281	9	72,135	18,350	2,492	2	20,844	17,534	1,852	5	19,391	7,461	919	1	8,368
Apr-16	238,613	26,337	284	265,234	64,987	7,246	9	72,241	18,250	2,477	2	20,731	17,488	1,845	5	19,216	7,427	915	2	8,344
May-16	238,975	26,344	284	265,602	65,008	7,250	9	72,267	18,207	2,496	2	20,706	17,380	1,831	5	19,162	7,427	915	2	8,304
Jun-16	239,342	26,380	287	266,008	64,807	7,239	9	72,055	18,104	2,492	2	20,598	17,252	1,826	5	19,083	7,386	916	2	8,304
Jul-16	239,377	26,340	290	266,007	64,596	7,233	9	71,838	18,067	2,487	2	20,576	17,324	1,833	5	19,162	7,252	918	2	8,172
Aug-16	239,681	26,460	287	266,428	64,439	7,237	9	71,685	18,094	2,480	2	20,576	17,205	1,826	5	19,036	7,225	920	3	8,148
Sep-16	240,506	26,559	289	267,354	64,625	7,263	9	71,897	18,052	2,477	2	20,531	17,221	1,836	5	19,062	7,209	923	7	8,140
Oct-16	242,094	26,588	286	268,967	65,232	7,249	9	72,490	18,228	2,480	2	20,710	17,452	1,816	5	19,272	7,347	922	7	8,276
Nov-16	242,959	26,744	288	269,991	65,999	7,338	9	73,346	18,527	2,500	2	21,029	17,713	1,832	4	19,550	7,454	922	5	8,381
Dec-16	244,275	26,852	290	271,418	66,787	7,373	9	74,169	18,677	2,503	2	21,182	17,911	1,853	4	19,768	7,525	922	2	8,449
Jan-17	243,415	26,866	288	270,560	66,596	7,365	9	73,970	18,952	2,536	2	21,488	17,928	1,868	4	19,758	7,581	923	1	8,505
Feb-17	243,530	27,007	288	270,826	66,680	7,372	9	74,061	19,003	2,536	2	21,541	17,928	1,880	4	19,813	7,593	923	1	8,517
Mar-17	243,909	26,972	286	271,166	66,855	7,389	9	74,253	19,069	2,539	2	21,610	17,961	1,881	5	19,847	7,582	924	1	8,507
Apr-17	243,787	26,944	286	271,017	66,809	7,357	9	74,170	18,968	2,524	2	21,494	17,914	1,874	5	19,793	7,573	920	1	8,494
May-17	244,156	26,951	286	271,393	66,830	7,367	9	74,196	18,921	2,544	2	21,467	17,803	1,860	5	19,668	7,548	920	2	8,470
Jun-17	244,531	26,988	289	271,808	66,623	7,346	9	73,979	18,814	2,539	2	21,355	17,672	1,855	5	19,532	7,506	921	2	8,429
Jul-17	244,567	26,947	292	272,236	66,407	7,340	9	73,756	18,879	2,534	2	21,414	17,746	1,862	5	19,613	7,370	923	2	8,429
Aug-17	244,878	27,070	289	272,236	66,246	7,344	9	73,599	18,803	2,527	2	21,332	17,654	1,862	5	19,484	7,342	925	3	8,270
Sep-17	245,720	27,172	291	273,183	66,437	7,370	9	73,816	18,760	2,524	2	21,286	17,640	1,865	5	19,510	7,326	928	7	8,402
Oct-17	247,343	27,201	288	274,831	67,061	7,356	9	74,426	18,943	2,527	2	21,472	17,877	1,844	5	19,726	7,466	927	7	8,400
Nov-17	248,227	27,360	290	275,877	67,850	7,446	9	75,305	19,253	2,547	2	21,802	18,145	1,861	4	20,010	7,575	927	5	8,507
Dec-17	249,572	27,471	292	277,335	68,660	7,482	9	76,151	19,409	2,550	2	22,223	18,349	1,882	4	20,234	7,647	927	2	8,576
Jan-18	248,796	27,463	287	276,527	68,337	7,465	9	75,811	19,253	2,547	2	22,223	18,349	1,882	4	20,234	7,647	927	2	8,576
Feb-18	248,896	27,612	289	276,799	68,423	7,472	9	75,905	19,697	2,578	2	22,277	18,349	1,906	5	20,253	7,714	927	1	8,643
Mar-18	249,283	27,575	289	277,147	68,604	7,489	9	76,101	19,766	2,581	2	22,349	18,375	1,907	5	20,287	7,703	928	1	8,632
Apr-18	249,159	27,547	289	276,994	68,556	7,453	9	76,017	19,662	2,565	2	22,229	18,327	1,899	5	20,232	7,694	924	1	8,619
May-18	249,536	27,554	289	277,379	68,578	7,457	9	76,044	19,613	2,586	2	22,200	18,214	1,885	5	20,104	7,668	924	2	8,594
Jun-18	249,919	27,592	292	277,801	68,366	7,446	9	75,821	19,501	2,581	2	22,084	18,080	1,881	5	19,945	7,626	925	2	8,554
Jul-18	249,956	27,550	295	278,101	68,144	7,439	9	75,592	19,569	2,575	2	22,146	18,156	1,887	5	20,048	7,487	927	2	8,471
Aug-18	250,273	27,676	292	278,241	67,978	7,444	9	75,431	19,569	2,569	2	22,061	18,031	1,881	5	19,916	7,459	929	3	8,392
Sep-18	251,135	27,780	294	279,208	68,174	7,470	9	75,654	19,446	2,565	2	22,013	18,047	1,879	5	19,943	7,444	932	7	8,383

Appendix 2.2 - Customer Forecast - Number by Region Expected Case

	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR Res	MFR Com	Medford Firm Ind	MFR Firm Ind	MFR Total	ROS Res	ROS Com	Roseburg Firm Ind	ROS Firm Ind	ROS Total	KLA Res	KLA Com	Klamath Falls Firm Ind	KLA Firm Ind	KLA Total	LGD Res	LGD Com	La Grande Firm Ind	LGD Firm Ind	LGD Total
Nov-19	259,268	28,585	297	288,150	71,411	7,647	9	79,067	79,067	20,661	2,630	2	23,293	23,293	18,969	1,912	5	20,886	7,802	936	5	8,743	20,886	
Dec-19	260,673	28,701	299	289,673	72,264	7,684	9	79,956	79,956	20,828	2,633	2	23,464	23,464	19,181	1,934	4	21,119	7,876	936	5	8,814	21,119	
Jan-20	260,673	28,689	292	289,362	71,833	7,667	9	79,500	79,500	21,041	2,660	2	23,703	23,703	19,112	1,947	4	21,062	7,929	936	1	8,866	21,062	
Feb-20	260,126	28,845	296	288,971	71,923	7,675	9	79,607	79,607	21,098	2,661	2	23,761	23,761	19,156	1,959	5	21,120	7,942	936	1	8,879	21,120	
Mar-20	260,530	28,806	294	289,336	72,113	7,692	9	79,813	79,813	21,172	2,664	2	23,838	23,838	19,191	1,960	5	21,156	7,930	937	1	8,868	21,156	
Apr-20	260,400	28,777	294	289,177	72,062	7,654	9	79,726	79,726	21,060	2,648	2	23,710	23,710	19,141	1,952	5	21,099	7,921	933	1	8,845	21,099	
May-20	260,794	28,784	294	289,578	72,086	7,659	9	79,754	79,754	21,007	2,669	2	23,678	23,678	19,023	1,937	5	20,966	7,894	933	2	8,829	20,966	
Jun-20	261,195	28,824	297	290,315	71,862	7,648	9	79,519	79,519	20,888	2,664	2	23,555	23,555	18,883	1,933	5	20,821	7,851	934	2	8,786	20,821	
Jul-20	261,233	28,780	300	290,313	71,629	7,641	9	79,279	79,279	20,960	2,659	2	23,621	23,621	18,962	1,940	5	20,907	7,708	936	2	8,646	20,907	
Aug-20	261,565	28,911	297	290,773	71,455	7,645	9	79,110	79,110	20,877	2,652	2	23,530	23,530	18,832	1,933	5	20,770	7,679	938	3	8,620	20,770	
Sep-20	262,465	29,020	299	291,784	71,661	7,673	9	79,343	79,343	20,828	2,648	2	23,479	23,479	18,849	1,943	5	20,797	7,663	941	7	8,611	20,797	
Oct-20	264,198	29,051	296	293,545	72,334	7,658	9	80,001	80,001	21,031	2,652	2	23,685	23,685	19,102	1,922	5	21,028	7,809	940	7	8,756	21,028	
Nov-20	265,142	29,221	298	294,662	73,185	7,752	9	80,946	80,946	21,376	2,673	2	24,051	24,051	19,388	1,939	5	21,331	7,923	940	5	8,868	21,331	
Dec-20	266,579	29,340	300	296,219	74,059	7,789	9	81,857	81,857	21,549	2,676	2	24,228	24,228	19,604	1,961	4	21,570	7,999	940	2	8,941	21,570	
Jan-21	265,962	29,316	294	295,572	73,525	7,757	9	81,291	81,291	21,734	2,693	2	24,429	24,429	19,524	1,967	4	21,495	8,035	940	1	8,976	21,495	
Feb-21	266,088	29,475	299	295,862	73,617	7,765	9	81,391	81,391	21,793	2,694	2	24,489	24,489	19,570	1,980	4	21,555	8,048	940	1	8,989	21,555	
Mar-21	266,502	29,436	297	296,234	73,811	7,783	9	81,602	81,602	21,869	2,698	2	24,569	24,569	19,606	1,981	5	21,591	8,036	941	1	8,978	21,591	
Apr-21	266,369	29,405	297	296,071	73,759	7,745	9	81,513	81,513	21,753	2,681	2	24,437	24,437	19,555	1,973	5	21,532	8,027	937	1	8,945	21,532	
May-21	266,772	29,453	297	296,482	73,883	7,749	9	81,542	81,542	21,699	2,703	2	24,404	24,404	19,434	1,958	5	21,397	8,000	937	2	8,959	21,397	
Jun-21	267,182	29,413	300	296,935	73,755	7,738	9	81,302	81,302	21,576	2,698	2	24,276	24,276	19,290	1,953	5	21,249	7,955	938	2	8,899	21,249	
Jul-21	267,221	29,409	303	296,933	73,316	7,731	9	81,056	81,056	21,651	2,692	2	24,346	24,346	19,372	1,960	5	21,337	7,811	940	2	8,753	21,337	
Aug-21	267,560	29,543	300	297,403	73,138	7,736	9	80,883	80,883	21,564	2,685	2	24,251	24,251	19,238	1,960	5	21,196	7,782	942	3	8,727	21,196	
Sep-21	268,481	29,654	302	298,437	73,349	7,763	9	81,121	81,121	21,514	2,681	2	24,198	24,198	19,256	1,963	5	21,225	7,766	945	7	8,718	21,225	
Oct-21	270,250	29,686	299	300,238	74,038	7,748	9	81,795	81,795	21,724	2,685	2	24,411	24,411	19,514	1,942	5	21,461	7,913	944	7	8,864	21,461	
Nov-21	272,689	29,981	303	302,974	74,909	7,843	9	82,751	82,751	22,080	2,706	2	24,788	24,788	19,806	1,959	5	21,770	8,029	944	5	8,978	21,770	
Dec-21	272,689	29,981	303	302,974	74,909	7,843	9	82,751	82,751	22,080	2,706	2	24,788	24,788	19,806	1,959	5	21,770	8,029	944	5	8,978	21,770	
Jan-22	272,219	29,942	296	302,357	75,167	7,854	9	83,029	83,029	22,427	2,710	2	24,971	24,971	20,028	1,982	4	22,013	8,106	944	2	9,051	22,013	
Feb-22	272,248	30,104	301	302,653	75,261	7,862	9	83,223	83,223	22,488	2,733	2	25,161	25,161	19,937	1,992	4	22,093	8,142	944	1	9,009	22,093	
Mar-22	272,671	30,033	299	303,034	75,459	7,879	9	83,447	83,447	22,566	2,737	2	25,305	25,305	20,020	2,006	4	22,031	8,154	944	1	9,009	22,031	
Apr-22	272,535	30,033	299	302,867	75,407	7,841	9	83,257	83,257	22,447	2,720	2	25,169	25,169	19,984	2,004	4	22,031	8,142	944	1	9,009	22,031	
May-22	272,948	30,041	299	303,288	75,431	7,846	9	83,286	83,286	22,391	2,742	2	25,134	25,134	19,945	1,982	5	21,970	8,133	941	1	9,074	21,970	
Jun-22	273,367	30,082	302	303,752	75,198	7,834	9	83,041	83,041	22,264	2,737	2	25,003	25,003	19,688	1,978	5	21,681	8,060	942	2	9,048	21,681	
Jul-22	273,407	30,037	305	303,750	74,963	7,827	9	82,790	82,790	22,341	2,731	2	25,074	25,074	19,781	1,985	5	21,771	7,914	944	2	9,048	21,771	
Aug-22	273,754	30,174	302	304,230	74,771	7,832	9	82,612	82,612	22,252	2,724	2	24,977	24,977	19,645	1,978	5	21,628	7,885	946	3	8,833	21,628	
Sep-22	274,697	30,287	304	305,288	74,987	7,860	9	82,856	82,856	22,200	2,720	2	24,922	24,922	19,663	1,988	5	21,656	7,868	949	7	8,824	21,656	
Oct-22	276,510	30,319	301	307,131	75,691	7,844	9	83,545	83,545	22,417	2,724	2	25,142	25,142	19,927	1,966	5	21,898	8,018	948	7	8,973	21,898	
Nov-22	277,499	30,497	303	308,299	76,582	7,940	9	84,531	84,531	22,784	2,745	2	25,531	25,531	20,225	1,983	5	22,214	8,135	948	5	9,088	22,214	
Dec-22	279,002	30,621	305	309,929	77,496	7,979	9	85,484	85,484	22,969	2,749	2	25,719	25,719	20,451	2,007	4	22,462	8,212	948	2	9,162	22,462	
Jan-23	278,608	30,567	299	309,342	76,784	7,952	9	84,738	84,738	23,109	2,771	2	25,882	25,882	20,337	2,016	4	22,357	8,232	948	1	9,194	22,357	
Feb-23	278,608	30,733	304	309,644	76,880	7,960	9	84,850	84,850	23,171	2,772	2	25,946	25,946	20,385	2,029	5	22,419	8,245	948	1	9,183	22,419	
Mar-23	279,041	30,692	302	310,034	77,083	7,944	9	85,070	85,070	23,252	2,776	2	26,030	26,030	20,422	2,030	5	22,457	8,233	949	1	9,199	22,457	
Apr-23	279,324	30,668	302	309,864	77,029	7,939	9	84,977	84,977	23,129	2,759	2	25,890	25,890	20,369	2,022	5	22,396	8,224	945	1	9,169	22,396	
May-23	279,753	30,710	305	310,294	77,054	7,944	9	85,007	85,007	23,072	2,781	2	25,854	25,854	20,243	2,007	5	22,255	8,196	945	2	9,143	22,255	
Jun-23	279,794	30,664	308	310,766	76,815	7,932	9	84,757	84,757	22,941	2,776	2	25,719	25,719	20,093	2,002	5	22,101	8,150	946	2	9,098	22,101	
Jul-23	280,149	30,804	305	311,258	76,380	7,925	9	84,500	84,500	23,020	2,770	2	25,792	25,792	20,178	2,009	5	22,192	8,003	948	2	9,063	22,192	
Aug-23	281,114	30,919	307	312,340	76,600	7,958	9	84,319	84,319	22,928	2,762	2	25,693	25,693	20,059	2,002	5	22,046	7,973	950	3	8,926	22,046	
Sep-23	282,970	30,952	304	313,226	77,320	7,943	9	84,568	84,568	22,875	2,759	2	25,636	25,636	20,058	2,013	5	22,075	7,956	953	7	9,066	22,075	
Oct-23	283,981	31,134	306	315,421	78,229	8,040	9	86,278	86,278	23,098	2,762	2	25,863	25,863	20,326	1,990	5	22,322	8,107	952	7	9,166	22,322	
Nov-23	285,520	31,260	308	317,089	79,163	8,079	9	87,251	87,251	23,477	2,784	2	26,263	26,263	20,651	2,008	5	22,644	8,226	952	5	9,183	22,644	
Dec-23	284,832	31,193	300	316,325	78,351	8,054	9	86,414	86,414	23,667	2,788	2	26,457	26,457	20,861	2,032	4	22,897	8,304	952	2	9,258	22,897	
Jan-24	284,968	31,362	305	316,635	78,449	8,062	9	86,520	86,520	23,802	2,812	2	26,616	26,616	20,7									

Appendix 2.2 - Customer Forecast - Number by Region  
Expected Case

	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR Res	MFR Com	Medford Firm Ind	MFR Total	ROS Res	ROS Com	Roseburg Firm Ind	ROS Total	KLA Res	KLA Com	Klamath Falls Firm Ind	KLA Total	LGD Res	LGD Com	La Grande Firm Ind	LGD Total
Nov-25	296,946	32,409	310	329,665	81,397	8,248	9	89,655	24,885	2,869	2	27,754	21,430	2,044	5	23,499	8,408	961	5	9,373
Dec-25	296,555	32,541	313	331,408	82,370	8,288	9	90,646	25,086	2,873	2	27,961	21,670	2,088	4	23,761	8,487	961	2	9,450
Jan-26	297,446	32,445	305	330,196	81,448	8,260	9	89,718	25,210	2,897	2	28,109	21,538	2,099	4	23,640	8,489	961	1	9,451
Feb-26	297,588	32,621	310	330,518	81,551	8,269	9	89,828	25,278	2,898	2	28,178	21,588	2,112	5	23,705	8,503	961	1	9,465
Mar-26	298,050	32,577	308	330,935	81,766	8,287	9	90,062	25,366	2,902	2	28,270	21,627	2,114	5	23,746	8,491	962	1	9,454
Apr-26	297,902	32,544	308	330,753	81,709	8,247	9	89,964	25,232	2,884	2	28,118	21,571	2,105	5	23,681	8,481	958	1	9,439
May-26	298,353	32,552	308	331,213	81,735	8,252	9	89,996	25,169	2,907	2	28,078	21,438	2,089	5	23,532	8,452	958	2	9,412
Jun-26	298,811	32,597	311	331,719	81,482	8,240	9	89,731	25,026	2,902	2	27,930	21,280	2,084	5	23,369	8,405	959	2	9,366
Jul-26	298,854	32,548	315	331,717	81,217	8,232	9	89,459	25,113	2,896	2	28,010	21,369	2,092	5	23,466	8,253	961	2	9,216
Aug-26	299,234	32,696	311	332,241	81,020	8,237	9	89,266	25,013	2,888	2	27,903	21,222	2,084	5	23,342	8,222	963	3	9,188
Sep-26	300,264	32,819	313	333,396	81,254	8,266	9	89,529	24,955	2,884	2	27,841	21,242	2,095	5	23,342	8,205	966	7	9,178
Oct-26	302,247	32,854	310	335,410	82,017	8,251	9	90,276	25,198	2,888	2	28,088	21,526	2,072	5	23,603	8,361	965	7	9,333
Nov-26	303,327	33,047	312	336,686	82,982	8,351	9	91,342	25,611	2,911	2	28,524	21,849	2,115	5	23,944	8,483	965	5	9,531
Dec-26	304,970	33,181	315	338,466	83,973	8,392	9	92,373	25,819	2,915	2	28,735	22,093	2,115	4	24,212	8,564	965	2	9,531
Jan-27	303,605	33,070	308	336,983	83,983	8,365	9	91,291	25,914	2,938	2	28,853	21,950	2,126	4	24,080	8,580	965	1	9,546
Feb-27	303,749	33,250	313	337,312	83,020	8,374	9	91,403	25,984	2,939	2	28,924	22,002	2,139	5	24,146	8,594	965	1	9,560
Mar-27	304,221	33,206	311	337,737	83,239	8,392	9	91,641	26,075	2,943	2	29,019	22,042	2,141	5	24,187	8,582	966	1	9,549
Apr-27	304,069	33,172	311	337,552	83,181	8,352	9	91,542	25,936	2,925	2	28,863	21,985	2,132	5	24,121	8,572	962	1	9,534
May-27	304,530	33,180	314	338,021	83,208	8,344	9	91,574	25,872	2,948	2	28,822	21,849	2,116	5	23,970	8,543	962	2	9,507
Jun-27	304,998	33,226	314	338,537	82,950	8,344	9	91,304	25,725	2,943	2	28,670	21,687	2,111	5	23,803	8,495	963	2	9,460
Jul-27	305,042	33,176	318	338,535	82,681	8,337	9	91,027	25,814	2,936	2	28,752	21,779	2,118	5	23,902	8,341	965	2	9,308
Aug-27	305,429	33,327	314	339,070	82,480	8,342	9	90,831	25,711	2,929	2	28,642	21,629	2,111	5	23,745	8,310	967	3	9,280
Sep-27	306,481	33,452	316	340,249	82,718	8,371	9	91,099	25,652	2,925	2	28,578	21,649	2,122	5	23,776	8,292	970	7	9,270
Oct-27	308,504	33,488	313	342,305	83,495	8,355	9	91,860	25,902	2,929	2	28,832	21,939	2,098	5	24,042	8,450	969	7	9,427
Nov-27	309,607	33,684	315	343,606	84,477	8,458	9	92,944	26,326	2,952	2	29,280	22,268	2,117	5	24,390	8,574	969	5	9,548
Dec-27	311,284	33,821	318	345,423	85,486	8,498	9	93,993	26,539	2,956	2	29,497	22,516	2,142	4	24,662	8,655	969	2	9,627

High Growth Case

Month	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR			Medford			ROS			Roseburg			Klamath Falls			La Grande				
					Res	Firm Ind	Total	Res	Firm Ind	Total	Res	Firm Ind	Total	Res	Firm Ind	Total	Res	Firm Ind	Total	Res	Firm Ind	Total	Res	Firm Ind
Nov-07	195,608	21,927	272	217,807	50,367	6,718	56,854	13,207	2,184	15,393	13,846	1,595	15,448	6,417	896	14	7,372	13,846	1,595	15,448	6,417	896	14	7,372
Dec-07	197,373	22,072	276	219,721	51,082	6,528	57,619	13,389	2,196	15,587	14,106	1,624	15,736	6,514	896	5	7,415	14,106	1,624	15,736	6,514	896	5	7,415
Jan-08	197,899	22,002	273	220,175	51,415	6,553	57,978	13,452	2,205	15,659	14,240	1,666	15,906	6,590	898	2	7,489	14,240	1,666	15,906	6,590	898	2	7,489
Feb-08	198,051	22,192	280	220,523	51,520	6,564	58,093	13,512	2,207	15,721	14,282	1,668	15,957	6,590	898	2	7,476	14,282	1,668	15,957	6,590	898	2	7,476
Mar-08	198,548	22,145	276	220,970	51,665	6,586	58,240	13,590	2,211	15,803	14,323	1,668	16,011	6,575	899	2	7,461	14,323	1,668	16,011	6,575	899	2	7,461
Apr-08	198,388	22,109	276	220,774	51,682	6,537	58,227	13,472	2,190	15,667	14,223	1,657	15,887	6,563	893	2	7,458	14,223	1,657	15,887	6,563	893	2	7,458
May-08	198,873	22,118	276	221,267	51,634	6,543	58,186	13,416	2,211	15,636	14,081	1,638	15,725	6,529	893	5	7,427	14,081	1,638	15,725	6,529	893	5	7,427
Jun-08	199,365	22,167	281	221,812	51,375	6,528	57,912	13,290	2,211	15,504	13,912	1,632	15,551	6,472	895	5	7,371	13,912	1,632	15,551	6,472	895	5	7,371
Jul-08	199,110	22,114	286	221,510	51,104	6,519	57,623	13,292	2,195	15,498	13,858	1,641	15,506	6,288	898	5	7,191	13,858	1,641	15,506	6,288	898	5	7,191
Aug-08	199,518	22,274	281	222,073	50,902	6,525	57,436	13,204	2,195	15,400	13,702	1,632	15,340	6,251	901	8	7,160	13,702	1,632	15,340	6,251	901	8	7,160
Sep-08	200,624	22,406	284	223,314	51,142	6,561	57,712	13,153	2,195	15,345	13,723	1,645	15,375	6,230	905	20	7,155	13,723	1,645	15,375	6,230	905	20	7,155
Oct-08	202,752	22,444	280	225,476	51,698	6,541	58,248	13,367	2,195	15,563	14,026	1,617	15,649	6,418	904	14	7,342	14,026	1,617	15,649	6,418	904	14	7,342
Nov-08	203,912	22,652	283	226,847	52,461	6,666	59,135	13,913	2,222	15,955	14,628	1,639	16,303	6,566	904	14	7,484	14,628	1,639	16,303	6,566	904	14	7,484
Dec-08	205,677	22,797	286	228,759	53,250	6,715	59,974	14,371	2,226	16,142	14,709	1,691	16,405	6,663	905	2	7,572	14,709	1,691	16,405	6,663	905	2	7,572
Jan-09	206,506	22,926	286	229,521	53,359	6,720	60,088	14,401	2,273	16,326	14,709	1,691	16,405	6,663	905	2	7,646	14,709	1,691	16,405	6,663	905	2	7,646
Feb-09	206,657	22,926	286	229,870	53,539	6,730	60,278	14,111	2,274	16,387	14,763	1,708	16,477	6,733	905	2	7,646	14,763	1,708	16,477	6,733	905	2	7,646
Mar-09	207,154	22,843	283	230,316	53,759	6,753	60,470	14,189	2,279	16,470	14,804	1,709	16,521	6,724	906	2	7,642	14,804	1,709	16,521	6,724	906	2	7,642
Apr-09	206,994	22,843	283	230,120	53,850	6,703	60,562	14,071	2,258	16,330	14,745	1,699	16,450	6,712	900	2	7,614	14,745	1,699	16,450	6,712	900	2	7,614
May-09	207,479	22,852	283	230,614	53,877	6,709	60,595	14,015	2,285	16,302	14,603	1,679	16,289	6,678	900	5	7,583	14,603	1,679	16,289	6,678	900	5	7,583
Jun-09	207,971	22,901	288	231,159	53,618	6,694	60,321	13,889	2,279	16,170	14,434	1,673	16,115	6,621	902	5	7,558	14,434	1,673	16,115	6,621	902	5	7,558
Jul-09	208,017	22,848	292	231,157	53,347	6,685	60,042	13,966	2,271	16,239	14,455	1,682	16,145	6,437	905	5	7,347	14,455	1,682	16,145	6,437	905	5	7,347
Aug-09	208,425	23,008	288	231,720	53,146	6,691	59,846	13,877	2,262	16,141	14,299	1,673	15,979	6,400	908	8	7,316	14,299	1,673	15,979	6,400	908	8	7,316
Sep-09	209,531	23,140	291	232,962	53,385	6,727	60,121	13,826	2,258	16,141	14,320	1,687	16,013	6,379	912	20	7,311	14,320	1,687	16,013	6,379	912	20	7,311
Oct-09	211,659	23,178	286	235,123	54,016	6,708	60,733	14,041	2,262	16,305	14,622	1,659	16,288	6,567	911	20	7,498	14,622	1,659	16,288	6,567	911	20	7,498
Nov-09	212,819	23,386	289	236,494	54,853	6,832	61,694	14,404	2,289	16,696	14,966	1,681	16,653	6,715	911	14	7,640	14,966	1,681	16,653	6,715	911	14	7,640
Dec-09	214,584	23,531	292	238,404	55,718	6,882	62,608	14,587	2,294	16,883	15,306	1,711	16,941	6,812	911	5	7,728	15,306	1,711	16,941	6,812	911	5	7,728
Jan-10	215,336	23,544	289	239,169	56,227	6,864	62,700	14,800	2,336	17,138	15,306	1,730	17,041	6,872	911	2	7,805	15,306	1,730	17,041	6,872	911	2	7,805
Feb-10	215,488	23,734	289	239,517	56,006	6,875	62,800	14,860	2,336	17,199	15,306	1,730	17,041	6,872	911	2	7,805	15,306	1,730	17,041	6,872	911	2	7,805
Mar-10	215,984	23,687	292	239,964	56,006	6,897	62,800	14,937	2,342	17,282	15,401	1,748	17,156	6,873	911	2	7,805	15,401	1,748	17,156	6,873	911	2	7,805
Apr-10	216,825	23,651	292	239,768	56,168	6,848	62,800	14,819	2,321	17,142	15,342	1,737	17,086	6,861	907	2	7,770	15,342	1,737	17,086	6,861	907	2	7,770
May-10	216,309	23,660	292	240,262	56,195	6,854	62,800	14,764	2,348	17,114	15,200	1,718	16,925	6,827	907	5	7,739	15,200	1,718	16,925	6,827	907	5	7,739
Jun-10	216,801	23,708	292	240,807	56,936	6,939	62,784	14,682	2,342	16,982	15,031	1,712	16,750	6,770	908	5	7,684	15,031	1,712	16,750	6,770	908	5	7,684
Jul-10	217,496	23,656	302	240,956	55,665	6,866	62,504	14,714	2,335	17,051	15,127	1,721	16,854	6,587	911	5	7,503	15,127	1,721	16,854	6,587	911	5	7,503
Aug-10	218,008	23,816	297	241,518	55,463	6,836	62,308	14,652	2,325	16,953	14,970	1,712	16,689	6,549	914	5	7,472	14,970	1,712	16,689	6,549	914	5	7,472
Sep-10	218,511	23,948	300	242,760	56,302	6,872	62,584	14,755	2,321	16,998	14,991	1,725	16,723	6,529	919	20	7,467	14,991	1,725	16,723	6,529	919	20	7,467
Oct-10	220,640	23,986	296	244,921	56,408	6,852	62,720	14,879	2,321	17,117	15,294	1,725	16,998	6,717	917	20	7,654	15,294	1,725	16,998	6,717	917	20	7,654
Nov-10	221,800	24,194	299	246,292	57,321	6,977	63,306	15,153	2,353	17,508	15,637	1,719	17,363	6,864	917	14	7,796	15,637	1,719	17,363	6,864	917	14	7,796
Dec-10	223,564	24,339	302	248,205	58,260	7,026	65,295	15,336	2,357	17,695	15,897	1,749	17,651	6,961	917	5	7,884	15,897	1,749	17,651	6,961	917	5	7,884
Jan-11	224,318	24,390	299	249,006	58,369	6,994	65,372	15,698	2,388	18,088	16,052	1,760	17,817	7,021	918	2	7,941	16,052	1,760	17,817	7,021	918	2	7,941
Feb-11	224,470	24,580	302	249,355	58,474	7,004	65,729	15,758	2,394	18,150	16,106	1,777	17,889	7,038	918	2	7,944	16,106	1,777	17,889	7,038	918	2	7,944
Mar-11	224,966	24,533	302	249,355	58,474	7,004	65,729	15,758	2,394	18,150	16,106	1,777	17,889	7,038	918	2	7,944	16,106	1,777	17,889	7,038	918	2	7,944
Apr-11	224,807	24,497	302	249,605	58,693	7,027	65,729	15,836	2,394	18,092	16,088	1,768	17,842	7,023	919	2	7,926	16,088	1,768	17,842	7,023	919	2	7,926
May-11	225,291	24,506	302	250,099	58,635	6,977	65,621	15,717	2,373	18,022	15,946	1,748	17,752	6,976	913	5	7,895	15,946	1,748	17,752	6,976	913	5	7,895
Jun-11	225,783	24,554	307	250,644	58,403	6,968	65,380	15,536	2,394	18,044	15,777	1,742	17,651	6,920	915	5	7,859	15,777	1,742	17,651	6,920	915	5	7,859
Jul-11	226,300	24,501	311	250,644	58,133	6,959	65,101	15,613	2,387	18,001	15,873	1,751	17,651	6,736	918	5	7,659	15,873	1,751	17,651	6,736	918	5	7,659
Aug-11	226,237	24,661	307	251,205	57,931	6,965	64,905	15,524	2,373	17,904	15,716	1,742	17,465	6,699	921	8	7,627	15,716	1,742	17,465	6,699	921	8	7,627
Sep-11	227,343	24,794	310	252,447	58,170	7,001	65,180	15,524	2,373	17,904	15,716	1,742	17,465	6,699	921	8	7,627	15,716	1,742	17,465	6,699	921	8	7,627
Oct-11	229,472	24,831	305	254,608	58,951	6,982	65,941	15,688																

Appendix 2.2 - Customer Forecast - Number by Region  
High Growth Case

Month	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR Res	MFR Firm Ind	MFR Total	ROSBurg Res	ROSBurg Firm Ind	ROSBurg Total	KLA Res	KLA Firm Ind	KLA Total	Klamath Falls KLA Res	Klamath Falls KLA Firm Ind	Klamath Falls KLA Total	LGD Res	LGD Firm Ind	LGD Total	
Nov-13	247,271	26,901	318	274,489	65,585	7,560	72,954	18,143	2,517	20,661	17,690	1,812	19,508	7,453	935	8,388	7,533	935	14	8,302
Dec-13	249,126	27,093	321	276,500	66,667	7,411	74,086	18,342	2,521	20,865	18,342	1,842	20,184	7,453	935	8,388	7,533	935	5	8,302
Jan-14	248,263	27,131	314	275,707	66,516	7,377	73,903	18,728	2,558	21,289	17,956	1,856	19,817	7,519	935	8,456	7,519	935	2	8,456
Feb-14	248,426	27,335	321	276,082	66,631	7,388	74,293	18,885	2,565	21,451	18,059	1,875	19,941	7,520	937	8,459	7,520	937	2	8,459
Mar-14	248,960	27,285	318	276,562	66,807	7,412	74,718	18,885	2,565	21,451	18,059	1,875	19,941	7,520	937	8,459	7,520	937	2	8,459
Apr-14	248,788	27,246	318	276,352	66,807	7,360	74,718	18,687	2,571	21,260	18,687	1,844	20,531	7,472	931	8,411	7,472	931	2	8,411
May-14	249,309	27,256	318	276,882	66,838	7,367	74,214	18,687	2,571	21,260	18,687	1,844	20,531	7,472	931	8,411	7,472	931	2	8,411
Jun-14	249,838	27,308	323	277,466	66,854	7,351	73,914	18,544	2,565	21,111	17,658	1,838	19,496	7,412	932	8,350	7,412	932	5	8,350
Jul-14	249,888	27,251	328	277,466	66,257	7,342	73,608	18,531	2,557	21,190	17,662	1,847	19,508	7,412	932	8,350	7,412	932	5	8,350
Aug-14	250,326	27,423	323	278,072	66,035	7,348	73,392	18,531	2,547	21,080	17,652	1,847	19,496	7,412	932	8,350	7,412	932	5	8,350
Sep-14	251,515	27,566	326	279,407	66,298	7,385	73,692	18,531	2,547	21,080	17,652	1,847	19,496	7,412	932	8,350	7,412	932	5	8,350
Oct-14	253,803	27,607	321	281,730	67,155	7,365	74,529	18,716	2,547	21,265	17,943	1,852	19,772	7,356	942	20	7,356	942	20	8,317
Nov-14	255,909	27,831	324	283,205	68,238	7,494	75,741	19,130	2,576	21,708	18,314	1,845	20,167	7,511	942	14	7,511	942	14	8,466
Dec-14	256,946	27,987	328	285,261	69,351	7,545	76,906	19,337	2,581	22,380	18,596	1,876	20,473	7,613	942	5	7,613	942	5	8,559
Jan-15	255,743	28,044	321	284,107	69,176	7,526	76,712	19,749	2,629	22,380	18,596	1,876	20,473	7,613	942	5	7,613	942	5	8,559
Feb-15	255,909	28,254	327	284,491	69,295	7,537	76,841	19,820	2,630	22,452	18,631	1,914	20,551	7,740	942	2	7,740	942	2	8,684
Mar-15	256,455	28,202	324	284,981	69,543	7,561	77,113	19,912	2,635	22,549	18,677	1,915	20,599	7,740	942	2	7,740	942	2	8,684
Apr-15	256,280	28,162	324	284,766	69,477	7,509	76,995	19,772	2,612	22,387	18,611	1,904	20,552	7,711	938	2	7,711	938	2	8,651
May-15	256,812	28,172	324	285,308	69,508	7,515	77,032	19,707	2,642	22,350	18,454	1,884	20,344	7,674	938	5	7,674	938	5	8,678
Jun-15	257,352	28,226	329	285,907	69,215	7,499	76,724	19,558	2,635	22,195	18,267	1,877	20,151	7,614	939	5	7,614	939	5	8,558
Jul-15	257,403	28,167	334	286,005	68,909	7,490	76,408	19,648	2,627	22,277	18,373	1,887	20,266	7,417	942	5	7,417	942	5	8,345
Aug-15	257,851	28,344	329	286,524	68,681	7,496	76,187	19,544	2,617	22,163	18,199	1,877	20,083	7,378	946	8	7,378	946	8	8,331
Sep-15	259,065	28,490	332	287,888	68,952	7,534	76,495	19,484	2,612	22,098	18,222	1,892	20,120	7,355	950	20	7,355	950	20	8,325
Oct-15	261,403	28,532	327	290,263	69,834	7,514	77,356	19,737	2,617	22,356	18,558	1,862	20,427	7,555	949	20	7,555	949	20	8,525
Nov-15	262,677	28,762	331	291,770	70,949	7,644	78,602	20,167	2,647	22,816	18,939	1,885	20,831	7,714	949	14	7,714	949	14	8,677
Dec-15	264,616	28,921	334	293,871	72,094	7,696	79,799	20,383	2,651	23,037	19,227	1,917	21,149	7,818	949	5	7,818	949	5	8,771
Jan-16	263,370	28,965	327	292,655	71,911	7,691	79,611	20,803	2,705	23,505	19,187	1,943	21,135	7,926	951	2	7,926	951	2	8,878
Feb-16	263,541	29,172	334	293,047	72,033	7,702	79,744	20,827	2,706	23,585	19,248	1,960	21,215	7,943	951	2	7,943	951	2	8,896
Mar-16	264,098	29,079	330	293,548	72,288	7,726	80,024	20,973	2,711	23,686	19,296	1,962	21,264	7,927	952	2	7,927	952	2	8,861
Apr-16	263,919	29,189	330	293,328	72,220	7,674	79,903	20,827	2,688	23,517	19,228	1,951	21,185	7,914	946	2	7,914	946	2	8,861
May-16	264,463	29,083	330	293,882	72,252	7,680	79,941	20,759	2,718	23,479	19,067	1,930	21,003	7,877	946	5	7,877	946	5	8,728
Jun-16	265,015	29,143	335	294,494	71,951	7,664	79,624	20,604	2,711	23,318	18,875	1,923	20,805	7,815	947	5	7,815	947	5	8,748
Jul-16	265,027	29,084	340	294,491	71,636	7,654	79,300	20,698	2,703	23,403	18,984	1,923	20,924	7,615	951	5	7,615	951	5	8,571
Aug-16	265,525	29,264	335	295,124	71,401	7,661	79,071	20,590	2,693	23,285	18,805	1,923	20,756	7,575	954	8	7,575	954	8	8,536
Sep-16	266,765	29,414	339	296,519	72,609	7,699	79,388	20,527	2,688	23,417	18,629	1,938	20,774	7,552	958	20	7,552	958	20	8,530
Oct-16	269,154	29,457	334	298,945	72,587	7,678	80,275	20,790	2,693	23,488	19,174	1,908	21,088	7,757	957	20	7,757	957	20	8,733
Nov-16	270,456	29,692	337	300,485	73,734	7,811	81,555	21,238	2,723	24,192	19,564	1,931	21,502	7,917	957	14	7,917	957	14	8,888
Dec-16	272,436	29,856	340	302,633	74,913	7,864	82,488	21,462	2,728	24,320	19,859	1,963	21,813	8,023	957	5	8,023	957	5	9,085
Jan-17	271,141	29,870	330	301,341	74,627	7,852	82,488	21,950	2,776	24,652	19,884	1,986	21,895	8,106	958	2	8,106	958	2	9,085
Feb-17	271,316	30,089	337	301,742	74,752	7,863	82,624	22,050	2,778	24,830	19,884	1,986	21,895	8,125	958	2	8,125	958	2	9,085
Mar-17	271,885	30,095	333	302,254	75,014	7,888	82,911	22,050	2,783	24,935	19,933	2,005	21,945	8,108	960	2	8,108	960	2	9,070
Apr-17	272,557	30,004	333	302,029	74,945	7,834	82,788	21,895	2,790	24,660	19,863	1,994	21,864	8,095	953	5	8,095	953	5	9,015
May-17	272,821	30,060	339	303,220	74,977	7,841	82,827	21,628	2,783	24,452	19,698	1,973	21,678	8,057	953	5	8,057	953	5	8,945
Jun-17	272,875	29,999	344	303,217	74,668	7,824	82,501	21,667	2,783	24,452	19,502	1,966	21,475	7,994	955	5	7,994	955	5	8,754
Jul-17	273,342	30,184	344	303,217	74,344	7,815	81,168	21,764	2,775	24,541	19,431	1,966	21,404	7,991	958	5	7,991	958	5	8,754
Aug-17	274,011	30,381	342	304,866	74,103	7,821	81,933	21,652	2,765	24,418	19,431	1,966	21,404	7,991	958	5	7,991	958	5	8,754
Sep-17	277,051	30,381	342	307,768	75,322	7,839	82,258	21,586	2,760	24,348	19,455	1,981	21,443	7,991	958	5	7,991	958	5	8,754
Oct-17	278,381	30,621	340	309,342	76,501	7,974	84,484	22,325	2,795	25,122	19,608	1,950	21,765	7,935	964	20	7,935	964	20	8,919
Nov-17	280,404	30,776	335	310,320	77,231	8,027	85,750	22,559	2,800	25,361	20,207	1,975	22,189	8,098	964	14	8,098	964	14	9,077
Dec-17	279,210	31,000	342	310,730	77,359	8,002	85,242	22,911	2,840	25,753	20,437	2,024	22,467	8,287	965	2	8,287	965	2	9,254
Jan-18	279,969	30,945	338	311,253	77,629	8,038	85,382	22,990	2,841	25,834	20,501	2,044	22,551	8,306	965	2	8,306	965	2	9,272
Feb-18	279,683	30,902	338	311,023	77,557	7,984	85,676	22,937	2,847	25,942	20,511	2,044	22,602	8,289	966	2	8,289	966	2	9,272
Mar-18	280,350	30,913	338	311,602	77,590	7,990	85,590	22,863	2,853	25,761	20,480	2,033	22,550	8,276	960	2	8,276	960	2	9,238
Apr-18	280,927	30,970	343	312,240	77,273	7,974	85,256	22,697	2,847	25,419	20,311	2,005	22,329	8,237	960	5	8,237	960	5	9,202
May-18	280,981	30,908	349	312,238	76,941	7,964	84,914	22,798	2,838	25,638	20,224	2,014	22,329	8,237	960	5	8,237	960	5	9,140
Jun-18	281,459	31,097	343	312,899	76,694	7,971	84,673	22,681	2,828	25,438	20,037	2,005	22,049	7,967	965	8	7,967	965	8	8,926
Jul-18	282,755	31,254	347	314,355	76,987	7,964	84,673	22,613	2,823	25,311	20,062	2,019	22,049	7,967	965	8	7,967	965	8	8,

### Appendix 2.2 - Customer Forecast - Number by Region High Growth Case

	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR Res	MFR Com	Medford Firm Ind	MFR Total	ROS Res	ROS Com	Roseburg Firm Ind	ROS Total	KLA Res	KLA Com	Klamath Falls Firm Ind	KLA Total	La Grande			
																	LGD Res	LGD Com	LGD Firm Ind	LGD Total
Nov-19	294,990	32,467	351	327,808	81,827	8,275	9	90,110	24,433	2,921	2	27,356	21,438	2,051	2	23,496	8,437	977	14	9,478
Dec-19	297,103	32,642	355	330,100	83,102	8,330	9	91,441	24,684	2,926	2	27,612	21,754	2,084	5	23,844	8,548	977	5	9,530
Jan-20	296,094	32,624	343	329,040	82,458	8,305	9	90,772	25,002	2,968	2	28,057	21,650	2,103	5	23,758	8,626	978	2	9,606
Feb-20	296,280	32,859	350	329,488	82,593	8,317	9	90,918	25,087	2,973	2	28,173	21,717	2,121	5	23,846	8,645	978	2	9,625
Mar-20	296,888	32,801	346	329,035	82,876	8,286	9	91,227	25,038	2,949	2	27,981	21,695	2,111	7	23,813	8,628	979	2	9,609
Apr-20	296,693	32,756	346	329,795	82,801	8,286	9	91,096	25,030	2,949	2	27,981	21,695	2,111	7	23,813	8,614	973	2	9,589
May-20	297,286	32,767	346	330,399	82,836	8,293	9	91,138	24,951	2,981	2	27,934	21,519	2,089	7	23,615	8,575	973	5	9,552
Jun-20	297,886	32,827	351	331,067	82,502	8,276	9	90,787	24,773	2,973	2	27,748	21,309	2,083	7	23,398	8,509	974	5	9,488
Jul-20	297,945	32,762	357	331,064	82,153	8,266	9	90,428	24,881	2,965	2	27,848	21,309	2,083	7	23,398	8,297	978	5	9,279
Aug-20	298,445	32,959	351	331,775	81,893	8,273	9	90,175	24,881	2,965	2	27,848	21,309	2,083	7	23,398	8,297	978	5	9,279
Sep-20	299,799	33,123	355	333,277	82,207	8,313	9	90,524	24,684	2,949	2	27,743	21,438	2,093	7	23,322	8,253	981	8	9,242
Oct-20	302,406	33,170	350	335,925	83,208	8,291	9	91,508	24,987	2,954	2	27,943	21,259	2,098	7	23,363	8,229	985	20	9,451
Nov-20	303,826	33,426	353	337,606	84,480	8,426	9	92,921	25,044	2,986	2	28,492	21,636	2,066	7	23,708	8,447	984	20	9,451
Dec-20	305,987	33,605	357	339,949	85,787	8,487	9	94,283	25,763	2,991	2	29,059	22,386	2,125	7	24,161	8,618	984	14	9,719
Jan-21	305,249	33,809	354	339,412	85,126	8,452	9	93,587	26,040	3,019	2	29,148	22,335	2,133	5	24,405	8,785	983	2	9,789
Feb-21	305,671	33,750	351	339,972	85,416	8,478	9	93,903	26,242	3,024	2	29,468	22,388	2,154	7	24,548	8,787	985	2	9,774
Mar-21	306,278	33,716	351	340,345	85,339	8,421	9	93,769	26,068	2,999	2	29,069	22,312	2,142	7	24,460	8,773	979	2	9,753
Apr-21	306,895	33,776	356	341,027	85,033	8,411	9	93,453	25,987	3,031	2	29,020	22,132	2,120	7	24,258	8,732	979	5	9,716
May-21	307,464	33,710	361	341,734	84,676	8,401	9	93,086	25,803	3,024	2	28,829	21,917	2,113	7	24,037	8,666	980	5	9,651
Jun-21	308,849	34,079	366	343,713	84,410	8,408	9	92,826	25,785	3,004	2	28,932	21,839	2,123	7	24,169	8,450	983	5	9,439
Jul-21	311,516	34,126	360	345,697	85,755	8,449	9	94,183	25,711	2,999	2	28,792	21,866	2,128	7	23,959	8,407	987	8	9,401
Aug-21	312,969	34,389	358	347,716	87,057	8,569	9	95,635	26,024	3,004	2	29,031	21,866	2,128	7	24,001	8,382	991	20	9,394
Sep-21	315,179	34,572	361	350,113	88,395	8,625	9	97,029	26,588	3,037	2	29,597	22,077	2,121	7	24,354	8,603	990	20	9,613
Oct-21	314,321	34,573	358	349,634	87,584	8,597	9	96,190	26,826	3,042	2	29,870	22,077	2,121	7	24,354	8,603	990	20	9,613
Nov-21	315,152	34,757	354	350,203	87,881	8,623	9	96,513	27,168	3,078	2	30,155	22,077	2,121	7	24,354	8,603	990	14	9,780
Dec-21	314,948	34,650	354	349,952	87,800	8,623	9	96,513	27,168	3,078	2	30,155	22,077	2,121	7	24,354	8,603	990	14	9,780
Jan-22	316,199	34,724	359	351,283	87,838	8,653	9	96,371	27,023	3,091	2	30,116	22,077	2,121	7	24,354	8,603	990	14	9,780
Feb-22	316,259	34,656	365	351,280	87,124	8,545	9	96,054	26,833	3,083	2	30,024	22,526	2,149	7	24,682	8,822	985	5	9,814
Mar-22	318,199	35,033	368	353,695	88,228	8,593	9	95,777	26,815	3,063	2	29,880	22,446	2,149	7	24,645	8,604	989	5	9,599
Apr-22	320,928	35,082	363	356,367	87,175	8,593	9	95,777	26,738	3,058	2	29,797	22,473	2,165	7	24,645	8,535	996	20	9,774
May-22	324,676	35,537	365	360,577	90,927	8,715	9	98,283	27,612	3,096	2	30,127	22,867	2,132	7	25,005	8,759	996	20	9,774
Jun-22	324,676	35,537	365	360,577	90,927	8,715	9	98,283	27,612	3,096	2	30,127	22,867	2,132	7	25,005	8,759	996	20	9,774
Jul-22	324,676	35,537	365	360,577	90,927	8,715	9	98,283	27,612	3,096	2	30,127	22,867	2,132	7	25,005	8,759	996	20	9,774
Aug-22	324,676	35,537	365	360,577	90,927	8,715	9	98,283	27,612	3,096	2	30,127	22,867	2,132	7	25,005	8,759	996	20	9,774
Sep-22	324,676	35,537	365	360,577	90,927	8,715	9	98,283	27,612	3,096	2	30,127	22,867	2,132	7	25,005	8,759	996	20	9,774
Oct-22	324,676	35,537	365	360,577	90,927	8,715	9	98,283	27,612	3,096	2	30,127	22,867	2,132	7	25,005	8,759	996	20	9,774
Nov-22	324,676	35,537	365	360,577	90,927	8,715	9	98,283	27,612	3,096	2	30,127	22,867	2,132	7	25,005	8,759	996	20	9,774
Dec-22	324,676	35,537	365	360,577	90,927	8,715	9	98,283	27,612	3,096	2	30,127	22,867	2,132	7	25,005	8,759	996	20	9,774
Jan-23	324,884	35,455	362	360,736	89,861	8,732	9	98,609	28,098	3,135	2	31,235	23,479	2,207	5	25,847	9,049	996	14	9,944
Feb-23	324,083	35,704	365	360,150	90,006	8,745	9	98,759	28,192	3,135	2	31,235	23,479	2,207	5	25,847	9,049	996	14	9,944
Mar-23	324,734	35,643	359	360,479	90,308	8,711	9	98,508	28,313	3,143	2	31,458	23,606	2,228	7	25,783	9,098	996	2	10,096
Apr-23	324,525	35,595	359	360,479	90,228	8,720	9	98,508	28,313	3,143	2	31,458	23,606	2,228	7	25,783	9,098	996	2	10,096
May-23	325,160	35,607	364	361,126	89,909	8,720	9	98,994	28,042	3,150	2	31,194	23,339	2,193	7	25,749	9,066	991	2	10,059
Jun-23	325,806	35,671	364	361,840	89,909	8,720	9	98,994	28,042	3,150	2	31,194	23,339	2,193	7	25,749	9,066	991	2	10,059
Jul-23	326,402	35,812	370	362,577	89,258	8,692	9	98,237	27,965	3,143	2	30,991	23,116	2,186	7	25,308	8,957	993	5	9,954
Aug-23	327,852	35,986	368	364,206	89,587	8,741	9	98,337	27,828	3,122	2	31,101	23,242	2,196	7	25,445	8,736	996	5	9,737
Sep-23	330,644	36,056	362	367,042	89,653	8,718	9	98,337	27,748	3,117	2	30,867	23,085	2,186	7	25,445	8,691	999	8	9,698
Oct-23	332,166	36,309	366	368,841	92,023	8,864	9	100,896	28,082	3,122	2	31,206	23,062	2,202	7	25,271	8,666	1,004	20	9,914
Nov-23	334,480	36,500	370	371,350	93,420	8,922	9	102,351	28,649	3,155	2	31,807	23,918	2,195	7	25,639	8,892	1,002	20	10,086
Dec-23	333,446	36,398	357	370,201	92,205	8,884	9	101,098	28,649	3,155	2	31,807	23,918	2,195	7	25,639	8,892	1,002	20	10,086
Jan-24	333,650	36,653	364	370,667	92,352	8,897	9	101,258	29,232	3,199	2	32,335	24,262	2,247	5	26,496	9,186	1,002	14	10,194
Feb-24	334,310	36,542	360	371,266	92,661	8,923	9	101,594	29,232	3,199	2	32,335	24,262	2,247	5	26,496	9,186	1,002	14	10,194
Mar-24	334,102	36,554	360	371,004	92,579	8,865	9	101,453	29,167	3,205	2	32,563	24,130	2,266	7	26,402	9,234	1,002	2	10,239
Apr-24	334,752	36,554	366	371,666	92,617	8,854	9	101,498	29,167	3,205	2	32,563	24,130	2,266	7	26,402	9,234	1,002	2	10,239
May-24	335,412	36,619	366	372,399	92,253	8,854	9	101,117	28,876	3,205	2	32,292	23,817	2,233	7	26,154	9,202	998	2	10,201
Jun-24	335,474	36,548	371	372,393	91,873	8,843	9	100,725	28,999	3,195	2	32,196	23,616	2,226	7	26,154	9,191	999	5	10,195
Jul-24	337,505	36,941	369	374,815	91,589	8,851	9	100,449	28,857	3,184	2	32,043	23,616	2,226	7	26,059	8,868	1,002	5	9,875
Aug-24	341,917	37,270	368	379,555	93,023	8,893	9	100,828	28,775	3,178	2	31,956	23,633	2,242	7	26,059	8,868	1,002	5	9,875
Sep-24	344,285	37,465	371	382,121	9															

Appendix 2.2 - Customer Forecast - Number by Region  
High Growth Case

	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR Res	MFR Com	Medford Firm Ind	MFR Total	ROS Res	ROS Com	Roseburg Firm Ind	ROS Total	KLA Res	KLA Com	Klamath Falls Firm Ind	KLA Total	LGD Res	LGD Com	La Grande Firm Ind	LGD Total
Nov-25	351,668	38,231	372	390,272	96,761	9,176	9	105,945	30,757	3,284	2	34,043	25,111	2,278	7	27,395	9,341	1,015	14	10,370
Dec-25	354,089	38,430	376	392,894	98,214	9,235	9	107,458	31,059	3,290	2	34,351	25,468	2,314	5	27,786	9,460	1,015	5	10,486
Jan-26	352,421	38,285	364	391,071	96,837	9,194	9	106,040	31,244	3,326	2	34,572	25,271	2,330	5	27,606	9,463	1,015	2	10,480
Feb-26	352,634	38,550	372	391,556	96,990	9,207	9	106,205	31,345	3,328	2	34,676	25,346	2,350	7	27,703	9,483	1,015	2	10,501
Mar-26	353,330	38,485	368	392,183	97,311	9,234	9	106,554	31,478	3,334	2	34,814	25,405	2,352	7	27,764	9,465	1,017	2	10,484
Apr-26	353,106	38,434	368	391,909	97,226	9,174	9	106,409	31,277	3,307	2	34,586	25,321	2,339	7	27,667	9,450	1,010	2	10,463
May-26	353,785	38,447	368	392,600	97,265	9,181	9	106,455	31,182	3,342	2	34,526	25,122	2,316	7	27,445	9,408	1,010	5	10,435
Jun-26	354,474	38,515	374	393,363	96,887	9,163	9	106,059	30,969	3,334	2	34,305	24,886	2,308	7	27,201	9,337	1,012	5	10,354
Jul-26	354,540	38,441	379	393,360	96,492	9,152	9	105,652	31,098	3,325	2	34,428	25,020	2,319	7	27,346	9,110	1,015	5	10,330
Aug-26	355,111	38,664	374	394,149	96,196	9,159	9	105,365	30,948	3,313	2	34,263	24,800	2,308	7	27,115	9,064	1,019	8	10,090
Sep-26	356,660	38,849	377	395,887	96,546	9,203	9	105,758	30,862	3,307	2	34,171	24,829	2,325	7	27,161	9,038	1,023	20	10,081
Oct-26	359,643	38,902	372	398,916	97,687	9,179	9	106,875	31,226	3,313	2	34,541	25,254	2,290	7	27,551	9,271	1,022	20	10,313
Nov-26	361,268	39,192	376	400,836	99,130	9,330	9	108,469	31,844	3,348	2	35,194	25,335	2,317	7	28,040	9,454	1,022	14	10,490
Dec-26	363,740	39,395	379	403,514	100,612	9,391	9	110,011	32,155	3,354	2	35,510	26,099	2,354	5	28,458	9,574	1,022	5	10,601
Jan-27	361,685	39,228	369	401,283	99,032	9,351	9	108,392	32,297	3,388	2	35,688	26,887	2,370	5	28,262	9,599	1,022	2	10,622
Feb-27	361,903	39,499	377	401,778	99,188	9,364	9	108,561	32,402	3,390	2	35,795	26,963	2,391	7	28,361	9,619	1,022	2	10,643
Mar-27	362,612	39,432	373	402,418	99,428	9,392	9	108,916	32,538	3,396	2	35,936	26,923	2,392	7	28,422	9,601	1,023	2	10,626
Apr-27	362,384	39,381	373	402,138	99,428	9,331	9	108,768	32,332	3,369	2	35,702	26,988	2,380	7	28,324	9,586	1,017	2	10,605
May-27	363,077	39,394	373	402,844	99,468	9,338	9	108,815	32,235	3,404	2	35,641	25,735	2,355	7	28,098	9,543	1,017	5	10,545
Jun-27	363,781	39,462	378	403,622	99,083	9,320	9	108,412	32,015	3,404	2	35,413	25,694	2,348	7	27,849	9,472	1,019	5	10,495
Jul-27	363,847	39,387	384	403,619	98,680	9,309	9	107,998	32,148	3,386	2	35,537	25,631	2,359	7	27,997	9,242	1,022	5	10,248
Aug-27	364,430	39,615	378	404,424	98,380	9,316	9	107,705	31,994	3,375	2	35,371	25,607	2,348	7	27,762	9,195	1,025	8	10,228
Sep-27	366,012	39,804	382	406,197	98,736	9,360	9	108,105	31,905	3,369	2	35,276	25,437	2,365	7	27,808	9,169	1,030	20	10,219
Oct-27	369,056	39,857	377	409,290	99,897	9,336	9	109,243	32,279	3,375	2	35,656	26,870	2,330	7	28,206	9,404	1,028	20	10,453
Nov-27	370,715	40,153	380	411,248	101,366	9,400	9	110,845	32,915	3,410	2	36,327	26,360	2,357	4	28,724	9,589	1,028	14	10,632
Dec-27	373,238	40,360	384	413,982	102,875	9,451	9	112,434	33,234	3,416	2	36,652	26,331	2,394	5	29,130	9,711	1,028	5	10,744



Appendix 2.2 - Customer Forecast - Number by Region  
Low Growth Case

	WA/ID Res	WA/ID Com	WA/ID Firm	WA/ID Total	MFR Res	MFR Com	Medford Firm Ind	MFR Total	ROS Res	ROS Com	Roseburg Firm Ind	ROS Total	KLA Res	KLA Com	Klamath Falls Firm Ind	KLA Total	LGD Res	LGD Com	La Grande Firm Ind	LGD Total
Nov-07	191,905	21,468	253	213,625	50,069	6,403	9	56,481	13,071	2,163	2	15,236	13,775	1,602	6	15,382	882	6	7,310	
Dec-07	192,493	21,516	254	214,263	50,307	6,420	9	56,736	13,132	2,167	2	15,300	13,861	1,611	6	15,478	882	6	7,339	
Jan-08	192,668	21,493	253	214,414	50,418	6,428	9	56,856	13,153	2,170	2	15,324	13,888	1,620	5	15,513	6,474	883	7,358	
Feb-08	192,719	21,556	255	214,530	50,463	6,432	9	56,894	13,173	2,175	2	15,345	13,906	1,625	6	15,537	6,474	883	7,364	
Mar-08	192,885	21,540	254	214,674	50,502	6,439	9	56,950	13,199	2,172	2	15,372	13,920	1,626	6	15,552	6,474	883	7,359	
Apr-08	192,831	21,528	254	214,614	50,507	6,423	9	56,939	13,159	2,165	2	15,326	13,900	1,622	6	15,528	6,474	881	7,353	
May-08	192,993	21,531	254	214,778	50,491	6,425	9	56,925	13,141	2,174	2	15,317	13,853	1,616	6	15,474	6,459	881	7,343	
Jun-08	193,157	21,548	256	214,960	50,405	6,420	9	56,834	13,099	2,172	2	15,273	13,797	1,614	6	15,416	6,440	882	7,342	
Jul-08	193,072	21,530	257	214,859	50,315	6,417	9	56,741	13,099	2,169	2	15,271	13,779	1,617	6	15,416	6,379	883	7,324	
Aug-08	193,208	21,583	256	215,047	50,247	6,419	9	56,675	13,070	2,166	2	15,238	13,727	1,614	6	15,346	6,366	884	7,254	
Sep-08	193,577	21,627	257	215,461	50,327	6,431	9	56,767	13,053	2,165	2	15,220	13,734	1,618	6	15,358	6,359	885	7,252	
Oct-08	194,286	21,640	255	216,181	50,513	6,424	9	56,946	13,124	2,166	2	15,292	13,854	1,609	6	15,449	6,422	885	7,315	
Nov-08	194,673	21,709	256	216,638	50,767	6,456	9	57,242	13,246	2,175	2	15,423	13,949	1,616	6	15,571	6,471	885	7,362	
Dec-08	195,261	21,758	257	217,276	51,030	6,482	9	57,521	13,306	2,177	2	15,485	14,035	1,626	5	15,667	6,504	885	7,391	
Jan-09	195,537	21,737	255	217,530	51,066	6,484	9	57,559	13,352	2,192	2	15,547	14,062	1,634	5	15,701	6,524	885	7,416	
Feb-09	195,588	21,801	257	217,646	51,126	6,487	9	57,623	13,372	2,193	2	15,567	14,080	1,639	6	15,725	6,529	885	7,416	
Mar-09	195,753	21,785	256	217,795	51,200	6,495	9	57,703	13,398	2,194	2	15,595	14,094	1,640	6	15,740	6,524	885	7,411	
Apr-09	195,700	21,773	256	217,729	51,239	6,478	9	57,717	13,359	2,187	2	15,548	14,074	1,636	6	15,716	6,520	883	7,405	
May-09	195,862	21,776	256	217,894	51,239	6,480	9	57,728	13,340	2,194	2	15,539	14,027	1,630	6	15,662	6,509	883	7,395	
Jun-09	196,026	21,792	258	218,076	51,153	6,475	9	57,637	13,298	2,194	2	15,495	13,971	1,628	6	15,604	6,490	884	7,377	
Jul-09	196,041	21,775	259	218,075	51,062	6,472	9	57,544	13,294	2,192	2	15,458	13,978	1,631	6	15,614	6,428	885	7,316	
Aug-09	196,177	21,828	258	218,263	50,995	6,474	9	57,479	13,294	2,189	2	15,467	13,926	1,628	6	15,559	6,416	886	7,306	
Sep-09	196,546	21,885	259	218,677	51,075	6,486	9	57,570	13,277	2,187	2	15,467	13,933	1,632	6	15,570	6,409	887	7,304	
Oct-09	197,255	21,872	258	219,397	51,285	6,480	9	57,774	13,349	2,189	2	15,540	14,033	1,623	6	15,662	6,472	887	7,361	
Nov-09	198,230	21,954	258	219,854	51,564	6,521	9	58,095	13,470	2,198	2	15,670	14,148	1,630	6	15,784	6,521	887	7,414	
Dec-09	198,230	22,002	259	220,492	51,863	6,538	9	58,399	13,531	2,199	2	15,732	14,234	1,640	5	15,880	6,553	887	7,443	
Jan-10	198,481	22,007	258	220,746	51,889	6,532	9	58,430	13,602	2,213	2	15,817	14,271	1,647	5	15,913	6,573	887	7,462	
Feb-10	198,531	22,070	261	220,662	51,949	6,536	9	58,493	13,622	2,214	2	15,838	14,279	1,652	6	15,937	6,579	887	7,468	
Mar-10	198,644	22,042	259	220,948	52,023	6,527	9	58,574	13,648	2,215	2	15,865	14,293	1,653	6	15,951	6,574	888	7,463	
Apr-10	198,805	22,045	259	220,948	52,002	6,529	9	58,538	13,608	2,208	2	15,819	14,273	1,649	6	15,928	6,570	886	7,457	
May-10	198,969	22,061	261	221,292	51,925	6,524	9	58,549	13,590	2,217	2	15,809	14,226	1,643	6	15,874	6,558	886	7,447	
Jun-10	199,035	22,044	263	221,341	51,885	6,521	9	58,458	13,544	2,215	2	15,765	14,170	1,641	6	15,816	6,478	887	7,429	
Jul-10	199,171	22,097	261	221,529	51,768	6,523	9	58,299	13,544	2,210	2	15,788	14,202	1,644	6	15,851	6,478	887	7,429	
Sep-10	199,539	22,141	262	221,943	51,848	6,535	9	58,391	13,527	2,208	2	15,787	14,156	1,645	6	15,796	6,466	888	7,408	
Oct-10	200,249	22,154	261	222,663	52,083	6,528	9	58,620	13,598	2,210	2	15,810	14,257	1,643	6	15,807	6,459	890	7,356	
Nov-10	200,635	22,223	262	223,120	52,387	6,570	9	58,965	13,720	2,219	2	15,941	14,372	1,643	6	15,899	6,522	889	7,419	
Dec-10	201,223	22,272	263	223,758	52,700	6,586	9	59,295	13,781	2,220	2	16,003	14,458	1,653	5	16,116	6,603	889	7,495	
Jan-11	201,475	22,289	262	224,025	52,736	6,575	9	59,321	13,901	2,231	2	16,134	14,510	1,657	5	16,172	6,623	889	7,514	
Feb-11	201,525	22,352	264	224,141	52,844	6,586	9	59,359	13,921	2,231	2	16,152	14,528	1,662	6	16,196	6,629	889	7,520	
Mar-11	201,691	22,336	263	224,290	52,844	6,572	9	59,400	13,947	2,233	2	16,182	14,542	1,663	6	16,210	6,624	890	7,515	
Apr-11	201,638	22,324	263	224,224	52,825	6,570	9	59,444	13,908	2,236	2	16,135	14,522	1,659	6	16,187	6,620	888	7,509	
May-11	201,799	22,327	263	224,389	52,834	6,572	9	59,415	13,889	2,235	2	16,126	14,475	1,653	6	16,133	6,608	888	7,499	
Jun-11	201,963	22,343	264	224,571	52,748	6,567	9	59,323	13,847	2,233	2	16,082	14,418	1,651	6	16,075	6,589	888	7,480	
Jul-11	201,979	22,326	266	224,570	52,658	6,564	9	59,230	13,873	2,230	2	16,105	14,450	1,654	6	16,110	6,528	889	7,420	
Aug-11	202,114	22,379	264	224,758	52,690	6,566	9	59,165	13,843	2,227	2	16,073	14,398	1,651	6	16,054	6,516	890	7,410	
Sep-11	202,483	22,423	265	225,172	52,670	6,578	9	59,257	13,826	2,226	2	16,054	14,405	1,655	6	16,066	6,509	892	7,408	
Oct-11	203,193	22,436	264	225,892	52,930	6,571	9	59,510	13,898	2,227	2	16,127	14,506	1,646	6	16,157	6,571	891	7,471	
Nov-11	203,579	22,505	266	226,892	53,259	6,613	9	59,881	14,019	2,236	2	16,257	14,620	1,653	6	16,279	6,621	891	7,518	
Dec-11	204,167	22,553	266	226,987	53,597	6,629	9	60,235	14,080	2,238	2	16,320	14,707	1,663	5	16,375	6,653	891	7,547	
Jan-12	204,271	22,593	263	227,127	53,691	6,618	9	60,318	14,253	2,249	2	16,504	14,734	1,667	5	16,406	6,676	891	7,569	
Feb-12	204,323	22,658	265	227,246	53,727	6,622	9	60,358	14,274	2,250	2	16,526	14,752	1,673	6	16,431	6,681	891	7,575	
Mar-12	204,493	22,642	264	227,399	53,803	6,629	9	60,441	14,301	2,252	2	16,554	14,767	1,673	6	16,446	6,676	892	7,575	
Apr-12	204,438	22,630	264	227,332	53,783	6,613	9	60,405	14,259	2,244	2	16,506	14,746	1,670	6	16,422	6,672	890	7,564	
May-12	204,604	22,633	264	227,501	53,792	6,615	9	60,416	14,240	2,254	2	16,494	14,698	1,663	6	16,367	6,661	890	7,553	
Jun-12	204,772	22,649	266	227,687	53,703	6,610	9	60,322	14,196	2,252	2	16,450	14,640	1,661	6	16,307	6,641	890	7,535	
Jul-12	204,928	22,686	266	227,687	53,610	6,609	9	60,158	14,223	2,249	2	16,474	14,673	1,664	6	16,342	6,579	891	7,473	
Sep-12	205,306	22,731	267	228,304	53,540	6,609	9	60,158	14,192	2,246	2	16,440	14,619	1,661	6	16,286	6,567	892	7,463	
Oct-12	206,034	22,744	267	229,032	53,621	6,614	9	60,252	14,174	2,244	2	16,421	14,626	1,666	6	16,297	6,560	894	7,461	
Nov-12	206,431	22,815	266	229,512	53,892	6,656	9	60,515	14,249	2,246	2	16,497	14,626	1,666	6	16,392	6,623	893	7,524	
Dec-12	206,914	22,865	267	229,512	54,232	6,656	9	60,897	14,376	2,255	2	16,633	14,848	1,664	6	16,517	6,673	893	7,573	
Jan-13	206,914	22,898	266	230,076	54,582	6,673	9	61,263	14,440	2,257	2	16,698	14,848	1,674	5	16,				



Appendix 2.2 - Customer Forecast - Number by Region  
Low Growth Case

	WA/ID Res		WA/ID Com		WA/ID Firm		WA/ID Total	Medford		Roseburg		Klamath Falls		KLA Total		La Grande		LGD Total		
	Res	Com	Res	Com	Firm Ind	MFR Com		MFR Firm Ind	MFR Total	Res	Com	Res	Com	Res	Com	Res	Com		Res	Com
Nov-19	225,032	24,981	279	250,292	60,556	7,002	9	67,567	16,813	2,408	2	19,223	16,305	1,754	6	18,065	7,095	909	6	8,010
Dec-19	225,736	25,039	280	251,056	60,981	7,021	9	68,010	16,897	2,410	2	19,309	16,411	1,765	6	18,181	7,132	909	3	8,044
Jan-20	225,400	25,033	276	250,709	60,766	7,012	9	67,787	17,003	2,423	2	19,428	16,376	1,771	5	18,152	7,158	909	2	8,069
Feb-20	225,462	25,112	279	250,852	60,811	7,016	9	67,836	17,031	2,424	2	19,457	16,398	1,777	6	18,181	7,164	909	2	8,076
Mar-20	225,665	25,092	277	250,934	60,905	7,025	9	67,939	17,068	2,426	2	19,496	16,416	1,778	6	18,199	7,159	910	2	8,070
Apr-20	225,600	25,077	277	250,954	60,880	7,006	9	67,895	17,012	2,418	2	19,432	16,391	1,774	6	18,170	7,154	908	2	8,064
May-20	225,797	25,101	277	251,156	60,892	7,008	9	67,909	16,986	2,426	2	19,416	16,332	1,766	6	18,104	7,141	908	3	8,051
Jun-20	225,998	25,107	279	251,378	60,781	7,003	9	67,792	16,926	2,428	2	19,354	16,332	1,764	6	18,032	7,119	908	3	8,030
Jul-20	226,017	25,079	281	251,377	60,664	6,999	9	67,673	16,962	2,423	2	19,387	16,302	1,768	6	18,075	7,048	909	3	7,960
Aug-20	226,184	25,145	279	251,608	60,578	7,002	9	67,588	16,921	2,419	2	19,342	16,237	1,764	6	18,007	7,034	910	4	7,948
Sep-20	226,635	25,200	280	252,115	60,681	7,015	9	67,705	16,997	2,419	2	19,316	16,246	1,769	6	18,020	7,026	912	8	7,946
Oct-20	227,504	25,215	279	252,998	61,016	7,008	9	68,033	16,999	2,419	2	19,419	16,371	1,759	6	18,135	7,098	911	8	8,018
Nov-20	228,698	25,360	280	253,558	61,440	7,053	9	68,958	17,170	2,430	2	19,602	16,514	1,765	6	18,286	7,155	911	6	8,073
Dec-20	228,698	25,348	280	254,339	61,876	7,073	9	69,542	17,256	2,432	2	19,690	16,621	1,778	6	18,405	7,193	911	2	8,107
Jan-21	228,452	25,428	278	254,014	61,669	7,057	9	68,676	17,349	2,440	2	19,791	16,581	1,781	5	18,368	7,211	911	2	8,124
Feb-21	228,559	25,409	279	254,347	61,665	7,061	9	68,726	17,349	2,441	2	19,821	16,604	1,787	6	18,397	7,217	911	2	8,130
Mar-21	228,659	25,493	279	254,347	61,752	7,070	9	68,831	17,416	2,443	2	19,861	16,622	1,788	6	18,415	7,212	912	2	8,125
Apr-21	228,592	25,397	279	254,265	61,726	7,051	9	68,786	17,358	2,434	2	19,794	16,597	1,784	6	18,386	7,207	912	2	8,118
May-21	229,000	25,417	281	254,711	61,738	7,053	9	68,801	17,371	2,445	2	19,778	16,537	1,777	6	18,319	7,193	910	3	8,106
Jun-21	229,000	25,417	281	254,698	61,624	7,048	9	68,681	17,270	2,443	2	19,714	16,465	1,774	6	18,245	7,171	910	3	8,084
Jul-21	229,020	25,395	282	254,697	61,505	7,044	9	68,559	17,307	2,440	2	19,749	16,506	1,778	6	18,289	7,099	911	3	8,084
Aug-21	229,190	25,462	281	254,933	61,417	7,047	9	68,472	17,264	2,436	2	19,702	16,439	1,774	6	18,219	7,085	912	4	8,001
Sep-21	229,652	25,518	282	255,522	61,522	7,060	9	68,591	17,339	2,434	2	19,675	16,448	1,779	6	18,233	7,077	914	8	7,999
Oct-21	230,541	25,534	280	256,355	61,865	7,053	9	68,927	17,343	2,436	2	19,782	16,576	1,769	6	18,351	7,150	913	8	8,072
Nov-21	231,025	25,683	281	256,928	62,299	7,100	9	69,408	17,521	2,447	2	19,970	16,722	1,777	6	18,505	7,208	913	3	8,127
Dec-21	231,762	25,663	282	257,127	62,745	7,119	9	69,873	17,611	2,449	2	20,061	16,832	1,788	5	18,625	7,246	913	3	8,162
Jan-22	231,541	25,744	281	257,566	62,428	7,106	9	69,542	17,725	2,460	2	20,156	16,787	1,793	5	18,585	7,264	913	2	8,179
Feb-22	231,541	25,744	281	257,566	62,475	7,110	9	69,593	17,725	2,461	2	20,187	16,810	1,800	6	18,615	7,270	913	2	8,185
Mar-22	231,753	25,724	280	257,757	62,974	7,118	9	69,701	17,694	2,462	2	20,228	16,828	1,800	6	18,634	7,264	914	2	8,180
Apr-22	231,685	25,709	280	257,673	62,547	7,099	9	69,656	17,704	2,464	2	20,160	16,802	1,796	6	18,604	7,260	912	2	8,173
May-22	232,102	25,713	280	257,884	62,559	7,102	9	69,670	17,676	2,465	2	20,143	16,741	1,796	6	18,535	7,246	912	3	8,169
Jun-22	232,102	25,733	282	258,117	62,443	7,096	9	69,548	17,615	2,462	2	20,077	16,668	1,786	6	18,460	7,223	912	3	8,139
Jul-22	232,122	25,711	284	258,116	62,321	7,092	9	69,423	17,601	2,459	2	20,113	16,709	1,790	6	18,460	7,215	913	3	8,139
Aug-22	232,296	25,779	282	258,357	62,331	7,095	9	69,334	17,601	2,456	2	20,065	16,641	1,786	6	18,433	7,136	914	4	8,054
Sep-22	232,768	25,836	283	258,888	62,338	7,108	9	69,357	17,581	2,454	2	20,037	16,650	1,792	6	18,448	7,128	915	8	8,052
Oct-22	233,678	25,853	281	259,812	62,689	7,101	9	69,799	17,689	2,456	2	20,147	16,782	1,789	6	18,568	7,202	916	8	8,125
Nov-22	234,173	25,942	282	260,398	63,133	7,149	9	70,291	17,873	2,467	2	20,341	16,930	1,801	5	18,725	7,261	915	6	8,182
Dec-22	234,927	26,004	284	261,215	63,589	7,168	9	70,766	17,965	2,469	2	20,435	17,042	1,806	5	18,848	7,299	915	3	8,217
Jan-23	234,730	26,004	283	260,920	63,234	7,155	9	70,398	18,035	2,480	2	20,516	16,986	1,806	5	18,796	7,309	915	2	8,226
Feb-23	234,730	26,060	280	261,073	63,282	7,159	9	70,450	18,066	2,480	2	20,548	17,009	1,812	6	18,827	7,315	915	2	8,233
Mar-23	234,947	26,040	282	261,268	63,383	7,168	9	70,559	18,106	2,482	2	20,591	17,028	1,813	6	18,846	7,309	916	2	8,227
Apr-23	234,877	26,024	282	261,182	63,356	7,151	9	70,513	18,045	2,474	2	20,520	17,002	1,809	6	18,816	7,305	914	2	8,220
May-23	235,089	26,049	282	261,398	63,368	7,145	9	70,528	18,016	2,485	2	20,503	16,939	1,801	6	18,746	7,291	914	3	8,208
Jun-23	235,304	26,049	285	261,636	63,250	7,145	9	70,403	17,951	2,482	2	20,435	16,865	1,799	6	18,669	7,268	914	3	8,185
Jul-23	235,324	26,026	285	261,635	63,125	7,141	9	70,276	17,990	2,479	2	20,472	16,907	1,802	6	18,714	7,195	915	3	8,113
Aug-23	235,503	26,096	283	261,882	63,033	7,144	9	70,185	17,945	2,474	2	20,422	16,838	1,799	6	18,642	7,180	916	4	8,100
Sep-23	235,986	26,154	285	262,425	63,142	7,158	9	70,309	17,918	2,474	2	20,394	16,847	1,804	6	18,656	7,171	918	8	8,097
Oct-23	236,917	26,171	283	263,370	63,501	7,150	9	70,660	18,029	2,475	2	20,507	16,890	1,793	6	18,779	7,247	917	8	8,172
Nov-23	237,424	26,262	284	263,970	63,954	7,199	9	71,162	18,218	2,486	2	20,707	17,132	1,802	6	18,939	7,306	917	8	8,229
Dec-23	238,195	26,325	285	264,806	64,420	7,218	9	71,647	18,313	2,488	2	20,804	17,247	1,813	5	19,065	7,345	917	3	8,265
Jan-24	237,851	26,291	281	264,423	64,015	7,205	9	71,229	18,381	2,500	2	20,883	17,179	1,819	5	19,003	7,354	917	2	8,274
Feb-24	237,919	26,376	283	264,578	64,064	7,210	9	71,283	18,413	2,501	2	20,916	17,203	1,825	6	19,053	7,361	917	2	8,280
Mar-24	238,141	26,355	282	264,778	64,167	7,218	9	71,348	18,454	2,503	2	20,959	17,222	1,826	6	19,053	7,355	918	2	8,275
Apr-24	238,069	26,339	282	264,691	64,140	7,199	9	71,395	18,454	2,503	2	20,959	17,222	1,826	6	19,053	7,355	918	2	8,275
May-24	238,286	26,343	282	264,911	64,311	7,201	9	71,363	18,361	2,505	2	20,869	17,195	1,822	6	18,951	7,336	916	3	8,255
Jun-24	238,506	26,365	284	265,155	64,001	7,195	9	71,236	18,294	2,503	2	20,799	17,055	1,812	6	18,873	7,313	916	3	8,232
Jul-24	238,527	26,341	286	265,154	63,904	7,192	9	71,105	18,335	2,500	2	20,837	17,098	1,815	6	18,919	7,239	917	3	8,159
Aug-24	239,204	26,413	285	265,406	63,810	7,194	9	71,028	18,288	2,496	2	20,786	17,028	1,812	6	18,845	7,224	919	4	8,146
Sep-24	239,204	26,472	285	265,961	63,922	7,208	9	71,139	18,266	2,494	2									

Appendix 2.2 - Customer Forecast - Number by Region  
Low Growth Case

	WA/ID Res	WA/ID Com	WA/ID Firm Ind	WA/ID Total	MFR Res	MFR Com	Medford Firm Ind	MFR Total	ROS Res	ROS Com	Roseburg Firm Ind	ROS Total	KLA Res	KLA Com	Klamath Falls Firm Ind	KLA Total	LGD Res	LGD Com	La Grande Firm Ind	LGD Total
Nov-25	243,925	26,902	286	271,113	65,534	7,303	9	72,845	18,921	2,529	2	21,452	17,530	1,829	6	19,364	7,396	922	6	8,324
Dec-25	244,732	26,969	287	271,987	66,018	7,322	9	73,349	19,022	2,531	2	21,555	17,649	1,841	5	19,495	7,436	922	3	8,361
Jan-26	244,176	26,920	283	271,380	65,559	7,309	9	72,877	19,083	2,543	2	21,609	17,583	1,847	5	19,435	7,437	922	2	8,361
Feb-26	244,247	27,009	286	271,541	65,610	7,313	9	72,932	19,117	2,544	2	21,663	17,608	1,853	6	19,467	7,444	922	2	8,368
Mar-26	244,479	26,987	285	271,750	65,717	7,322	9	73,048	19,161	2,546	2	21,709	17,628	1,854	6	19,487	7,438	922	2	8,365
Apr-26	244,404	26,970	285	271,659	65,689	7,302	9	73,000	19,094	2,537	2	21,633	17,600	1,850	6	19,455	7,433	920	2	8,355
May-26	244,630	26,974	285	271,889	65,702	7,304	9	73,015	19,063	2,540	2	21,613	17,533	1,842	6	19,381	7,419	920	3	8,342
Jun-26	244,860	26,997	287	272,144	65,576	7,298	9	72,883	18,992	2,546	2	21,540	17,455	1,839	6	19,300	7,395	921	3	8,319
Jul-26	244,882	26,972	288	272,143	65,444	7,295	9	72,747	19,035	2,543	2	21,580	17,499	1,843	6	19,348	7,319	922	3	8,244
Aug-26	245,072	27,047	287	272,406	65,345	7,297	9	72,652	18,985	2,539	2	21,526	17,426	1,839	6	19,271	7,304	923	4	8,231
Sep-26	245,589	27,108	288	272,985	65,462	7,312	9	72,783	18,956	2,537	2	21,495	17,456	1,845	6	19,286	7,295	924	8	8,228
Oct-26	246,583	27,126	286	273,995	65,842	7,304	9	73,155	19,077	2,539	2	21,618	17,577	1,843	6	19,416	7,373	924	8	8,305
Nov-26	247,125	27,223	287	274,635	66,323	7,354	9	73,686	19,283	2,551	2	21,836	17,738	1,842	6	19,586	7,434	924	6	8,364
Jan-27	247,949	27,290	288	275,527	66,817	7,374	9	74,200	19,387	2,553	2	21,941	17,859	1,855	5	19,719	7,474	924	3	8,401
Feb-27	247,264	27,235	285	274,784	66,291	7,361	9	73,661	19,434	2,564	2	22,001	17,788	1,860	5	19,653	7,482	924	2	8,408
Mar-27	247,573	27,303	286	275,162	66,343	7,365	9	73,711	19,469	2,565	2	22,036	17,814	1,867	6	19,686	7,489	924	2	8,415
Apr-27	247,728	27,286	286	275,162	66,452	7,375	9	73,835	19,515	2,567	2	22,083	17,854	1,867	6	19,707	7,483	924	2	8,409
May-27	247,728	27,290	286	275,304	66,436	7,357	9	73,786	19,446	2,558	2	22,005	17,805	1,863	6	19,674	7,478	922	2	8,402
Jun-27	247,962	27,313	288	275,563	66,308	7,351	9	73,667	19,414	2,569	2	21,985	17,738	1,855	6	19,599	7,464	922	3	8,389
Jul-27	247,984	27,288	290	275,562	66,173	7,347	9	73,529	19,340	2,567	2	21,909	17,657	1,853	6	19,516	7,440	923	3	8,366
Aug-27	248,179	27,364	288	275,831	66,073	7,349	9	73,432	19,385	2,563	2	21,950	17,703	1,856	6	19,565	7,363	924	3	8,290
Sep-27	248,706	27,427	289	276,422	66,192	7,354	9	73,565	19,304	2,558	2	21,863	17,628	1,858	6	19,487	7,348	925	4	8,277
Oct-27	249,721	27,444	288	277,453	66,579	7,356	9	73,944	19,428	2,560	2	21,990	17,783	1,847	6	19,502	7,339	927	8	8,352
Nov-27	250,274	27,543	289	278,105	67,069	7,407	9	74,485	19,640	2,571	2	22,214	17,946	1,856	6	19,807	7,479	926	8	8,411
Dec-27	251,115	27,612	290	279,017	67,572	7,428	9	75,008	19,747	2,573	2	22,322	18,070	1,868	5	19,943	7,520	926	3	8,449



# **Demand Coefficients**

## **Appendix 2.3**

Regression--Residential WA & ID				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.0301 0.0023	12.9224	2.68657E-30
NHDDD		0.0094 0.0001	63.6034	7.2305E-169
NQDDD		0.0019 0.0001	14.9808	1.07403E-37

a Dependent Variable: RNDT

Regression--Commercial WA & ID				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.2134 0.0113	18.8746	6.91553E-52
NHDDD		0.0472 0.0007	65.9534	5.1129E-173
NQDDD		0.0115 0.0006	19.0984	1.06953E-52

a Dependent Variable: CNDT

Regression--Firm Industrial WA & ID				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		4.3748 0.080897048	54.07863783	1.4517E-150
NHDDD		0.1164 0.005117407	22.75515098	1.0506E-65
NQDDD		0.0452 0.004309456	10.4915236	6.02302E-22

a Dependent Variable: INDT

Regression--Residential Medford				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.0376 0.0015	25.6122	1.85684E-75
MHDDD		0.0095 0.0001	67.2378	3.1236E-175
MQDDD		0.0017 0.0001	13.5006	2.35291E-32

a Dependent Variable: RMDT

Regression--Commercial Medford				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.2903 0.0155	18.7306	2.30114E-51
MHDDD		0.0452 0.0015	30.4767	4.51413E-91
MQDDD		0.0002 0.0013	0.1656	0.868594306

a Dependent Variable: CMDT

Regression--Firm Industrial Medford				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.029406813 0.028566584	1.029412998	0.304170887
MHDDD		0.075782114 0.002736531	27.69276501	2.71243E-82
MQDDD		0.001501534 0.002462884	0.609664908	0.54257646

a Dependent Variable: CMDT

Regression--Residential WA & ID			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.0301</b>	1.6196	<b>0.0488</b>
<b>Shoulder</b>	<b>0.0094</b>	0.6304	<b>0.0059</b>
<b>Dec-Jan-Feb</b>	<b>0.0112</b>	0.9259	<b>0.0104</b>
<b>Nov &amp; Mar</b>	<b>0.0094</b>	0.9702	<b>0.0091</b>

Regression--Commercial WA & ID			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.2134</b>	1.6196	<b>0.3456</b>
<b>Shoulder</b>	<b>0.0472</b>	0.6304	<b>0.0297</b>
<b>Dec-Jan-Feb</b>	<b>0.0587</b>	0.9259	<b>0.0543</b>
<b>Nov &amp; Mar</b>	<b>0.0472</b>	0.9702	<b>0.0458</b>

Regression--Firm Industrial WA & ID			
		Calibration Correction (%)	Final
<b>Base</b>	<b>4.3748</b>	1.6196	<b>7.0854</b>
<b>Shoulder</b>	<b>0.1164</b>	0.6304	<b>0.0734</b>
<b>Dec-Jan-Feb</b>	<b>0.1617</b>	0.9259	<b>0.1497</b>
<b>Nov &amp; Mar</b>	<b>0.1164</b>	0.9702	<b>0.1130</b>

Regression--Residential Medford			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.0376</b>	1.1754	<b>0.0442</b>
<b>Shoulder</b>	<b>0.0095</b>	0.7691	<b>0.0073</b>
<b>Dec-Jan-Feb</b>	<b>0.0112</b>	1.0440	<b>0.0117</b>
<b>Nov &amp; Mar</b>	<b>0.0095</b>	1.0680	<b>0.0101</b>

Regression--Commercial Medford			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.2903</b>	1.1754	<b>0.3412</b>
<b>Shoulder</b>	<b>0.0452</b>	0.7691	<b>0.0348</b>
<b>Dec-Jan-Feb</b>	<b>0.0455</b>	1.0440	<b>0.0475</b>
<b>Nov &amp; Mar</b>	<b>0.0452</b>	1.0680	<b>0.0483</b>

Regression--Firm Industrial Medford			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.0294</b>	1.1754	<b>0.0346</b>
<b>Shoulder</b>	<b>0.0758</b>	0.7691	<b>0.0583</b>
<b>Dec-Jan-Feb</b>	<b>0.0773</b>	1.0440	<b>0.0807</b>
<b>Nov &amp; Mar</b>	<b>0.0758</b>	1.0680	<b>0.0809</b>

Regression--Residential Roseburg				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.0359 0.0012	28.9895	1.958E-86
RHDDD		0.0106 0.0001	79.6055	8.2663E-195
RQDDD		0.0013 0.0001	10.7946	5.92577E-23

a Dependent Variable: RRDT

Regression--Residential Roseburg			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.0359</b>	1.2964	<b>0.0465</b>
<b>Shoulder</b>	<b>0.0106</b>	0.7245	<b>0.0077</b>
<b>Dec-Jan-Feb</b>	<b>0.0119</b>	0.9789	<b>0.0117</b>
<b>Nov &amp; Mar</b>	<b>0.0106</b>	0.9349	<b>0.0099</b>

Regression--Commercial Roseburg				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.2805 0.0163	17.2281	6.81002E-46
RHDDD		0.0534 0.0018	30.3715	9.5193E-91
RQDDD		-0.0011 0.0016	-0.6839	0.494595161

a Dependent Variable: CRDT

Regression--Commercial Roseburg			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.2805</b>	1.2964	<b>0.3637</b>
<b>Shoulder</b>	<b>0.0534</b>	0.7245	<b>0.0387</b>
<b>Dec-Jan-Feb</b>	<b>0.0523</b>	0.9789	<b>0.0512</b>
<b>Nov &amp; Mar</b>	<b>0.0534</b>	0.9349	<b>0.0499</b>

Regression--Firm Industrial Roseburg				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		11.9581 0.1814	65.9241	5.7476E-173
RHDDD		0.6041 0.0196	30.8542	3.13865E-92
RQDDD		-0.1701 0.0177	-9.6239	3.91227E-19

a Dependent Variable: IRDT

Regression--Firm Industrial Roseburg			
		Calibration Correction (%)	Final
<b>Base</b>	<b>11.9581</b>	1.2964	<b>15.5025</b>
<b>Shoulder</b>	<b>0.6041</b>	0.7245	<b>0.4377</b>
<b>Dec-Jan-Feb</b>	<b>0.4340</b>	0.9789	<b>0.4249</b>
<b>Nov &amp; Mar</b>	<b>0.6041</b>	0.9349	<b>0.5648</b>

Regression--Residential Klamath Falls				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.0137 0.0031	4.4168	1.43108E-05
KHDDD		0.0079 0.0002	41.3221	2.0409E-121
KQDDD		0.0020 0.0002	13.1000	6.29945E-31

a Dependent Variable: RKDT

Regression--Residential Klamath Falls			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.0137</b>	2.3155	<b>0.0318</b>
<b>Shoulder</b>	<b>0.0079</b>	0.5186	<b>0.0041</b>
<b>Dec-Jan-Feb</b>	<b>0.0099</b>	0.8426	<b>0.0084</b>
<b>Nov &amp; Mar</b>	<b>0.0079</b>	0.8476	<b>0.0067</b>

Regression--Commercial Klamath Falls				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.1506 0.0266	5.6723	3.49963E-08
KHDDD		0.0419 0.0016	25.6776	1.12342E-75
KQDDD		0.0023 0.0013	1.7302	0.08469882

a Dependent Variable: CKDT

Regression--Commercial Klamath Falls			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.1506</b>	2.3155	<b>0.3488</b>
<b>Shoulder</b>	<b>0.0419</b>	0.5186	<b>0.0217</b>
<b>Dec-Jan-Feb</b>	<b>0.0442</b>	0.8426	<b>0.0372</b>
<b>Nov &amp; Mar</b>	<b>0.0419</b>	0.8476	<b>0.0355</b>

Regression--Firm Industrial Klamath Falls				
Coefficients				
Model	B	Unstandardized Coefficients Std. Error	t	Sig.
1 (Constant)		0.038518325 0.03941458	0.977260814	0.329280619
KHDDD		0.054989665 0.002420898	22.71457399	1.45482E-65
KQDDD		0.010036591 0.00197617	5.078808335	6.92943E-07

a Dependent Variable: CKDT

Regression--Firm Industrial Klamath Falls			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.0385</b>	2.3155	<b>0.0892</b>
<b>Shoulder</b>	<b>0.0550</b>	0.5186	<b>0.0285</b>
<b>Dec-Jan-Feb</b>	<b>0.0650</b>	0.8426	<b>0.0548</b>
<b>Nov &amp; Mar</b>	<b>0.0550</b>	0.8476	<b>0.0466</b>



Regression--Residential La Grande				
Coefficients				
Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
1 (Constant)	0.0145	0.0047	3.0840	0.002245712
LHDDD	0.0091	0.0003	29.1164	7.7838E-87
LQDDD	0.0018	0.0003	6.9195	3.06602E-11

a Dependent Variable: RLDT

Regression--Commercial La Grande				
Coefficients				
Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
1 (Constant)	0.1274	0.0226	5.6466	4.00306E-08
LHDDD	0.0407	0.0015	27.1824	1.22582E-80
LQDDD	0.0046	0.0013	3.6881	0.000271162

a Dependent Variable: CLDT

Regression--Firm Industrial La Grande				
Coefficients				
Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
1 (Constant)	27.2292	1.6612	16.3912	7.75936E-43
LHDDD	-1.1588	0.1104	-10.4999	5.65102E-22
LQDDD	0.3679	0.0923	3.9869	8.54086E-05

a Dependent Variable: ILDT

Regression--Residential La Grande			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.0145</b>	2.0591	<b>0.0299</b>
<b>Shoulder</b>	<b>0.0091</b>	0.6308	<b>0.0057</b>
<b>Dec-Jan-Feb</b>	<b>0.0109</b>	1.1194	<b>0.0122</b>
<b>Nov &amp; Mar</b>	<b>0.0091</b>	1.1161	<b>0.0102</b>

Regression--Commercial La Grande			
		Calibration Correction (%)	Final
<b>Base</b>	<b>0.1274</b>	2.0591	<b>0.2623</b>
<b>Shoulder</b>	<b>0.0407</b>	0.6308	<b>0.0257</b>
<b>Dec-Jan-Feb</b>	<b>0.0454</b>	1.1194	<b>0.0508</b>
<b>Nov &amp; Mar</b>	<b>0.0407</b>	1.1161	<b>0.0455</b>

Regression--Firm Industrial La Grande			
		Calibration Correction (%)	Final
<b>Base</b>	<b>27.2292</b>	2.0591	<b>56.0676</b>
<b>Shoulder</b>	<b>(1.1588)</b>	0.6308	-
<b>Dec-Jan-Feb</b>	<b>(0.7909)</b>	1.1194	-
<b>Nov &amp; Mar</b>	<b>(1.1588)</b>	1.1161	-

# Detailed Demand Data

## Appendix 2.4

## Appendix 2.4 - A

## Annual Avg. Demand (MDth/d)

(Net of DSM Savings)

Area	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
<b>Expected Case</b>										
Klam Falls	3.81	3.88	3.96	4.05	4.14	4.21	4.28	4.36	4.46	4.54
La Grande	2.43	2.45	2.47	2.49	2.51	2.53	2.55	2.58	2.61	2.64
Medford GTN	10.41	10.61	10.85	11.09	11.38	11.61	11.85	12.11	12.41	12.66
Medford NWP	4.68	4.77	4.87	4.98	5.11	5.22	5.33	5.44	5.58	5.69
Roseburg	4.24	4.32	4.43	4.55	4.70	4.83	4.96	5.10	5.27	5.42
<b>OR Sub-Total</b>	<b>25.56</b>	<b>26.02</b>	<b>26.58</b>	<b>27.16</b>	<b>27.84</b>	<b>28.40</b>	<b>28.97</b>	<b>29.60</b>	<b>30.33</b>	<b>30.95</b>
Spokane	40.49	41.37	42.38	43.42	44.53	45.29	46.23	46.77	47.75	48.56
Spokane GTN	5.59	5.71	5.85	5.99	6.14	6.25	6.36	6.46	6.59	6.70
Spokane NWP	23.74	24.25	24.85	25.46	26.12	26.57	27.01	27.44	28.02	28.49
<b>WA/ID Sub-Total</b>	<b>69.81</b>	<b>71.33</b>	<b>73.07</b>	<b>74.87</b>	<b>76.79</b>	<b>78.11</b>	<b>79.60</b>	<b>80.67</b>	<b>82.36</b>	<b>83.75</b>
<b>Expected Case Total</b>	<b>95.37</b>	<b>97.35</b>	<b>99.65</b>	<b>102.03</b>	<b>104.63</b>	<b>106.51</b>	<b>108.58</b>	<b>110.27</b>	<b>112.69</b>	<b>114.70</b>
<b>High Case</b>										
Klam Falls	3.82	3.88	4.05	4.21	4.37	4.50	4.63	4.75	4.90	5.02
La Grande	2.70	2.70	2.77	2.81	2.86	2.91	2.95	2.99	3.04	3.08
Medford GTN	10.48	10.66	11.16	11.59	12.08	12.48	12.89	13.29	13.75	14.12
Medford NWP	4.71	4.79	5.01	5.21	5.43	5.61	5.79	5.97	6.18	6.35
Roseburg	<b>4.30</b>	<b>4.38</b>	<b>4.60</b>	<b>4.80</b>	<b>5.05</b>	<b>5.26</b>	<b>5.48</b>	<b>5.70</b>	<b>5.96</b>	<b>6.18</b>
<b>OR Sub-Total</b>	<b>26.01</b>	<b>26.40</b>	<b>27.59</b>	<b>28.63</b>	<b>29.79</b>	<b>30.75</b>	<b>31.75</b>	<b>32.72</b>	<b>33.83</b>	<b>34.75</b>
Spokane	41.32	42.15	44.25	46.14	47.70	49.22	50.81	52.24	53.82	55.07
Spokane GTN	5.70	5.82	6.11	6.37	6.64	6.84	7.06	7.24	7.43	7.60
Spokane NWP	24.22	24.72	25.95	27.06	27.97	28.87	29.80	30.65	31.57	32.31
<b>WA/ID Sub-Total</b>	<b>71.24</b>	<b>72.69</b>	<b>76.30</b>	<b>79.56</b>	<b>82.31</b>	<b>84.93</b>	<b>87.67</b>	<b>90.12</b>	<b>92.82</b>	<b>94.99</b>
<b>High Case Total</b>	<b>97.25</b>	<b>99.09</b>	<b>103.89</b>	<b>108.19</b>	<b>112.09</b>	<b>115.68</b>	<b>119.42</b>	<b>122.84</b>	<b>126.65</b>	<b>129.74</b>
<b>Low Case</b>										
Klam Falls	3.76	3.69	3.74	3.79	3.83	3.86	3.89	3.93	3.97	4.01
La Grande	2.47	2.41	2.43	2.45	2.45	2.46	2.47	2.48	2.49	2.51
Medford GTN	10.29	10.11	10.25	10.40	10.54	10.63	10.74	10.85	11.00	11.11
Medford NWP	4.62	4.54	4.60	4.67	4.74	4.78	4.83	4.88	4.94	4.99
Roseburg	4.22	4.15	4.22	4.29	4.36	4.42	4.48	4.54	4.63	4.69
<b>OR Sub-Total</b>	<b>25.37</b>	<b>24.91</b>	<b>25.23</b>	<b>25.60</b>	<b>25.93</b>	<b>26.15</b>	<b>26.40</b>	<b>26.68</b>	<b>27.04</b>	<b>27.31</b>
Spokane	40.11	39.41	39.99	40.62	41.02	41.19	41.43	41.74	42.16	42.43
Spokane GTN	5.53	5.44	5.52	5.61	5.66	5.69	5.72	5.76	5.82	5.86
Spokane NWP	<b>23.52</b>	<b>23.11</b>	<b>23.45</b>	<b>23.82</b>	<b>24.06</b>	<b>24.16</b>	<b>24.35</b>	<b>24.49</b>	<b>24.74</b>	<b>24.90</b>
<b>WA/ID Sub-Total</b>	<b>69.17</b>	<b>67.96</b>	<b>68.96</b>	<b>70.05</b>	<b>70.73</b>	<b>71.04</b>	<b>71.50</b>	<b>71.99</b>	<b>72.73</b>	<b>73.19</b>
<b>Low Case Total</b>	<b>94.53</b>	<b>92.86</b>	<b>94.19</b>	<b>95.65</b>	<b>96.66</b>	<b>97.18</b>	<b>97.91</b>	<b>98.68</b>	<b>99.77</b>	<b>100.50</b>

**Appendix 2.4 - A**  
**Annual Avg. Demand (MDth/d)**  
 (Net of DSM Savings)

Area	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027
<b>Expected Case</b>										
Klam Falls	4.71	4.80	4.87	4.96	5.04	5.13	5.20	5.29	5.38	5.46
La Grande	2.69	2.72	2.74	2.76	2.79	2.81	2.83	2.85	2.87	2.88
Medford GTN	13.20	13.50	13.73	13.99	14.24	14.53	14.74	14.98	15.22	15.50
Medford NWP	5.93	6.07	6.17	6.29	6.40	6.53	6.62	6.73	6.84	6.96
Roseburg	5.72	5.88	6.02	6.17	6.31	6.47	6.61	6.77	6.92	7.08
<b>OR Sub-Total</b>	<b>32.25</b>	<b>32.98</b>	<b>33.54</b>	<b>34.16</b>	<b>34.77</b>	<b>35.46</b>	<b>36.00</b>	<b>36.62</b>	<b>37.23</b>	<b>37.89</b>
Spokane	50.53	51.65	52.62	53.70	54.82	56.04	57.07	58.20	59.31	60.56
Spokane GTN	6.98	7.13	7.26	7.41	7.57	7.74	7.88	8.03	8.19	8.36
Spokane NWP	29.65	30.30	30.87	31.51	32.16	32.88	33.48	34.14	34.80	35.53
<b>WA/ID Sub-Total</b>	<b>87.15</b>	<b>89.08</b>	<b>90.75</b>	<b>92.63</b>	<b>94.55</b>	<b>96.66</b>	<b>98.43</b>	<b>100.37</b>	<b>102.29</b>	<b>104.44</b>
<b>Expected Case Total</b>	<b>119.40</b>	<b>122.06</b>	<b>124.29</b>	<b>126.78</b>	<b>129.33</b>	<b>132.12</b>	<b>134.44</b>	<b>136.99</b>	<b>139.52</b>	<b>142.33</b>
<b>High Case</b>										
Klam Falls	5.14	5.26	5.39	5.50	5.62	5.73	5.85	5.96	6.09	6.21
La Grande	3.11	3.15	3.18	3.22	3.25	3.28	3.30	3.33	3.35	3.38
Medford GTN	14.41	14.90	15.33	15.66	16.03	16.38	16.78	17.07	17.43	17.78
Medford NWP	6.48	6.69	6.89	7.04	7.20	7.36	7.54	7.67	7.83	7.99
Roseburg	6.40	6.62	6.86	7.06	7.27	7.48	7.71	7.91	8.13	8.35
<b>OR Sub-Total</b>	<b>35.53</b>	<b>36.62</b>	<b>37.65</b>	<b>38.47</b>	<b>39.37</b>	<b>40.24</b>	<b>41.18</b>	<b>41.94</b>	<b>42.84</b>	<b>43.71</b>
Spokane	56.44	57.96	59.62	61.08	62.71	64.31	66.07	67.56	69.25	70.90
Spokane GTN	7.79	8.00	8.23	8.43	8.66	8.88	9.12	9.32	9.56	9.78
Spokane NWP	33.11	34.00	34.98	35.83	36.79	37.73	38.76	39.63	40.62	41.59
<b>WA/ID Sub-Total</b>	<b>97.35</b>	<b>99.96</b>	<b>102.83</b>	<b>105.33</b>	<b>108.15</b>	<b>110.92</b>	<b>113.95</b>	<b>116.51</b>	<b>119.43</b>	<b>122.27</b>
<b>High Case Total</b>	<b>132.88</b>	<b>136.58</b>	<b>140.48</b>	<b>143.80</b>	<b>147.52</b>	<b>151.15</b>	<b>155.14</b>	<b>158.45</b>	<b>162.28</b>	<b>165.98</b>
<b>Low Case</b>										
Klam Falls	4.04	4.08	4.12	4.15	4.19	4.22	4.25	4.27	4.31	4.34
La Grande	2.52	2.53	2.54	2.55	2.56	2.56	2.57	2.57	2.58	2.58
Medford GTN	11.23	11.36	11.52	11.61	11.71	11.81	11.94	12.00	12.10	12.19
Medford NWP	5.05	5.10	5.17	5.21	5.26	5.31	5.37	5.40	5.44	5.48
Roseburg	4.77	4.84	4.92	4.98	5.05	5.11	5.18	5.24	5.30	5.37
<b>OR Sub-Total</b>	<b>27.61</b>	<b>27.91</b>	<b>28.26</b>	<b>28.50</b>	<b>28.77</b>	<b>29.01</b>	<b>29.31</b>	<b>29.49</b>	<b>29.72</b>	<b>29.96</b>
Spokane	42.85	43.28	43.80	44.19	44.65	45.06	45.56	45.89	46.31	46.73
Spokane GTN	5.92	5.98	6.05	6.10	6.16	6.22	6.29	6.34	6.39	6.45
Spokane NWP	25.15	25.40	25.71	25.93	26.20	26.44	26.73	26.93	27.17	27.42
<b>WA/ID Sub-Total</b>	<b>73.92</b>	<b>74.65</b>	<b>75.56</b>	<b>76.22</b>	<b>77.01</b>	<b>77.73</b>	<b>78.58</b>	<b>79.15</b>	<b>79.87</b>	<b>80.61</b>
<b>Low Case Total</b>	<b>101.53</b>	<b>102.57</b>	<b>103.82</b>	<b>104.71</b>	<b>105.78</b>	<b>106.74</b>	<b>107.89</b>	<b>108.64</b>	<b>109.60</b>	<b>110.57</b>

80 Appendix 2.4 - B

Annual Avg. Demand (MDth/d)

By Class (Net of DSM Savings)

Area	2007/2008				2008/2009			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	2.24	1.57	0.00	3.81	2.28	1.59	0.00	3.88
La Grande	1.36	0.91	0.16	2.43	1.38	0.91	0.16	2.45
Medford GTN	6.27	4.13	-	10.41	6.42	4.19	-	10.61
Medford NWP	2.82	1.86	-	4.68	2.88	1.88	-	4.77
Roseburg	2.21	1.98	0.04	4.24	2.27	2.01	0.04	4.32
<b>OR Sub-Total</b>	<b>14.90</b>	<b>10.45</b>	<b>0.20</b>	<b>25.56</b>	<b>15.23</b>	<b>10.58</b>	<b>0.21</b>	<b>26.02</b>
Spokane Both	23.63	15.49	1.37	40.49	24.18	15.79	1.40	41.37
Spokane GTN	3.26	2.14	0.19	5.59	3.34	2.18	0.19	5.71
Spokane NWP	13.85	9.08	0.80	23.74	14.18	9.26	0.82	24.25
<b>WA/ID Sub-Total</b>	<b>40.74</b>	<b>26.70</b>	<b>2.36</b>	<b>69.81</b>	<b>41.69</b>	<b>27.23</b>	<b>2.41</b>	<b>71.33</b>
<b>Expected Case Total</b>	<b>55.64</b>	<b>37.16</b>	<b>2.57</b>	<b>95.37</b>	<b>56.93</b>	<b>37.81</b>	<b>2.61</b>	<b>97.35</b>
<b>High Case</b>								
Klam Falls	2.25	1.57	0.01	3.82	2.29	1.59	0.01	3.88
La Grande	1.36	0.92	0.42	2.70	1.37	0.92	0.42	2.70
Medford GTN	6.31	4.17	-	10.48	6.45	4.21	-	10.66
Medford NWP	2.83	1.87	-	4.71	2.90	1.89	-	4.79
Roseburg	2.23	2.02	0.04	4.30	2.29	2.04	0.04	4.38
<b>OR Sub-Total</b>	<b>14.98</b>	<b>10.56</b>	<b>0.47</b>	<b>26.01</b>	<b>15.29</b>	<b>10.65</b>	<b>0.47</b>	<b>26.40</b>
Spokane Both	24.03	15.77	1.52	41.32	24.57	16.04	1.55	42.15
Spokane GTN	3.31	2.18	0.21	5.70	3.39	2.21	0.21	5.82
Spokane NWP	14.09	9.25	0.89	24.22	14.41	9.40	0.91	24.72
<b>WA/ID Sub-Total</b>	<b>41.43</b>	<b>27.20</b>	<b>2.62</b>	<b>71.24</b>	<b>42.36</b>	<b>27.65</b>	<b>2.67</b>	<b>72.69</b>
<b>High Case Total</b>	<b>56.41</b>	<b>37.75</b>	<b>3.09</b>	<b>97.25</b>	<b>57.65</b>	<b>38.30</b>	<b>3.14</b>	<b>99.09</b>
<b>Low Case</b>								
Klam Falls	2.21	1.55	0.01	3.76	2.16	1.52	0.01	3.69
La Grande	1.35	0.91	0.21	2.47	1.31	0.88	0.22	2.41
Medford GTN	6.20	4.09	-	10.29	6.09	4.02	-	10.11
Medford NWP	2.78	1.84	-	4.62	2.74	1.81	-	4.54
Roseburg	2.19	1.99	0.04	4.22	2.15	1.96	0.04	4.15
<b>OR Sub-Total</b>	<b>14.72</b>	<b>10.38</b>	<b>0.26</b>	<b>25.37</b>	<b>14.45</b>	<b>10.19</b>	<b>0.26</b>	<b>24.91</b>
Spokane Both	23.37	15.35	1.39	40.11	22.93	15.09	1.39	39.41
Spokane GTN	3.22	2.12	0.19	5.53	3.16	2.08	0.19	5.44
Spokane NWP	13.70	9.00	0.82	23.52	13.45	8.85	0.81	23.11
<b>WA/ID Sub-Total</b>	<b>40.29</b>	<b>26.47</b>	<b>2.40</b>	<b>69.17</b>	<b>39.54</b>	<b>26.02</b>	<b>2.40</b>	<b>67.96</b>
<b>Low Case Total</b>	<b>55.01</b>	<b>36.86</b>	<b>2.66</b>	<b>94.53</b>	<b>53.99</b>	<b>36.21</b>	<b>2.66</b>	<b>92.86</b>

**Appendix 2.4 - B**  
**Annual Avg. Demand (MDth/d)**  
 By Class (Net of DSM Savings)

Area	2009/2010				2010/2011			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	2.34	1.61	0.00	3.96	2.41	1.63	0.00	4.05
La Grande	1.40	0.91	0.16	2.47	1.41	0.91	0.16	2.49
Medford GTN	6.61	4.24	-	10.85	6.80	4.29	-	11.09
Medford NWP	2.97	1.91	-	4.87	3.06	1.93	-	4.98
Roseburg	2.35	2.04	0.04	4.43	2.44	2.07	0.04	4.55
<b>OR Sub-Total</b>	<b>15.66</b>	<b>10.72</b>	<b>0.21</b>	<b>26.58</b>	<b>16.12</b>	<b>10.83</b>	<b>0.21</b>	<b>27.16</b>
Spokane Both	24.80	16.15	1.43	42.38	25.42	16.54	1.46	43.42
Spokane GTN	3.42	2.23	0.20	5.85	3.51	2.28	0.20	5.99
Spokane NWP	14.55	9.47	0.84	24.85	14.91	9.69	0.85	25.46
<b>WA/ID Sub-Total</b>	<b>42.76</b>	<b>27.85</b>	<b>2.46</b>	<b>73.07</b>	<b>43.85</b>	<b>28.51</b>	<b>2.51</b>	<b>74.87</b>
<b>Expected Case Total</b>	<b>58.42</b>	<b>38.57</b>	<b>2.66</b>	<b>99.65</b>	<b>59.97</b>	<b>39.34</b>	<b>2.72</b>	<b>102.03</b>
<b>High Case</b>								
Klam Falls	2.41	1.64	0.01	4.05	2.53	1.67	0.01	4.21
La Grande	1.42	0.93	0.42	2.77	1.45	0.94	0.42	2.81
Medford GTN	6.82	4.34	-	11.16	7.16	4.43	-	11.59
Medford NWP	3.06	1.95	-	5.01	3.21	1.99	-	5.21
Roseburg	2.43	2.12	0.04	4.60	2.59	2.18	0.04	4.80
<b>OR Sub-Total</b>	<b>16.14</b>	<b>10.98</b>	<b>0.47</b>	<b>27.59</b>	<b>16.94</b>	<b>11.22</b>	<b>0.47</b>	<b>28.63</b>
Spokane Both	25.86	16.78	1.60	44.25	27.02	17.46	1.66	46.14
Spokane GTN	3.57	2.31	0.22	6.11	3.73	2.41	0.23	6.37
Spokane NWP	15.17	9.84	0.94	25.95	15.85	10.23	0.97	27.06
<b>WA/ID Sub-Total</b>	<b>44.60</b>	<b>28.93</b>	<b>2.77</b>	<b>76.30</b>	<b>46.60</b>	<b>30.10</b>	<b>2.86</b>	<b>79.56</b>
<b>High Case Total</b>	<b>60.74</b>	<b>39.91</b>	<b>3.24</b>	<b>103.89</b>	<b>63.54</b>	<b>41.32</b>	<b>3.33</b>	<b>108.19</b>
<b>Low Case</b>								
Klam Falls	2.19	1.54	0.01	3.74	2.24	1.55	0.01	3.79
La Grande	1.33	0.89	0.22	2.43	1.34	0.89	0.22	2.45
Medford GTN	6.20	4.05	-	10.25	6.32	4.08	-	10.40
Medford NWP	2.78	1.82	-	4.60	2.84	1.84	-	4.67
Roseburg	2.20	1.98	0.04	4.22	2.25	2.00	0.04	4.29
<b>OR Sub-Total</b>	<b>14.70</b>	<b>10.27</b>	<b>0.26</b>	<b>25.23</b>	<b>14.98</b>	<b>10.36</b>	<b>0.26</b>	<b>25.60</b>
Spokane Both	23.27	15.31	1.41	39.99	23.63	15.56	1.43	40.62
Spokane GTN	3.21	2.11	0.19	5.52	3.26	2.15	0.20	5.61
Spokane NWP	13.65	8.98	0.83	23.45	13.86	9.12	0.84	23.82
<b>WA/ID Sub-Total</b>	<b>40.13</b>	<b>26.40</b>	<b>2.43</b>	<b>68.96</b>	<b>40.75</b>	<b>26.83</b>	<b>2.46</b>	<b>70.05</b>
<b>Low Case Total</b>	<b>54.82</b>	<b>36.68</b>	<b>2.69</b>	<b>94.19</b>	<b>55.73</b>	<b>37.19</b>	<b>2.73</b>	<b>95.65</b>

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Annual Avg. Demand (MDth/d)

By Class (Net of DSM Savings)

Area	2011/2012				2012/2013			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	2.49	1.65	0.00	4.14	2.54	1.66	0.00	4.21
La Grande	1.43	0.92	0.16	2.51	1.46	0.92	0.16	2.53
Medford GTN	7.04	4.34	-	11.38	7.24	4.38	-	11.61
Medford NWP	3.16	1.95	-	5.11	3.25	1.97	-	5.22
Roseburg	2.55	2.10	0.04	4.70	2.66	2.13	0.04	4.83
<b>OR Sub-Total</b>	<b>16.68</b>	<b>10.96</b>	<b>0.20</b>	<b>27.84</b>	<b>17.14</b>	<b>11.05</b>	<b>0.21</b>	<b>28.40</b>
Spokane Both	26.06	16.98	1.48	44.53	26.43	17.37	1.49	45.29
Spokane GTN	3.60	2.34	0.20	6.14	3.65	2.40	0.21	6.25
Spokane NWP	15.29	9.96	0.87	26.12	15.51	10.18	0.88	26.57
<b>WA/ID Sub-Total</b>	<b>44.95</b>	<b>29.28</b>	<b>2.55</b>	<b>76.79</b>	<b>45.58</b>	<b>29.95</b>	<b>2.58</b>	<b>78.11</b>
<b>Expected Case Total</b>	<b>61.63</b>	<b>40.24</b>	<b>2.76</b>	<b>104.63</b>	<b>62.73</b>	<b>41.00</b>	<b>2.78</b>	<b>106.51</b>
<b>High Case</b>								
Klam Falls	2.66	1.71	0.01	4.37	2.75	1.74	0.01	4.50
La Grande	1.49	0.95	0.42	2.86	1.53	0.96	0.42	2.91
Medford GTN	7.55	4.53	-	12.08	7.88	4.60	-	12.48
Medford NWP	3.39	2.04	-	5.43	3.54	2.07	-	5.61
Roseburg	2.77	2.23	0.04	5.05	2.94	2.28	0.04	5.26
<b>OR Sub-Total</b>	<b>17.86</b>	<b>11.46</b>	<b>0.47</b>	<b>29.79</b>	<b>18.64</b>	<b>11.64</b>	<b>0.47</b>	<b>30.75</b>
Spokane Both	27.79	18.21	1.70	47.70	28.64	18.87	1.72	49.22
Spokane GTN	3.89	2.51	0.23	6.64	4.00	2.60	0.24	6.84
Spokane NWP	16.30	10.68	0.99	27.97	16.80	11.06	1.01	28.87
<b>WA/ID Sub-Total</b>	<b>47.98</b>	<b>31.40</b>	<b>2.92</b>	<b>82.31</b>	<b>49.43</b>	<b>32.53</b>	<b>2.97</b>	<b>84.93</b>
<b>High Case Total</b>	<b>65.84</b>	<b>42.87</b>	<b>3.39</b>	<b>112.09</b>	<b>68.07</b>	<b>44.17</b>	<b>3.44</b>	<b>115.68</b>
<b>Low Case</b>								
Klam Falls	2.27	1.56	0.01	3.83	2.29	1.56	0.01	3.86
La Grande	1.35	0.89	0.21	2.45	1.36	0.89	0.22	2.46
Medford GTN	6.44	4.11	-	10.54	6.51	4.12	-	10.63
Medford NWP	2.89	1.85	-	4.74	2.93	1.85	-	4.78
Roseburg	2.31	2.01	0.04	4.36	2.35	2.02	0.04	4.42
<b>OR Sub-Total</b>	<b>15.25</b>	<b>10.42</b>	<b>0.26</b>	<b>25.93</b>	<b>15.45</b>	<b>10.44</b>	<b>0.26</b>	<b>26.15</b>
Spokane Both	23.78	15.79	1.44	41.02	23.78	15.96	1.45	41.19
Spokane GTN	3.28	2.18	0.20	5.66	3.28	2.20	0.20	5.69
Spokane NWP	13.96	9.26	0.84	24.06	13.96	9.36	0.85	24.16
<b>WA/ID Sub-Total</b>	<b>41.02</b>	<b>27.23</b>	<b>2.48</b>	<b>70.73</b>	<b>41.02</b>	<b>27.52</b>	<b>2.49</b>	<b>71.04</b>
<b>Low Case Total</b>	<b>56.28</b>	<b>37.64</b>	<b>2.74</b>	<b>96.66</b>	<b>56.47</b>	<b>37.96</b>	<b>2.76</b>	<b>97.18</b>

**Appendix 2.4 - B**  
**Annual Avg. Demand (MDth/d)**  
 By Class (Net of DSM Savings)

Area	2013/2014				2014/2015			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	2.60	1.68	0.00	4.28	2.66	1.70	0.00	4.36
La Grande	1.47	0.92	0.16	2.55	1.50	0.92	0.16	2.58
Medford GTN	7.44	4.41	-	11.85	7.65	4.46	-	12.11
Medford NWP	3.34	1.98	-	5.33	3.44	2.01	-	5.44
Roseburg	2.76	2.16	0.04	4.96	2.87	2.19	0.04	5.10
<b>OR Sub-Total</b>	<b>17.62</b>	<b>11.15</b>	<b>0.21</b>	<b>28.97</b>	<b>18.11</b>	<b>11.28</b>	<b>0.21</b>	<b>29.60</b>
Spokane Both	26.92	17.80	1.52	46.23	27.02	18.22	1.54	46.77
Spokane GTN	3.69	2.45	0.21	6.36	3.74	2.51	0.21	6.46
Spokane NWP	15.69	10.43	0.89	27.01	15.86	10.68	0.90	27.44
<b>WA/ID Sub-Total</b>	<b>46.31</b>	<b>30.68</b>	<b>2.61</b>	<b>79.60</b>	<b>46.62</b>	<b>31.41</b>	<b>2.65</b>	<b>80.67</b>
<b>Expected Case Total</b>	<b>63.93</b>	<b>41.83</b>	<b>2.82</b>	<b>108.58</b>	<b>64.73</b>	<b>42.69</b>	<b>2.86</b>	<b>110.27</b>
<b>High Case</b>								
Klam Falls	2.86	1.77	0.01	4.63	2.95	1.80	0.01	4.75
La Grande	1.57	0.96	0.42	2.95	1.60	0.97	0.42	2.99
Medford GTN	8.21	4.68	-	12.89	8.53	4.76	-	13.29
Medford NWP	3.69	2.10	-	5.79	3.83	2.14	-	5.97
Roseburg	3.11	2.33	0.04	5.48	3.27	2.39	0.04	5.70
<b>OR Sub-Total</b>	<b>19.43</b>	<b>11.85</b>	<b>0.47</b>	<b>31.75</b>	<b>20.19</b>	<b>12.06</b>	<b>0.47</b>	<b>32.72</b>
Spokane Both	29.49	19.56	1.76	50.81	30.24	20.21	1.79	52.24
Spokane GTN	4.12	2.70	0.24	7.06	4.20	2.79	0.25	7.24
Spokane NWP	17.30	11.47	1.03	29.80	17.75	11.85	1.05	30.65
<b>WA/ID Sub-Total</b>	<b>50.91</b>	<b>33.73</b>	<b>3.03</b>	<b>87.67</b>	<b>52.19</b>	<b>34.84</b>	<b>3.09</b>	<b>90.12</b>
<b>High Case Total</b>	<b>70.34</b>	<b>45.58</b>	<b>3.50</b>	<b>119.42</b>	<b>72.38</b>	<b>46.90</b>	<b>3.56</b>	<b>122.84</b>
<b>Low Case</b>								
Klam Falls	2.32	1.57	0.01	3.89	2.35	1.58	0.01	3.93
La Grande	1.36	0.89	0.22	2.47	1.37	0.89	0.22	2.48
Medford GTN	6.61	4.13	-	10.74	6.70	4.15	-	10.85
Medford NWP	2.97	1.86	-	4.83	3.01	1.87	-	4.88
Roseburg	2.40	2.03	0.04	4.48	2.45	2.05	0.04	4.54
<b>OR Sub-Total</b>	<b>15.66</b>	<b>10.48</b>	<b>0.26</b>	<b>26.40</b>	<b>15.89</b>	<b>10.53</b>	<b>0.26</b>	<b>26.68</b>
Spokane Both	23.81	16.17	1.46	41.43	23.91	16.37	1.47	41.74
Spokane GTN	3.29	2.23	0.20	5.72	3.30	2.26	0.20	5.76
Spokane NWP	14.02	9.48	0.86	24.35	14.03	9.59	0.86	24.49
<b>WA/ID Sub-Total</b>	<b>41.12</b>	<b>27.87</b>	<b>2.52</b>	<b>71.50</b>	<b>41.24</b>	<b>28.22</b>	<b>2.53</b>	<b>71.99</b>
<b>Low Case Total</b>	<b>56.78</b>	<b>38.35</b>	<b>2.78</b>	<b>97.91</b>	<b>57.13</b>	<b>38.75</b>	<b>2.80</b>	<b>98.68</b>



## Appendix 2.4 - B

### Annual Avg. Demand (MDth/d)

By Class (Net of DSM Savings)

Area	2015/2016				2016/2017			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	2.73	1.73	0.00	4.46	2.78	1.75	0.00	4.54
La Grande	1.52	0.93	0.16	2.61	1.55	0.93	0.16	2.64
Medford GTN	7.88	4.53	-	12.41	8.08	4.59	-	12.66
Medford NWP	3.54	2.04	-	5.58	3.63	2.06	-	5.69
Roseburg	2.99	2.24	0.04	5.27	3.10	2.28	0.04	5.42
<b>OR Sub-Total</b>	<b>18.67</b>	<b>11.46</b>	<b>0.20</b>	<b>30.33</b>	<b>19.13</b>	<b>11.61</b>	<b>0.21</b>	<b>30.95</b>
Spokane Both	27.51	18.68	1.56	47.75	27.92	19.06	1.57	48.56
Spokane GTN	3.80	2.58	0.22	6.59	3.86	2.63	0.22	6.70
Spokane NWP	16.15	10.95	0.91	28.02	16.39	11.18	0.92	28.49
<b>WA/ID Sub-Total</b>	<b>47.47</b>	<b>32.20</b>	<b>2.69</b>	<b>82.36</b>	<b>48.17</b>	<b>32.87</b>	<b>2.71</b>	<b>83.75</b>
<b>Expected Case Total</b>	<b>66.13</b>	<b>43.66</b>	<b>2.89</b>	<b>112.69</b>	<b>67.30</b>	<b>44.48</b>	<b>2.92</b>	<b>114.70</b>
<b>High Case</b>								
Klam Falls	3.05	1.85	0.01	4.90	3.13	1.88	0.01	5.02
La Grande	1.64	0.98	0.42	3.04	1.68	0.98	0.42	3.08
Medford GTN	8.89	4.86	-	13.75	9.18	4.95	-	14.12
Medford NWP	3.99	2.19	-	6.18	4.12	2.22	-	6.35
Roseburg	3.46	2.46	0.04	5.96	3.62	2.52	0.04	6.18
<b>OR Sub-Total</b>	<b>21.03</b>	<b>12.33</b>	<b>0.47</b>	<b>33.83</b>	<b>21.73</b>	<b>12.56</b>	<b>0.47</b>	<b>34.75</b>
Spokane Both	31.08	20.91	1.83	53.82	31.75	21.48	1.85	55.07
Spokane GTN	4.30	2.88	0.25	7.43	4.39	2.96	0.25	7.60
Spokane NWP	18.24	12.26	1.07	31.57	18.64	12.59	1.08	32.31
<b>WA/ID Sub-Total</b>	<b>53.62</b>	<b>36.06</b>	<b>3.15</b>	<b>92.82</b>	<b>54.77</b>	<b>37.03</b>	<b>3.18</b>	<b>94.99</b>
<b>High Case Total</b>	<b>74.65</b>	<b>48.39</b>	<b>3.62</b>	<b>126.65</b>	<b>76.50</b>	<b>49.59</b>	<b>3.65</b>	<b>129.74</b>
<b>Low Case</b>								
Klam Falls	2.37	1.59	0.01	3.97	2.40	1.60	0.01	4.01
La Grande	1.39	0.89	0.21	2.49	1.40	0.89	0.22	2.51
Medford GTN	6.82	4.18	-	11.00	6.90	4.20	-	11.11
Medford NWP	3.07	1.88	-	4.94	3.10	1.89	-	4.99
Roseburg	2.51	2.08	0.04	4.63	2.56	2.09	0.04	4.69
<b>OR Sub-Total</b>	<b>16.16</b>	<b>10.62</b>	<b>0.26</b>	<b>27.04</b>	<b>16.36</b>	<b>10.69</b>	<b>0.26</b>	<b>27.31</b>
Spokane Both	24.08	16.60	1.48	42.16	24.17	16.77	1.49	42.43
Spokane GTN	3.33	2.29	0.20	5.82	3.34	2.31	0.21	5.86
Spokane NWP	14.14	9.73	0.87	24.74	14.20	9.83	0.87	24.90
<b>WA/ID Sub-Total</b>	<b>41.55</b>	<b>28.63</b>	<b>2.55</b>	<b>72.73</b>	<b>41.71</b>	<b>28.92</b>	<b>2.56</b>	<b>73.19</b>
<b>Low Case Total</b>	<b>57.71</b>	<b>39.25</b>	<b>2.82</b>	<b>99.77</b>	<b>58.07</b>	<b>39.61</b>	<b>2.83</b>	<b>100.50</b>

**Appendix 2.4 - B**  
**Annual Avg. Demand (MDth/d)**  
 By Class (Net of DSM Savings)

Area	2017/2018				2018/2019			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	2.84	1.78	0.00	4.63	2.90	1.80	0.00	4.71
La Grande	1.57	0.94	0.16	2.67	1.59	0.94	0.16	2.69
Medford GTN	8.28	4.65	-	12.93	8.49	4.71	-	13.20
Medford NWP	3.72	2.09	-	5.81	3.81	2.12	-	5.93
Roseburg	3.21	2.32	0.04	5.57	3.32	2.36	0.04	5.72
<b>OR Sub-Total</b>	<b>19.63</b>	<b>11.78</b>	<b>0.21</b>	<b>31.61</b>	<b>20.12</b>	<b>11.93</b>	<b>0.21</b>	<b>32.25</b>
Spokane Both	28.46	19.48	1.59	49.53	29.02	19.90	1.61	50.53
Spokane GTN	3.93	2.69	0.22	6.84	4.01	2.75	0.22	6.98
Spokane NWP	16.71	11.42	0.93	29.06	17.03	11.67	0.94	29.65
<b>WA/ID Sub-Total</b>	<b>49.10</b>	<b>33.59</b>	<b>2.74</b>	<b>85.43</b>	<b>50.06</b>	<b>34.32</b>	<b>2.77</b>	<b>87.15</b>
<b>Expected Case Total</b>	<b>68.73</b>	<b>45.37</b>	<b>2.94</b>	<b>117.04</b>	<b>70.18</b>	<b>46.25</b>	<b>2.98</b>	<b>119.40</b>
<b>High Case</b>								
Klam Falls	3.21	1.92	0.01	5.14	3.30	1.95	0.01	5.26
La Grande	1.71	0.98	0.42	3.11	1.74	0.99	0.42	3.15
Medford GTN	9.40	5.01	-	14.41	9.78	5.12	-	14.90
Medford NWP	4.22	2.25	-	6.48	4.39	2.30	-	6.69
Roseburg	3.78	2.58	0.04	6.40	3.95	2.63	0.04	6.62
<b>OR Sub-Total</b>	<b>22.32</b>	<b>12.74</b>	<b>0.47</b>	<b>35.53</b>	<b>23.15</b>	<b>13.00</b>	<b>0.47</b>	<b>36.62</b>
Spokane Both	32.51	22.06	1.87	56.44	33.37	22.69	1.90	57.96
Spokane GTN	4.49	3.04	0.26	7.79	4.61	3.13	0.26	8.00
Spokane NWP	19.09	12.93	1.10	33.11	19.59	13.30	1.11	34.00
<b>WA/ID Sub-Total</b>	<b>56.09</b>	<b>38.04</b>	<b>3.22</b>	<b>97.35</b>	<b>57.57</b>	<b>39.11</b>	<b>3.28</b>	<b>99.96</b>
<b>High Case Total</b>	<b>78.41</b>	<b>50.78</b>	<b>3.69</b>	<b>132.88</b>	<b>80.72</b>	<b>52.11</b>	<b>3.75</b>	<b>136.58</b>
<b>Low Case</b>								
Klam Falls	2.42	1.62	0.01	4.04	2.45	1.63	0.01	4.08
La Grande	1.41	0.90	0.22	2.52	1.41	0.90	0.22	2.53
Medford GTN	7.00	4.24	-	11.23	7.09	4.27	-	11.36
Medford NWP	3.14	1.90	-	5.05	3.19	1.91	-	5.10
Roseburg	2.61	2.11	0.04	4.77	2.67	2.13	0.04	4.84
<b>OR Sub-Total</b>	<b>16.59</b>	<b>10.76</b>	<b>0.26</b>	<b>27.61</b>	<b>16.81</b>	<b>10.84</b>	<b>0.26</b>	<b>27.91</b>
Spokane Both	24.38	16.97	1.50	42.85	24.60	17.18	1.51	43.28
Spokane GTN	3.37	2.34	0.21	5.92	3.40	2.37	0.21	5.98
Spokane NWP	14.32	9.95	0.88	25.15	14.45	10.07	0.88	25.40
<b>WA/ID Sub-Total</b>	<b>42.07</b>	<b>29.27</b>	<b>2.58</b>	<b>73.92</b>	<b>42.44</b>	<b>29.61</b>	<b>2.60</b>	<b>74.65</b>
<b>Low Case Total</b>	<b>58.65</b>	<b>40.03</b>	<b>2.84</b>	<b>101.53</b>	<b>59.25</b>	<b>40.45</b>	<b>2.86</b>	<b>102.57</b>

## Appendix 2.4 - B

### Annual Avg. Demand (MDth/d)

By Class (Net of DSM Savings)

Area	2019/2020				2020/2021			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	2.97	1.83	0.00	4.80	3.02	1.85	0.00	4.87
La Grande	1.61	0.95	0.16	2.72	1.63	0.95	0.16	2.74
Medford GTN	8.72	4.79	-	13.50	8.90	4.84	-	13.73
Medford NWP	3.92	2.15	-	6.07	4.00	2.17	-	6.17
Roseburg	3.44	2.40	0.04	5.88	3.55	2.43	0.04	6.02
<b>OR Sub-Total</b>	<b>20.66</b>	<b>12.11</b>	<b>0.20</b>	<b>32.98</b>	<b>21.10</b>	<b>12.23</b>	<b>0.21</b>	<b>33.54</b>
Spokane Both	29.65	20.38	1.62	51.65	30.21	20.78	1.63	52.62
Spokane GTN	4.10	2.81	0.22	7.13	4.17	2.87	0.22	7.26
Spokane NWP	17.41	11.95	0.95	30.30	17.74	12.18	0.96	30.87
<b>WA/ID Sub-Total</b>	<b>51.16</b>	<b>35.14</b>	<b>2.79</b>	<b>89.08</b>	<b>52.12</b>	<b>35.82</b>	<b>2.81</b>	<b>90.75</b>
<b>Expected Case Total</b>	<b>71.82</b>	<b>47.25</b>	<b>2.99</b>	<b>122.06</b>	<b>73.22</b>	<b>48.05</b>	<b>3.02</b>	<b>124.29</b>
<b>High Case</b>								
Klam Falls	3.40	1.99	0.01	5.39	3.48	2.01	0.01	5.50
La Grande	1.77	1.00	0.42	3.18	1.80	1.00	0.42	3.22
Medford GTN	10.11	5.22	-	15.33	10.37	5.29	-	15.66
Medford NWP	4.54	2.35	-	6.89	4.66	2.38	-	7.04
Roseburg	4.12	2.69	0.04	6.86	4.28	2.73	0.04	7.06
<b>OR Sub-Total</b>	<b>23.94</b>	<b>13.25</b>	<b>0.47</b>	<b>37.65</b>	<b>24.58</b>	<b>13.42</b>	<b>0.47</b>	<b>38.47</b>
Spokane Both	34.34	23.37	1.92	59.62	35.19	23.95	1.94	61.08
Spokane GTN	4.74	3.22	0.26	8.23	4.86	3.30	0.27	8.43
Spokane NWP	20.15	13.70	1.12	34.98	20.65	14.04	1.13	35.83
<b>WA/ID Sub-Total</b>	<b>59.23</b>	<b>40.30</b>	<b>3.30</b>	<b>102.83</b>	<b>60.70</b>	<b>41.29</b>	<b>3.34</b>	<b>105.33</b>
<b>High Case Total</b>	<b>83.17</b>	<b>53.55</b>	<b>3.77</b>	<b>140.48</b>	<b>85.28</b>	<b>54.72</b>	<b>3.81</b>	<b>143.80</b>
<b>Low Case</b>								
Klam Falls	2.48	1.64	0.01	4.12	2.50	1.64	0.01	4.15
La Grande	1.42	0.90	0.21	2.54	1.43	0.90	0.22	2.55
Medford GTN	7.21	4.31	-	11.52	7.28	4.33	-	11.61
Medford NWP	3.24	1.93	-	5.17	3.27	1.94	-	5.21
Roseburg	2.73	2.15	0.04	4.92	2.77	2.16	0.04	4.98
<b>OR Sub-Total</b>	<b>17.07</b>	<b>10.93</b>	<b>0.26</b>	<b>28.26</b>	<b>17.26</b>	<b>10.98</b>	<b>0.26</b>	<b>28.50</b>
Spokane Both	24.87	17.42	1.51	43.80	25.07	17.59	1.52	44.19
Spokane GTN	3.44	2.40	0.21	6.05	3.46	2.43	0.21	6.10
Spokane NWP	14.61	10.21	0.89	25.71	14.72	10.31	0.89	25.93
<b>WA/ID Sub-Total</b>	<b>42.92</b>	<b>30.03</b>	<b>2.61</b>	<b>75.56</b>	<b>43.26</b>	<b>30.33</b>	<b>2.62</b>	<b>76.22</b>
<b>Low Case Total</b>	<b>59.99</b>	<b>40.96</b>	<b>2.87</b>	<b>103.82</b>	<b>60.52</b>	<b>41.31</b>	<b>2.88</b>	<b>104.71</b>

**Appendix 2.4 - B**  
**Annual Avg. Demand (MDth/d)**  
 By Class (Net of DSM Savings)

Area	2021/2022				2022/2023			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	3.08	1.87	0.00	4.96	3.14	1.89	0.00	5.04
La Grande	1.65	0.95	0.16	2.76	1.67	0.96	0.16	2.79
Medford GTN	9.09	4.89	-	13.99	9.28	4.96	-	14.24
Medford NWP	4.08	2.20	-	6.29	4.17	2.23	-	6.40
Roseburg	3.66	2.46	0.04	6.17	3.77	2.50	0.04	6.31
<b>OR Sub-Total</b>	<b>21.57</b>	<b>12.38</b>	<b>0.21</b>	<b>34.16</b>	<b>22.04</b>	<b>12.53</b>	<b>0.21</b>	<b>34.77</b>
Spokane Both	30.85	21.21	1.64	53.70	31.51	21.65	1.66	54.82
Spokane GTN	4.26	2.93	0.23	7.41	4.35	2.99	0.23	7.57
Spokane NWP	18.11	12.44	0.96	31.51	18.50	12.69	0.97	32.16
<b>WA/ID Sub-Total</b>	<b>53.22</b>	<b>36.58</b>	<b>2.83</b>	<b>92.63</b>	<b>54.36</b>	<b>37.33</b>	<b>2.86</b>	<b>94.55</b>
<b>Expected Case Total</b>	<b>74.79</b>	<b>48.96</b>	<b>3.04</b>	<b>126.78</b>	<b>76.40</b>	<b>49.86</b>	<b>3.06</b>	<b>129.33</b>
<b>High Case</b>								
Klam Falls	3.56	2.05	0.01	5.62	3.65	2.08	0.01	5.73
La Grande	1.82	1.00	0.42	3.25	1.85	1.01	0.42	3.28
Medford GTN	10.65	5.38	-	16.03	10.92	5.46	-	16.38
Medford NWP	4.79	2.42	-	7.20	4.91	2.46	-	7.36
Roseburg	4.45	2.78	0.04	7.27	4.61	2.83	0.04	7.48
<b>OR Sub-Total</b>	<b>25.27</b>	<b>13.63</b>	<b>0.47</b>	<b>39.37</b>	<b>25.93</b>	<b>13.84</b>	<b>0.47</b>	<b>40.24</b>
Spokane Both	36.16	24.59	1.95	62.71	37.12	25.21	1.98	64.31
Spokane GTN	4.99	3.39	0.27	8.66	5.13	3.48	0.27	8.88
Spokane NWP	21.22	14.42	1.15	36.79	21.79	14.78	1.16	37.73
<b>WA/ID Sub-Total</b>	<b>62.38</b>	<b>42.40</b>	<b>3.37</b>	<b>108.15</b>	<b>64.04</b>	<b>43.47</b>	<b>3.41</b>	<b>110.92</b>
<b>High Case Total</b>	<b>87.65</b>	<b>56.03</b>	<b>3.84</b>	<b>147.52</b>	<b>89.97</b>	<b>57.31</b>	<b>3.88</b>	<b>151.15</b>
<b>Low Case</b>								
Klam Falls	2.53	1.65	0.01	4.19	2.55	1.66	0.01	4.22
La Grande	1.44	0.90	0.22	2.56	1.44	0.90	0.22	2.56
Medford GTN	7.37	4.34	-	11.71	7.44	4.37	-	11.81
Medford NWP	3.31	1.95	-	5.26	3.34	1.96	-	5.31
Roseburg	2.83	2.18	0.04	5.05	2.88	2.19	0.04	5.11
<b>OR Sub-Total</b>	<b>17.47</b>	<b>11.04</b>	<b>0.26</b>	<b>28.77</b>	<b>17.65</b>	<b>11.09</b>	<b>0.26</b>	<b>29.01</b>
Spokane Both	<b>25.32</b>	<b>17.80</b>	<b>1.53</b>	<b>44.65</b>	<b>25.55</b>	<b>17.98</b>	<b>1.53</b>	<b>45.06</b>
Spokane GTN	3.50	2.46	0.21	6.16	3.53	2.48	0.21	6.22
Spokane NWP	14.87	10.44	0.89	26.20	15.00	10.54	0.90	26.44
<b>WA/ID Sub-Total</b>	<b>43.69</b>	<b>30.69</b>	<b>2.63</b>	<b>77.01</b>	<b>44.09</b>	<b>31.00</b>	<b>2.64</b>	<b>77.73</b>
<b>Low Case Total</b>	<b>61.17</b>	<b>41.73</b>	<b>2.89</b>	<b>105.78</b>	<b>61.74</b>	<b>42.09</b>	<b>2.91</b>	<b>106.74</b>

## Appendix 2.4 - B

### Annual Avg. Demand (MDth/d)

By Class (Net of DSM Savings)

Area	2023/2024				2024/2025			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	3.20	1.92	0.00	5.13	3.26	1.94	0.00	5.20
La Grande	1.69	0.96	0.16	2.81	1.70	0.97	0.16	2.83
Medford GTN	9.50	5.03	-	14.53	9.65	5.08	-	14.74
Medford NWP	4.27	2.26	-	6.53	4.34	2.29	-	6.62
Roseburg	3.89	2.54	0.04	6.47	4.00	2.57	0.04	6.61
<b>OR Sub-Total</b>	<b>22.55</b>	<b>12.71</b>	<b>0.20</b>	<b>35.46</b>	<b>22.95</b>	<b>12.85</b>	<b>0.21</b>	<b>36.00</b>
Spokane Both	32.24	22.13	1.67	56.04	32.85	22.54	1.68	57.07
Spokane GTN	4.45	3.05	0.23	7.74	4.54	3.11	0.23	7.88
Spokane NWP	18.93	12.98	0.98	32.88	19.28	13.21	0.98	33.48
<b>WA/ID Sub-Total</b>	<b>55.62</b>	<b>38.16</b>	<b>2.87</b>	<b>96.66</b>	<b>56.68</b>	<b>38.86</b>	<b>2.90</b>	<b>98.43</b>
<b>Expected Case Total</b>	<b>78.17</b>	<b>50.87</b>	<b>3.08</b>	<b>132.12</b>	<b>79.62</b>	<b>51.71</b>	<b>3.10</b>	<b>134.44</b>
<b>High Case</b>								
Klam Falls	3.74	2.11	0.01	5.85	3.81	2.15	0.01	5.96
La Grande	1.87	1.01	0.42	3.30	1.89	1.02	0.42	3.33
Medford GTN	11.22	5.56	-	16.78	11.44	5.64	-	17.07
Medford NWP	5.04	2.50	-	7.54	5.14	2.53	-	7.67
Roseburg	4.78	2.89	0.04	7.71	4.93	2.94	0.04	7.91
<b>OR Sub-Total</b>	<b>26.64</b>	<b>14.07</b>	<b>0.47</b>	<b>41.18</b>	<b>27.20</b>	<b>14.27</b>	<b>0.47</b>	<b>41.94</b>
Spokane Both	38.20	25.88	1.99	66.07	39.09	26.45	2.01	67.56
Spokane GTN	5.27	3.57	0.27	9.12	5.40	3.65	0.28	9.32
Spokane NWP	22.42	15.17	1.17	38.76	22.94	15.51	1.18	39.63
<b>WA/ID Sub-Total</b>	<b>65.89</b>	<b>44.63</b>	<b>3.43</b>	<b>113.95</b>	<b>67.43</b>	<b>45.61</b>	<b>3.47</b>	<b>116.51</b>
<b>High Case Total</b>	<b>92.53</b>	<b>58.70</b>	<b>3.90</b>	<b>155.14</b>	<b>94.63</b>	<b>59.88</b>	<b>3.94</b>	<b>158.45</b>
<b>Low Case</b>								
Klam Falls	2.57	1.67	0.01	4.25	2.59	1.68	0.01	4.27
La Grande	1.45	0.90	0.21	2.57	1.45	0.91	0.22	2.57
Medford GTN	7.54	4.40	-	11.94	7.59	4.42	-	12.00
Medford NWP	<b>3.39</b>	<b>1.98</b>	-	<b>5.37</b>	<b>3.41</b>	<b>1.99</b>	-	<b>5.40</b>
Roseburg	<b>2.93</b>	<b>2.21</b>	<b>0.04</b>	<b>5.18</b>	<b>2.97</b>	<b>2.23</b>	<b>0.04</b>	<b>5.24</b>
<b>OR Sub-Total</b>	<b>17.88</b>	<b>11.17</b>	<b>0.26</b>	<b>29.31</b>	<b>18.01</b>	<b>11.22</b>	<b>0.26</b>	<b>29.49</b>
Spokane Both	25.82	18.20	1.54	45.56	25.99	18.35	1.54	45.89
Spokane GTN	3.57	2.51	0.21	6.29	3.59	2.53	0.21	6.34
Spokane NWP	15.16	10.67	0.90	26.73	15.26	10.76	0.90	26.93
<b>WA/ID Sub-Total</b>	<b>44.55</b>	<b>31.38</b>	<b>2.65</b>	<b>78.58</b>	<b>44.85</b>	<b>31.64</b>	<b>2.66</b>	<b>79.15</b>
<b>Low Case Total</b>	<b>62.43</b>	<b>42.55</b>	<b>2.91</b>	<b>107.89</b>	<b>62.85</b>	<b>42.86</b>	<b>2.92</b>	<b>108.64</b>

**Appendix 2.4 - B**  
**Annual Avg. Demand (MDth/d)**  
 By Class (Net of DSM Savings)

Area	2025/2026				2026/2027			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	3.32	1.97	0.00	5.29	3.38	2.00	0.00	5.38
La Grande	1.72	0.97	0.16	2.85	1.73	0.97	0.16	2.87
Medford GTN	9.84	5.15	-	14.98	10.01	5.21	-	15.22
Medford NWP	4.42	2.32	-	6.73	4.50	2.34	-	6.84
Roseburg	4.11	2.61	0.04	6.77	4.23	2.65	0.04	6.92
<b>OR Sub-Total</b>	<b>23.40</b>	<b>13.01</b>	<b>0.21</b>	<b>36.62</b>	<b>23.85</b>	<b>13.18</b>	<b>0.21</b>	<b>37.23</b>
Spokane Both	33.52	22.99	1.69	58.20	34.17	23.44	1.71	59.31
Spokane GTN	4.63	3.17	0.23	8.03	4.72	3.23	0.24	8.19
Spokane NWP	19.67	13.48	0.99	34.14	20.05	13.74	1.00	34.80
<b>WA/ID Sub-Total</b>	<b>57.82</b>	<b>39.64</b>	<b>2.92</b>	<b>100.37</b>	<b>58.94</b>	<b>40.41</b>	<b>2.94</b>	<b>102.29</b>
<b>Expected Case Total</b>	<b>81.22</b>	<b>52.65</b>	<b>3.12</b>	<b>136.99</b>	<b>82.79</b>	<b>53.59</b>	<b>3.15</b>	<b>139.52</b>
<b>High Case</b>								
Klam Falls	3.90	2.18	0.01	6.09	3.99	2.22	0.01	6.21
La Grande	1.91	1.02	0.42	3.35	1.93	1.03	0.42	3.38
Medford GTN	11.71	5.73	-	17.43	11.96	5.82	-	17.78
Medford NWP	5.26	2.58	-	7.83	5.37	2.62	-	7.99
Roseburg	5.10	3.00	0.04	8.13	5.26	3.05	0.04	8.35
<b>OR Sub-Total</b>	<b>27.87</b>	<b>14.50</b>	<b>0.47</b>	<b>42.84</b>	<b>28.51</b>	<b>14.74</b>	<b>0.47</b>	<b>43.71</b>
Spokane Both	40.12	27.11	2.03	69.25	41.09	27.75	2.06	70.90
Spokane GTN	5.54	3.74	0.28	9.56	5.67	3.83	0.28	9.78
Spokane NWP	23.54	15.89	1.19	40.62	24.11	16.27	1.20	41.59
<b>WA/ID Sub-Total</b>	<b>69.20</b>	<b>46.74</b>	<b>3.50</b>	<b>119.43</b>	<b>70.88</b>	<b>47.85</b>	<b>3.54</b>	<b>122.27</b>
<b>High Case Total</b>	<b>97.07</b>	<b>61.24</b>	<b>3.97</b>	<b>162.28</b>	<b>99.39</b>	<b>62.58</b>	<b>4.01</b>	<b>165.98</b>
<b>Low Case</b>								
Klam Falls	2.61	1.69	0.01	4.31	2.63	1.70	0.01	4.34
La Grande	1.45	0.91	0.22	2.58	1.46	0.91	0.22	2.58
Medford GTN	7.66	4.44	-	12.10	7.73	4.47	-	12.19
Medford NWP	3.44	2.00	-	5.44	3.47	2.01	-	5.48
Roseburg	3.02	2.24	0.04	5.30	3.07	2.26	0.04	5.37
<b>OR Sub-Total</b>	<b>18.18</b>	<b>11.28</b>	<b>0.26</b>	<b>29.72</b>	<b>18.36</b>	<b>11.34</b>	<b>0.26</b>	<b>29.96</b>
Spokane Both	26.22	18.54	1.55	46.31	26.44	18.74	1.55	46.73
Spokane GTN	3.62	2.56	0.21	6.39	3.65	2.58	0.21	6.45
Spokane NWP	15.39	10.87	0.91	27.17	15.53	10.99	0.91	27.42
<b>WA/ID Sub-Total</b>	<b>45.23</b>	<b>31.97</b>	<b>2.67</b>	<b>79.87</b>	<b>45.62</b>	<b>32.31</b>	<b>2.68</b>	<b>80.61</b>
<b>Low Case Total</b>	<b>63.42</b>	<b>43.25</b>	<b>2.93</b>	<b>109.60</b>	<b>63.98</b>	<b>43.65</b>	<b>2.94</b>	<b>110.57</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area Expected Case	2007/2008				2008/2009			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
	Klam Falls	819.10	574.41	1.60	1,395.11	833.83	580.85	1.59
La Grande	498.01	332.29	58.14	888.45	503.05	332.31	58.09	893.45
Medford GTN	2,295.64	1,513.18	-	3,808.81	2,342.47	1,528.87	-	3,871.34
Medford NWP	1,031.37	679.86	-	1,711.24	1,052.41	686.95	-	1,739.36
Rosburg	809.71	725.26	15.28	1,550.25	828.25	733.18	15.23	1,576.66
<b>OR Sub-Total</b>	<b>5,453.83</b>	<b>3,825.01</b>	<b>75.02</b>	<b>9,353.86</b>	<b>5,560.02</b>	<b>3,862.16</b>	<b>74.91</b>	<b>9,497.08</b>
<b>Spokane Both</b>	<b>8,648.11</b>	<b>5,668.88</b>	<b>501.97</b>	<b>14,818.96</b>	<b>8,825.15</b>	<b>5,763.99</b>	<b>509.20</b>	<b>15,098.34</b>
Spokane GTN	1,193.09	781.91	69.24	2,044.24	1,217.76	795.03	70.23	2,083.02
Spokane NWP	5,070.64	3,323.14	294.26	8,688.03	5,175.46	3,378.89	298.50	8,852.85
<b>WA/ID Sub-Total</b>	<b>14,911.84</b>	<b>9,773.93</b>	<b>865.46</b>	<b>25,551.24</b>	<b>15,218.37</b>	<b>9,937.91</b>	<b>877.94</b>	<b>26,034.21</b>
<b>Base Case Total</b>	<b>20,365.67</b>	<b>13,598.94</b>	<b>940.48</b>	<b>34,905.10</b>	<b>20,778.38</b>	<b>13,800.06</b>	<b>952.84</b>	<b>35,531.29</b>
<b>High Case</b>								
Klam Falls	821.92	575.58	2.16	1,399.66	834.43	579.98	2.15	1,416.56
La Grande	498.07	337.83	153.91	989.80	498.95	334.13	153.79	986.87
Medford GTN	2,309.08	1,525.04	-	3,834.13	2,353.66	1,535.94	-	3,889.60
Medford NWP	1,037.41	685.20	-	1,722.61	1,057.44	690.12	-	1,747.57
Rosburg	816.43	740.28	15.28	1,571.99	835.52	746.40	15.16	1,597.08
<b>OR Sub-Total</b>	<b>5,482.91</b>	<b>3,863.93</b>	<b>171.34</b>	<b>9,518.19</b>	<b>5,580.00</b>	<b>3,886.57</b>	<b>171.10</b>	<b>9,637.67</b>
<b>Spokane Both</b>	<b>8,793.36</b>	<b>5,773.17</b>	<b>555.72</b>	<b>15,122.25</b>	<b>8,966.99</b>	<b>5,853.20</b>	<b>566.09</b>	<b>15,386.28</b>
Spokane GTN	1,213.13	796.30	76.65	2,086.08	1,237.32	807.34	78.08	2,122.74
Spokane NWP	5,155.78	3,384.27	325.77	8,865.82	5,258.61	3,431.19	331.85	9,021.64
<b>WA/ID Sub-Total</b>	<b>15,162.27</b>	<b>9,953.75</b>	<b>958.13</b>	<b>26,074.15</b>	<b>15,462.92</b>	<b>10,091.72</b>	<b>976.02</b>	<b>26,530.66</b>
<b>High Case Total</b>	<b>20,645.18</b>	<b>13,817.68</b>	<b>1,129.48</b>	<b>35,592.34</b>	<b>21,042.92</b>	<b>13,978.29</b>	<b>1,147.12</b>	<b>36,168.33</b>
<b>Low Case</b>								
Klam Falls	807.83	567.51	1.95	1,377.29	788.71	556.05	1.94	1,346.70
La Grande	493.33	332.21	78.66	904.21	479.57	322.53	78.55	880.65
Medford GTN	2,268.04	1,497.93	-	3,765.97	2,222.51	1,466.64	-	3,689.15
Medford NWP	1,018.97	673.02	-	1,691.99	998.52	658.99	-	1,657.51
Rosburg	800.02	729.47	15.28	1,544.76	786.11	715.23	15.09	1,516.42
<b>OR Sub-Total</b>	<b>5,388.19</b>	<b>3,800.14</b>	<b>95.89</b>	<b>9,284.21</b>	<b>5,275.41</b>	<b>3,719.44</b>	<b>95.58</b>	<b>9,090.43</b>
<b>Spokane Both</b>	<b>8,552.62</b>	<b>5,619.89</b>	<b>509.29</b>	<b>14,681.80</b>	<b>8,368.53</b>	<b>5,508.71</b>	<b>507.44</b>	<b>14,384.68</b>
Spokane GTN	1,179.92	775.16	70.25	2,025.32	1,154.77	759.82	69.99	1,984.59
Spokane NWP	5,014.66	3,294.42	298.55	8,607.63	4,907.78	3,229.24	297.47	8,434.49
<b>WA/ID Sub-Total</b>	<b>14,747.19</b>	<b>9,689.47</b>	<b>878.09</b>	<b>25,314.75</b>	<b>14,431.09</b>	<b>9,497.77</b>	<b>874.90</b>	<b>24,803.75</b>
<b>Low Case Total</b>	<b>20,135.38</b>	<b>13,489.61</b>	<b>973.98</b>	<b>34,598.97</b>	<b>19,706.50</b>	<b>13,217.21</b>	<b>970.48</b>	<b>33,894.19</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area	2009/2010				2010/2011			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	855.13	588.71	1.59	1,445.43	880.99	595.00	1.59	1,477.59
La Grande	509.72	333.23	58.09	901.04	516.40	333.83	58.09	908.31
Medford GTN	2,411.29	1,548.49	-	3,959.78	2,482.40	1,565.43	-	4,047.83
Medford NWP	1,083.33	695.79	-	1,779.13	1,115.28	703.44	-	1,818.72
Rosburg	856.40	745.63	15.23	1,617.26	889.72	756.01	15.23	1,660.96
<b>OR Sub-Total</b>	<b>5,715.89</b>	<b>3,911.85</b>	<b>74.91</b>	<b>9,702.64</b>	<b>5,884.80</b>	<b>3,953.71</b>	<b>74.91</b>	<b>9,913.41</b>
<b>Spokane Both</b>	<b>9,051.04</b>	<b>5,895.55</b>	<b>520.33</b>	<b>15,466.92</b>	<b>9,279.48</b>	<b>6,035.43</b>	<b>532.28</b>	<b>15,847.20</b>
Spokane GTN	1,249.16	813.18	71.77	2,134.11	1,280.91	832.47	73.42	2,186.81
Spokane NWP	5,308.93	3,456.01	305.02	9,069.96	5,443.89	3,538.01	312.03	9,293.93
<b>WA/ID Sub-Total</b>	<b>15,609.13</b>	<b>10,164.75</b>	<b>897.11</b>	<b>26,670.99</b>	<b>16,004.28</b>	<b>10,405.92</b>	<b>917.73</b>	<b>27,327.93</b>
<b>Base Case Total</b>	<b>21,325.02</b>	<b>14,076.60</b>	<b>972.02</b>	<b>36,373.63</b>	<b>21,889.07</b>	<b>14,359.63</b>	<b>992.64</b>	<b>37,241.34</b>
<b>High Case</b>								
Klam Falls	878.71	598.71	2.15	1,479.57	923.80	611.02	2.15	1,536.97
La Grande	516.50	340.07	153.79	1,010.37	530.02	343.45	153.79	1,027.26
Medford GTN	2,488.80	1,583.63	-	4,072.43	2,611.86	1,618.75	-	4,230.61
Medford NWP	1,118.16	711.58	-	1,829.74	1,173.44	727.39	-	1,900.84
Rosburg	888.46	773.84	15.22	1,677.53	944.20	794.24	15.22	1,753.69
<b>OR Sub-Total</b>	<b>5,890.63</b>	<b>4,007.84</b>	<b>171.17</b>	<b>10,069.64</b>	<b>6,183.31</b>	<b>4,094.86</b>	<b>171.20</b>	<b>10,449.37</b>
<b>Spokane Both</b>	<b>9,440.50</b>	<b>6,124.69</b>	<b>585.60</b>	<b>16,150.79</b>	<b>9,861.85</b>	<b>6,372.11</b>	<b>606.17</b>	<b>16,840.13</b>
Spokane GTN	1,302.88	844.78	80.77	2,228.43	1,361.24	878.91	83.61	2,323.76
Spokane NWP	5,537.23	3,590.34	343.28	9,470.85	5,785.28	3,735.38	355.34	9,875.99
<b>WA/ID Sub-Total</b>	<b>16,280.61</b>	<b>10,559.81</b>	<b>1,009.65</b>	<b>27,850.07</b>	<b>17,008.37</b>	<b>10,986.40</b>	<b>1,045.12</b>	<b>29,039.88</b>
<b>High Case Total</b>	<b>22,171.24</b>	<b>14,567.65</b>	<b>1,180.82</b>	<b>37,919.71</b>	<b>23,191.68</b>	<b>15,081.26</b>	<b>1,216.31</b>	<b>39,489.25</b>
<b>Low Case</b>								
Klam Falls	800.93	560.91	1.94	1,363.77	816.47	565.46	1.94	1,383.86
La Grande	483.98	323.73	78.55	886.26	489.31	324.93	78.55	892.79
Medford GTN	2,261.65	1,478.58	-	3,740.23	2,305.16	1,490.62	-	3,795.78
Medford NWP	1,016.10	664.39	-	1,680.49	1,035.65	669.82	-	1,705.48
Rosburg	801.58	722.48	15.11	1,539.17	820.83	729.42	15.13	1,565.38
<b>OR Sub-Total</b>	<b>5,364.24</b>	<b>3,750.09</b>	<b>95.60</b>	<b>9,209.93</b>	<b>5,467.41</b>	<b>3,780.25</b>	<b>95.62</b>	<b>9,343.28</b>
<b>Spokane Both</b>	<b>8,492.49</b>	<b>5,589.13</b>	<b>514.02</b>	<b>14,595.64</b>	<b>8,623.80</b>	<b>5,680.51</b>	<b>521.81</b>	<b>14,826.12</b>
Spokane GTN	1,172.12	770.91	70.90	2,013.93	1,190.48	783.52	71.97	2,045.97
Spokane NWP	4,981.50	3,276.39	301.32	8,559.21	5,059.52	3,329.95	305.89	8,695.37
<b>WA/ID Sub-Total</b>	<b>14,646.10</b>	<b>9,636.44</b>	<b>886.23</b>	<b>25,168.78</b>	<b>14,873.79</b>	<b>9,793.98</b>	<b>899.68</b>	<b>25,567.45</b>
<b>Low Case Total</b>	<b>20,010.35</b>	<b>13,386.53</b>	<b>981.83</b>	<b>34,378.70</b>	<b>20,341.21</b>	<b>13,574.23</b>	<b>995.30</b>	<b>34,910.73</b>



**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area Expected Case	2011/2012				2012/2013			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
Klam Falls	909.66	602.39	1.60	1,513.65	928.26	605.75	1.59	1,535.60
La Grande	525.09	335.59	58.14	918.82	531.27	335.13	58.09	924.48
Medford GTN	2,576.91	1,589.31	-	4,166.22	2,641.76	1,597.23	-	4,238.98
Medford NWP	1,157.74	714.20	-	1,871.94	1,186.88	717.78	-	1,904.66
Rosburg	933.86	769.74	15.28	1,718.89	969.57	776.81	15.23	1,761.61
<b>OR Sub-Total</b>	<b>6,103.26</b>	<b>4,011.24</b>	<b>75.02</b>	<b>10,189.52</b>	<b>6,257.73</b>	<b>4,032.70</b>	<b>74.91</b>	<b>10,365.34</b>
<b>Spokane Both</b>	<b>9,539.17</b>	<b>6,215.68</b>	<b>541.39</b>	<b>16,296.24</b>	<b>9,645.37</b>	<b>6,340.65</b>	<b>545.48</b>	<b>16,531.51</b>
Spokane GTN	1,316.99	857.33	74.68	2,249.00	1,331.72	874.57	75.24	2,281.54
Spokane NWP	5,597.19	3,643.54	317.37	9,558.10	5,659.84	3,716.94	319.77	9,696.55
<b>WA/ID Sub-Total</b>	<b>16,453.34</b>	<b>10,716.55</b>	<b>933.44</b>	<b>28,103.33</b>	<b>16,636.94</b>	<b>10,932.16</b>	<b>940.49</b>	<b>28,509.59</b>
<b>Base Case Total</b>	<b>22,556.60</b>	<b>14,727.79</b>	<b>1,008.46</b>	<b>38,292.85</b>	<b>22,894.67</b>	<b>14,964.86</b>	<b>1,015.39</b>	<b>38,874.93</b>
<b>High Case</b>								
Klam Falls	971.90	625.67	2.16	1,599.73	1,005.25	633.85	2.15	1,641.25
La Grande	546.03	347.88	153.91	1,047.82	557.88	348.88	153.79	1,060.56
Medford GTN	2,762.34	1,659.76	-	4,422.10	2,875.47	1,678.47	-	4,553.95
Medford NWP	1,241.05	745.25	-	1,986.30	1,291.88	754.39	-	2,046.27
Rosburg	1,013.76	817.49	15.33	1,846.58	1,072.62	832.21	15.29	1,920.13
<b>OR Sub-Total</b>	<b>6,535.08</b>	<b>4,196.06</b>	<b>171.40</b>	<b>10,902.53</b>	<b>6,803.10</b>	<b>4,247.81</b>	<b>171.24</b>	<b>11,222.15</b>
<b>Spokane Both</b>	<b>10,171.28</b>	<b>6,665.50</b>	<b>620.56</b>	<b>17,457.34</b>	<b>10,452.28</b>	<b>6,886.45</b>	<b>628.26</b>	<b>17,966.99</b>
Spokane GTN	1,423.27	919.57	85.59	2,428.43	1,458.28	950.04	86.66	2,494.97
Spokane NWP	5,967.21	3,907.47	363.77	10,238.46	6,132.86	4,037.02	368.29	10,538.17
<b>WA/ID Sub-Total</b>	<b>17,561.76</b>	<b>11,492.54</b>	<b>1,069.93</b>	<b>30,124.22</b>	<b>18,043.41</b>	<b>11,873.50</b>	<b>1,083.21</b>	<b>31,000.13</b>
<b>High Case Total</b>	<b>24,096.83</b>	<b>15,688.60</b>	<b>1,241.32</b>	<b>41,026.75</b>	<b>24,846.52</b>	<b>16,121.31</b>	<b>1,254.45</b>	<b>42,222.28</b>
<b>Low Case</b>								
Klam Falls	830.90	569.76	1.95	1,402.61	837.12	569.86	1.94	1,408.91
La Grande	493.81	325.88	78.66	898.36	495.56	324.76	78.55	898.87
Medford GTN	2,355.42	1,503.86	-	3,859.28	2,377.45	1,502.20	-	3,879.66
Medford NWP	1,058.23	675.81	-	1,734.04	1,068.91	675.15	-	1,744.06
Rosburg	843.67	736.89	15.18	1,595.75	858.64	738.02	15.13	1,611.80
<b>OR Sub-Total</b>	<b>5,582.04</b>	<b>3,812.20</b>	<b>95.79</b>	<b>9,490.03</b>	<b>5,637.69</b>	<b>3,810.00</b>	<b>95.62</b>	<b>9,543.30</b>
<b>Spokane Both</b>	<b>8,705.29</b>	<b>5,779.86</b>	<b>526.84</b>	<b>15,011.99</b>	<b>8,679.87</b>	<b>5,826.71</b>	<b>528.17</b>	<b>15,034.75</b>
Spokane GTN	1,201.84	797.22	72.67	2,071.73	1,198.55	803.65	72.85	2,075.06
Spokane NWP	5,107.83	3,388.20	308.84	8,804.87	5,093.85	3,415.66	309.62	8,819.13
<b>WA/ID Sub-Total</b>	<b>15,014.96</b>	<b>9,965.29</b>	<b>908.35</b>	<b>25,888.59</b>	<b>14,972.27</b>	<b>10,046.02</b>	<b>910.64</b>	<b>25,928.93</b>
<b>Low Case Total</b>	<b>20,597.00</b>	<b>13,777.49</b>	<b>1,004.14</b>	<b>35,378.62</b>	<b>20,609.96</b>	<b>13,856.02</b>	<b>1,006.26</b>	<b>35,472.23</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area Expected Case	2013/2014				2014/2015			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
	Klam Falls	950.09	611.88	1.59	1,563.56	971.92	619.30	1.59
La Grande	538.24	335.83	58.09	932.15	546.86	336.72	58.09	941.66
Medford GTN	2,715.47	1,610.56	-	4,326.03	2,791.34	1,628.74	-	4,420.07
Medford NWP	1,219.99	723.93	-	1,943.92	1,254.08	732.14	-	1,986.22
Rosburg	1,007.64	786.98	15.23	1,809.85	1,047.29	799.94	15.23	1,862.46
<b>OR Sub-Total</b>	<b>6,431.43</b>	<b>4,069.17</b>	<b>74.91</b>	<b>10,575.51</b>	<b>6,611.48</b>	<b>4,116.84</b>	<b>74.91</b>	<b>10,803.23</b>
<b>Spokane Both</b>	<b>9,825.79</b>	<b>6,495.56</b>	<b>553.03</b>	<b>16,874.38</b>	<b>9,862.20</b>	<b>6,648.76</b>	<b>561.00</b>	<b>17,071.96</b>
Spokane GTN	1,348.59	895.94	76.28	2,320.80	1,363.70	917.25	77.38	2,358.33
Spokane NWP	5,728.47	3,807.75	324.19	9,860.41	5,788.83	3,897.73	328.86	10,015.42
<b>WA/ID Sub-Total</b>	<b>16,902.84</b>	<b>11,199.25</b>	<b>953.50</b>	<b>29,055.59</b>	<b>17,014.74</b>	<b>11,463.74</b>	<b>967.24</b>	<b>29,445.71</b>
<b>Base Case Total</b>	<b>23,334.27</b>	<b>15,268.42</b>	<b>1,028.40</b>	<b>39,631.10</b>	<b>23,626.22</b>	<b>15,580.58</b>	<b>1,042.15</b>	<b>40,248.94</b>
<b>High Case</b>								
Klam Falls	1,042.14	645.18	2.15	1,689.46	1,076.09	656.93	2.15	1,735.17
La Grande	571.36	351.13	153.79	1,076.29	584.85	352.88	153.79	1,091.53
Medford GTN	2,997.84	1,708.19	-	4,706.03	3,115.03	1,737.33	-	4,852.36
Medford NWP	1,346.86	767.79	-	2,114.64	1,399.51	780.93	-	2,180.44
Rosburg	1,134.62	851.58	15.30	2,001.51	1,194.72	872.24	15.30	2,082.26
<b>OR Sub-Total</b>	<b>7,092.81</b>	<b>4,323.88</b>	<b>171.25</b>	<b>11,587.94</b>	<b>7,370.20</b>	<b>4,400.31</b>	<b>171.25</b>	<b>11,941.75</b>
<b>Spokane Both</b>	<b>10,762.81</b>	<b>7,140.88</b>	<b>641.34</b>	<b>18,545.03</b>	<b>11,037.78</b>	<b>7,376.36</b>	<b>653.74</b>	<b>19,067.88</b>
Spokane GTN	1,503.76	985.16	88.46	2,577.37	1,533.58	1,017.65	90.17	2,641.40
Spokane NWP	6,315.84	4,186.19	375.96	10,877.98	6,477.97	4,324.25	383.23	11,185.45
<b>WA/ID Sub-Total</b>	<b>18,582.41</b>	<b>12,312.22</b>	<b>1,105.76</b>	<b>32,000.39</b>	<b>19,049.33</b>	<b>12,718.26</b>	<b>1,127.14</b>	<b>32,894.73</b>
<b>High Case Total</b>	<b>25,675.22</b>	<b>16,636.10</b>	<b>1,277.00</b>	<b>43,588.33</b>	<b>26,419.53</b>	<b>17,118.57</b>	<b>1,298.39</b>	<b>44,836.48</b>
<b>Low Case</b>								
Klam Falls	846.56	572.14	1.94	1,420.63	856.00	575.10	1.94	1,433.04
La Grande	498.20	324.73	78.55	901.48	501.86	324.67	78.55	905.08
Medford GTN	2,412.25	1,507.82	-	3,920.07	2,447.26	1,514.81	-	3,962.06
Medford NWP	1,083.76	677.64	-	1,761.41	1,099.49	680.86	-	1,780.35
Rosburg	876.28	742.50	15.13	1,633.92	895.00	748.03	15.13	1,658.16
<b>OR Sub-Total</b>	<b>5,717.05</b>	<b>3,824.84</b>	<b>95.62</b>	<b>9,637.50</b>	<b>5,799.60</b>	<b>3,843.47</b>	<b>95.62</b>	<b>9,738.69</b>
<b>Spokane Both</b>	<b>8,689.03</b>	<b>5,900.46</b>	<b>532.52</b>	<b>15,122.00</b>	<b>8,725.53</b>	<b>5,973.80</b>	<b>536.48</b>	<b>15,235.81</b>
Spokane GTN	1,200.04	813.75	73.45	2,087.23	1,205.29	823.98	74.00	2,103.27
Spokane NWP	5,118.17	3,458.56	312.17	8,888.90	5,122.51	3,502.06	314.49	8,939.06
<b>WA/ID Sub-Total</b>	<b>15,007.23</b>	<b>10,172.76</b>	<b>918.14</b>	<b>26,098.13</b>	<b>15,053.33</b>	<b>10,299.83</b>	<b>924.97</b>	<b>26,278.14</b>
<b>Low Case Total</b>	<b>20,724.28</b>	<b>13,997.60</b>	<b>1,013.76</b>	<b>35,735.63</b>	<b>20,852.93</b>	<b>14,143.31</b>	<b>1,020.59</b>	<b>36,016.83</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area	2015/2016				2016/2017			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	998.05	631.98	1.60	1,631.63	1,016.07	639.74	1.59	1,657.41
La Grande	558.05	339.64	58.14	955.83	564.79	340.41	58.09	963.29
Medford GTN	2,885.20	1,657.50	-	4,542.70	2,947.56	1,674.17	-	4,621.74
Medford NWP	1,296.25	745.11	-	2,041.36	1,324.27	752.65	-	2,076.92
Rosburg	1,093.85	819.85	15.28	1,928.98	1,130.56	832.25	15.23	1,978.04
<b>OR Sub-Total</b>	<b>6,831.40</b>	<b>4,194.08</b>	<b>75.02</b>	<b>11,100.50</b>	<b>6,983.25</b>	<b>4,239.23</b>	<b>74.91</b>	<b>11,297.39</b>
<b>Spokane Both</b>	<b>10,070.40</b>	<b>6,836.08</b>	<b>570.96</b>	<b>17,477.44</b>	<b>10,191.07</b>	<b>6,957.97</b>	<b>573.80</b>	<b>17,722.83</b>
Spokane GTN	1,391.02	942.91	78.75	2,412.69	1,407.88	959.72	79.14	2,446.75
Spokane NWP	5,911.87	4,007.56	334.70	10,254.12	5,983.51	4,079.03	336.36	10,398.90
<b>WA/ID Sub-Total</b>	<b>17,373.29</b>	<b>11,786.54</b>	<b>984.42</b>	<b>30,144.25</b>	<b>17,582.45</b>	<b>11,996.72</b>	<b>989.31</b>	<b>30,568.48</b>
<b>Base Case Total</b>	<b>24,204.69</b>	<b>15,980.62</b>	<b>1,059.44</b>	<b>41,244.75</b>	<b>24,565.71</b>	<b>16,235.95</b>	<b>1,064.21</b>	<b>41,865.87</b>
<b>High Case</b>								
Klam Falls	1,115.50	675.32	2.16	1,792.98	1,143.38	686.93	2.15	1,832.46
La Grande	601.56	357.03	153.91	1,112.50	611.79	357.96	153.79	1,123.55
Medford GTN	3,253.38	1,779.93	-	5,033.31	3,349.46	1,805.91	-	5,155.37
Medford NWP	1,461.66	800.12	-	2,261.78	1,504.83	811.84	-	2,316.67
Rosburg	1,265.05	901.54	15.35	2,181.94	1,320.18	920.76	15.29	2,256.23
<b>OR Sub-Total</b>	<b>7,697.15</b>	<b>4,513.94</b>	<b>171.42</b>	<b>12,382.51</b>	<b>7,929.65</b>	<b>4,583.39</b>	<b>171.24</b>	<b>12,684.27</b>
<b>Spokane Both</b>	<b>11,374.24</b>	<b>7,653.64</b>	<b>668.83</b>	<b>19,696.71</b>	<b>11,588.07</b>	<b>7,839.88</b>	<b>673.69</b>	<b>20,101.64</b>
Spokane GTN	1,572.70	1,055.82	92.25	2,720.78	1,600.57	1,081.37	92.92	2,774.86
Spokane NWP	6,676.19	4,486.82	392.07	11,555.07	6,802.44	4,596.02	394.92	11,793.38
<b>WA/ID Sub-Total</b>	<b>19,623.13</b>	<b>13,196.28</b>	<b>1,153.15</b>	<b>33,972.56</b>	<b>19,991.08</b>	<b>13,517.26</b>	<b>1,161.53</b>	<b>34,669.88</b>
<b>High Case Total</b>	<b>27,320.28</b>	<b>17,710.22</b>	<b>1,324.57</b>	<b>46,355.07</b>	<b>27,920.73</b>	<b>18,100.65</b>	<b>1,332.77</b>	<b>47,354.15</b>
<b>Low Case</b>								
Klam Falls	869.17	582.29	1.95	1,453.40	875.13	585.10	1.94	1,462.17
La Grande	507.55	326.69	78.66	912.91	509.53	326.48	78.55	914.56
Medford GTN	2,497.00	1,530.23	-	4,027.23	2,519.46	1,534.79	-	4,054.25
Medford NWP	1,121.84	687.88	-	1,809.73	1,131.93	690.03	-	1,821.96
Rosburg	918.96	759.46	15.18	1,693.60	934.39	764.14	15.13	1,713.66
<b>OR Sub-Total</b>	<b>5,914.53</b>	<b>3,886.55</b>	<b>95.79</b>	<b>9,896.87</b>	<b>5,970.43</b>	<b>3,900.55</b>	<b>95.62</b>	<b>9,966.60</b>
<b>Spokane Both</b>	<b>8,813.28</b>	<b>6,076.77</b>	<b>542.33</b>	<b>15,432.38</b>	<b>8,822.85</b>	<b>6,121.93</b>	<b>542.97</b>	<b>15,487.75</b>
Spokane GTN	1,217.63	838.18	74.80	2,130.61	1,219.16	844.41	74.89	2,138.46
Spokane NWP	5,174.93	3,562.45	317.92	9,055.30	5,181.44	3,588.94	318.29	9,088.68
<b>WA/ID Sub-Total</b>	<b>15,205.84</b>	<b>10,477.40</b>	<b>935.05</b>	<b>26,618.29</b>	<b>15,223.45</b>	<b>10,555.28</b>	<b>936.15</b>	<b>26,714.88</b>
<b>Low Case Total</b>	<b>21,120.37</b>	<b>14,363.95</b>	<b>1,030.84</b>	<b>36,515.15</b>	<b>21,193.88</b>	<b>14,455.83</b>	<b>1,031.77</b>	<b>36,681.48</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area	2017/2018				2018/2019			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
<b>Expected Case</b>								
Klam Falls	1,038.13	648.88	1.59	1,688.60	1,059.46	657.70	1.59	1,718.75
La Grande	572.99	342.03	58.09	973.11	580.41	343.56	58.09	982.06
Medford GTN	3,023.38	1,697.47	-	4,720.85	3,098.48	1,720.03	-	4,818.51
Medford NWP	1,358.33	763.17	-	2,121.50	1,392.07	773.35	-	2,165.42
Rosburg	1,171.89	846.62	15.23	2,033.74	1,212.82	860.26	15.23	2,088.31
<b>OR Sub-Total</b>	<b>7,164.73</b>	<b>4,298.17</b>	<b>74.91</b>	<b>11,537.80</b>	<b>7,343.25</b>	<b>4,354.89</b>	<b>74.91</b>	<b>11,773.05</b>
<b>Spokane Both</b>	<b>10,387.89</b>	<b>7,111.67</b>	<b>579.35</b>	<b>18,078.91</b>	<b>10,590.60</b>	<b>7,265.06</b>	<b>586.90</b>	<b>18,442.56</b>
Spokane GTN	1,435.03	980.92	79.91	2,495.86	1,462.99	1,002.08	80.95	2,546.02
Spokane NWP	6,098.88	4,169.15	339.62	10,607.66	6,217.71	4,259.10	344.04	10,820.85
<b>WA/ID Sub-Total</b>	<b>17,921.80</b>	<b>12,261.75</b>	<b>998.88</b>	<b>31,182.43</b>	<b>18,271.30</b>	<b>12,526.24</b>	<b>1,011.90</b>	<b>31,809.43</b>
<b>Base Case Total</b>	<b>25,086.53</b>	<b>16,559.91</b>	<b>1,073.79</b>	<b>42,720.23</b>	<b>25,614.55</b>	<b>16,881.13</b>	<b>1,086.80</b>	<b>43,582.48</b>
<b>High Case</b>								
Klam Falls	1,173.43	699.01	2.15	1,874.59	1,205.30	711.81	2.15	1,919.25
La Grande	622.49	359.36	153.79	1,135.65	633.39	361.39	153.79	1,148.57
Medford GTN	3,430.20	1,830.06	-	5,260.26	3,568.26	1,869.38	-	5,437.64
Medford NWP	1,541.10	822.74	-	2,363.84	1,603.13	840.45	-	2,443.58
Rosburg	1,379.41	940.50	15.28	2,335.19	1,440.92	960.70	15.27	2,416.89
<b>OR Sub-Total</b>	<b>8,146.64</b>	<b>4,651.66</b>	<b>171.22</b>	<b>12,969.52</b>	<b>8,451.00</b>	<b>4,743.73</b>	<b>171.21</b>	<b>13,365.94</b>
<b>Spokane Both</b>	<b>11,867.77</b>	<b>8,052.40</b>	<b>682.13</b>	<b>20,602.30</b>	<b>12,180.76</b>	<b>8,280.14</b>	<b>693.74</b>	<b>21,154.64</b>
Spokane GTN	1,639.15	1,110.68	94.09	2,843.91	1,682.32	1,142.09	95.69	2,920.10
Spokane NWP	6,966.40	4,720.62	399.87	12,086.89	7,149.88	4,854.14	406.68	12,410.69
<b>WA/ID Sub-Total</b>	<b>20,473.32</b>	<b>13,883.69</b>	<b>1,176.09</b>	<b>35,533.10</b>	<b>21,012.95</b>	<b>14,276.37</b>	<b>1,196.11</b>	<b>36,485.43</b>
<b>High Case Total</b>	<b>28,619.96</b>	<b>18,535.36</b>	<b>1,347.30</b>	<b>48,502.62</b>	<b>29,463.95</b>	<b>19,020.10</b>	<b>1,367.32</b>	<b>49,851.37</b>
<b>Low Case</b>								
Klam Falls	884.69	589.65	1.94	1,476.28	893.88	594.04	1.94	1,489.85
La Grande	512.98	327.25	78.55	918.79	516.07	327.96	78.55	922.58
Medford GTN	2,554.43	1,546.24	-	4,100.67	2,589.07	1,557.32	-	4,146.39
Medford NWP	1,147.64	693.87	-	1,841.51	1,163.20	698.77	-	1,861.97
Rosburg	953.92	771.36	15.13	1,740.40	973.26	778.14	15.13	1,766.53
<b>OR Sub-Total</b>	<b>6,053.65</b>	<b>3,928.37</b>	<b>95.62</b>	<b>10,077.64</b>	<b>6,135.47</b>	<b>3,956.23</b>	<b>95.62</b>	<b>10,187.32</b>
<b>Spokane Both</b>	<b>8,899.07</b>	<b>6,195.58</b>	<b>546.36</b>	<b>15,641.01</b>	<b>8,978.17</b>	<b>6,269.02</b>	<b>550.35</b>	<b>15,797.54</b>
Spokane GTN	1,229.67	854.57	75.36	2,159.60	1,240.58	864.70	75.91	2,181.19
Spokane NWP	5,226.13	3,632.14	320.28	9,178.55	5,272.49	3,675.21	322.62	9,270.32
<b>WA/ID Sub-Total</b>	<b>15,354.87</b>	<b>10,682.29</b>	<b>942.01</b>	<b>26,979.16</b>	<b>15,491.25</b>	<b>10,808.93</b>	<b>948.88</b>	<b>27,249.05</b>
<b>Low Case Total</b>	<b>21,408.52</b>	<b>14,610.66</b>	<b>1,037.63</b>	<b>37,056.80</b>	<b>21,626.72</b>	<b>14,765.16</b>	<b>1,044.50</b>	<b>37,436.37</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area	2019/2020				2020/2021			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
	Expected Case							
Klam Falls	1,085.74	669.33	1.60	1,756.66	1,103.02	674.36	1.59	1,778.96
La Grande	590.19	346.17	58.14	994.51	595.73	346.53	58.09	1,000.35
Medford GTN	3,190.98	1,751.80	-	4,942.78	3,246.93	1,764.82	-	5,011.75
Medford NWP	1,433.63	787.68	-	2,221.30	1,458.76	793.57	-	2,252.33
Rosburg	1,260.39	878.10	15.28	2,153.77	1,295.48	886.18	15.23	2,196.89
<b>OR Sub-Total</b>	<b>7,560.93</b>	<b>4,433.08</b>	<b>75.02</b>	<b>12,069.03</b>	<b>7,699.92</b>	<b>4,465.45</b>	<b>74.91</b>	<b>12,240.28</b>
<b>Spokane Both</b>	<b>10,853.28</b>	<b>7,458.48</b>	<b>592.22</b>	<b>18,903.99</b>	<b>11,027.27</b>	<b>7,582.90</b>	<b>595.29</b>	<b>19,205.46</b>
Spokane GTN	1,499.23	1,028.76	81.69	2,609.67	1,523.21	1,045.92	82.11	2,651.25
Spokane NWP	6,371.74	4,372.50	347.17	11,091.41	6,473.69	4,445.46	348.96	11,268.11
<b>WA/ID Sub-Total</b>	<b>18,724.25</b>	<b>12,859.75</b>	<b>1,021.08</b>	<b>32,605.07</b>	<b>19,024.17</b>	<b>13,074.29</b>	<b>1,026.36</b>	<b>33,124.82</b>
<b>Base Case Total</b>	<b>26,285.18</b>	<b>17,292.83</b>	<b>1,096.10</b>	<b>44,674.10</b>	<b>26,724.09</b>	<b>17,539.74</b>	<b>1,101.27</b>	<b>45,365.11</b>
<b>High Case</b>								
Klam Falls	1,243.29	727.58	2.16	1,973.02	1,269.43	735.04	2.15	2,006.62
La Grande	646.87	364.49	153.91	1,165.27	655.23	364.79	153.79	1,173.82
Medford GTN	3,698.92	1,912.29	-	5,611.21	3,784.12	1,932.34	-	5,716.47
Medford NWP	1,661.83	859.78	-	2,521.61	1,700.11	868.83	-	2,568.95
Rosburg	1,509.68	985.53	15.31	2,510.52	1,562.36	997.87	15.25	2,575.48
<b>OR Sub-Total</b>	<b>8,760.58</b>	<b>4,849.67</b>	<b>171.38</b>	<b>13,781.64</b>	<b>8,971.25</b>	<b>4,898.88</b>	<b>171.20</b>	<b>14,041.33</b>
<b>Spokane Both</b>	<b>12,566.73</b>	<b>8,553.70</b>	<b>701.34</b>	<b>21,821.77</b>	<b>12,844.25</b>	<b>8,741.75</b>	<b>706.45</b>	<b>22,292.45</b>
Spokane GTN	1,735.57	1,179.83	96.74	3,012.13	1,773.83	1,205.76	97.44	3,077.04
Spokane NWP	7,376.18	5,014.53	411.13	12,801.84	7,538.82	5,124.79	414.13	13,077.73
<b>WA/ID Sub-Total</b>	<b>21,678.48</b>	<b>14,748.05</b>	<b>1,209.21</b>	<b>37,635.74</b>	<b>22,156.90</b>	<b>15,072.30</b>	<b>1,218.02</b>	<b>38,447.22</b>
<b>High Case Total</b>	<b>30,439.06</b>	<b>19,597.73</b>	<b>1,380.59</b>	<b>51,417.38</b>	<b>31,128.15</b>	<b>19,971.18</b>	<b>1,389.22</b>	<b>52,488.55</b>
<b>Low Case</b>								
Klam Falls	907.11	598.71	1.95	1,507.77	912.79	599.99	1.94	1,514.72
La Grande	521.06	329.68	78.66	929.41	522.50	329.31	78.55	930.36
Medford GTN	2,638.10	1,576.40	-	4,214.50	2,657.63	1,579.31	-	4,236.95
Medford NWP	1,185.23	707.26	-	1,892.49	1,194.01	708.50	-	1,902.51
Rosburg	997.71	787.37	15.18	1,800.26	1,012.41	789.84	15.13	1,817.38
<b>OR Sub-Total</b>	<b>6,249.21</b>	<b>3,999.42</b>	<b>95.79</b>	<b>10,344.42</b>	<b>6,299.34</b>	<b>4,006.96</b>	<b>95.62</b>	<b>10,401.92</b>
<b>Spokane Both</b>	<b>9,103.92</b>	<b>6,375.04</b>	<b>553.59</b>	<b>16,032.55</b>	<b>9,151.75</b>	<b>6,421.46</b>	<b>554.72</b>	<b>16,127.94</b>
Spokane GTN	1,257.94	879.32	76.36	2,213.61	1,264.52	885.72	76.51	2,226.76
Spokane NWP	5,346.26	3,737.38	324.52	9,408.16	5,374.25	3,764.62	325.18	9,464.05
<b>WA/ID Sub-Total</b>	<b>15,708.12</b>	<b>10,991.74</b>	<b>954.46</b>	<b>27,654.32</b>	<b>15,790.53</b>	<b>11,071.80</b>	<b>956.42</b>	<b>27,818.75</b>
<b>Low Case Total</b>	<b>21,957.33</b>	<b>14,991.16</b>	<b>1,050.25</b>	<b>37,998.74</b>	<b>22,089.86</b>	<b>15,078.76</b>	<b>1,052.04</b>	<b>38,220.67</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area Expected Case	2021/2022				2022/2023			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
	Klam Falls	1,124.98	682.38	1.59	1,808.95	1,146.57	690.83	1.59
La Grande	602.84	347.93	58.09	1,008.86	609.25	349.42	58.09	1,016.75
Medford GTN	3,318.22	1,786.37	-	5,104.58	3,388.30	1,808.71	-	5,197.01
Medford NWP	1,490.79	803.30	-	2,294.09	1,522.28	813.38	-	2,335.65
Rosburg	1,336.54	898.59	15.23	2,250.36	1,377.23	911.53	15.23	2,303.98
<b>OR Sub-Total</b>	<b>7,873.37</b>	<b>4,518.56</b>	<b>74.91</b>	<b>12,466.84</b>	<b>8,043.62</b>	<b>4,573.86</b>	<b>74.91</b>	<b>12,692.39</b>
<b>Spokane Both</b>	<b>11,259.63</b>	<b>7,742.90</b>	<b>599.70</b>	<b>19,602.23</b>	<b>11,501.64</b>	<b>7,902.69</b>	<b>605.25</b>	<b>20,009.58</b>
Spokane GTN	1,555.27	1,067.99	82.72	2,705.97	1,588.65	1,090.03	83.48	2,762.16
Spokane NWP	6,609.90	4,539.27	351.55	11,500.72	6,751.77	4,632.97	354.80	11,739.54
<b>WA/ID Sub-Total</b>	<b>19,424.80</b>	<b>13,350.16</b>	<b>1,033.96</b>	<b>33,808.93</b>	<b>19,842.06</b>	<b>13,625.68</b>	<b>1,043.54</b>	<b>34,511.28</b>
<b>Base Case Total</b>	<b>27,298.17</b>	<b>17,868.73</b>	<b>1,108.87</b>	<b>46,275.77</b>	<b>27,865.68</b>	<b>18,199.54</b>	<b>1,118.45</b>	<b>47,203.67</b>
<b>High Case</b>								
Klam Falls	1,301.15	746.43	2.15	2,049.73	1,332.13	757.92	2.15	2,092.20
La Grande	665.39	366.58	153.79	1,185.76	673.79	368.16	153.79	1,195.74
Medford GTN	3,888.08	1,963.14	-	5,851.22	3,986.87	1,993.50	-	5,980.36
Medford NWP	1,746.82	882.72	-	2,629.53	1,791.20	896.40	-	2,687.60
Rosburg	1,622.79	1,015.93	15.25	2,653.96	1,681.26	1,034.09	15.24	2,730.58
<b>OR Sub-Total</b>	<b>9,224.22</b>	<b>4,974.79</b>	<b>171.19</b>	<b>14,370.21</b>	<b>9,465.24</b>	<b>5,050.06</b>	<b>171.18</b>	<b>14,686.48</b>
<b>Spokane Both</b>	<b>13,199.09</b>	<b>8,975.75</b>	<b>713.26</b>	<b>22,888.09</b>	<b>13,550.13</b>	<b>9,202.34</b>	<b>721.83</b>	<b>23,474.30</b>
Spokane GTN	1,822.78	1,238.04	98.38	3,159.20	1,871.19	1,269.29	99.56	3,240.05
Spokane NWP	7,746.82	5,261.98	418.12	13,426.92	7,952.61	5,394.83	423.12	13,770.56
<b>WA/ID Sub-Total</b>	<b>22,768.69</b>	<b>15,475.77</b>	<b>1,229.76</b>	<b>39,474.21</b>	<b>23,373.93</b>	<b>15,866.47</b>	<b>1,244.51</b>	<b>40,484.91</b>
<b>High Case Total</b>	<b>31,992.91</b>	<b>20,450.56</b>	<b>1,400.95</b>	<b>53,844.42</b>	<b>32,839.17</b>	<b>20,916.52</b>	<b>1,415.70</b>	<b>55,171.39</b>
<b>Low Case</b>								
Klam Falls	922.23	603.66	1.94	1,527.83	929.81	606.91	1.94	1,538.65
La Grande	525.34	329.90	78.55	933.79	527.04	330.01	78.55	935.59
Medford GTN	2,689.76	1,585.48	-	4,275.24	2,717.01	1,593.97	-	4,310.98
Medford NWP	1,208.44	713.04	-	1,921.48	1,220.68	716.90	-	1,937.58
Rosburg	1,031.70	795.84	15.13	1,842.67	1,049.53	801.17	15.12	1,865.82
<b>OR Sub-Total</b>	<b>6,377.47</b>	<b>4,027.92</b>	<b>95.62</b>	<b>10,501.01</b>	<b>6,444.06</b>	<b>4,048.96</b>	<b>95.61</b>	<b>10,588.63</b>
<b>Spokane Both</b>	<b>9,243.05</b>	<b>6,496.94</b>	<b>556.80</b>	<b>16,296.78</b>	<b>9,326.24</b>	<b>6,562.78</b>	<b>559.67</b>	<b>16,448.69</b>
Spokane GTN	1,277.12	896.13	76.80	2,250.05	1,288.59	905.22	77.20	2,271.00
Spokane NWP	5,427.77	3,808.88	326.40	9,563.05	5,476.54	3,847.50	328.08	9,652.12
<b>WA/ID Sub-Total</b>	<b>15,947.93</b>	<b>11,201.96</b>	<b>959.99</b>	<b>28,109.89</b>	<b>16,091.37</b>	<b>11,315.49</b>	<b>964.95</b>	<b>28,371.81</b>
<b>Low Case Total</b>	<b>22,325.41</b>	<b>15,229.88</b>	<b>1,055.61</b>	<b>38,610.90</b>	<b>22,535.43</b>	<b>15,364.45</b>	<b>1,060.55</b>	<b>38,960.44</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area Expected Case	2023/2024				2024/2025			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
	Klam Falls	1,172.48	702.48	1.60	1,876.56	1,188.55	709.56	1.59
La Grande	617.31	352.05	58.14	1,027.51	621.31	352.49	58.09	1,031.88
Medford GTN	3,475.63	1,840.58	-	5,316.21	3,523.21	1,855.34	-	5,378.54
Medford NWP	1,561.51	827.74	-	2,389.25	1,582.89	834.40	-	2,417.29
Rosburg	1,425.15	928.97	15.28	2,369.39	1,459.33	939.15	15.23	2,413.71
<b>OR Sub-Total</b>	<b>8,252.08</b>	<b>4,651.82</b>	<b>75.02</b>	<b>12,978.92</b>	<b>8,375.29</b>	<b>4,690.94</b>	<b>74.91</b>	<b>13,141.13</b>
<b>Spokane Both</b>	<b>11,800.31</b>	<b>8,101.26</b>	<b>610.22</b>	<b>20,511.79</b>	<b>11,991.38</b>	<b>8,226.55</b>	<b>613.22</b>	<b>20,831.16</b>
Spokane GTN	1,629.85	1,117.42	84.17	2,831.44	1,656.20	1,134.70	84.58	2,875.48
Spokane NWP	6,926.90	4,749.39	357.71	12,034.00	7,038.86	4,822.86	359.48	12,221.19
<b>WA/ID Sub-Total</b>	<b>20,357.06</b>	<b>13,968.07</b>	<b>1,052.10</b>	<b>35,377.23</b>	<b>20,686.44</b>	<b>14,184.11</b>	<b>1,057.28</b>	<b>35,927.83</b>
<b>Base Case Total</b>	<b>28,609.14</b>	<b>18,619.89</b>	<b>1,127.12</b>	<b>48,356.16</b>	<b>29,061.73</b>	<b>18,875.05</b>	<b>1,132.19</b>	<b>49,068.96</b>
<b>High Case</b>								
Klam Falls	1,367.41	773.11	2.16	2,142.68	1,390.34	783.39	2.15	2,175.88
La Grande	684.18	370.88	153.91	1,208.97	689.41	371.37	153.79	1,214.57
Medford GTN	4,105.71	2,034.75	-	6,140.46	4,174.37	2,056.89	-	6,231.26
Medford NWP	1,844.59	914.97	-	2,759.56	1,875.44	924.96	-	2,800.40
Rosburg	1,748.75	1,057.46	15.28	2,821.49	1,798.24	1,072.65	15.22	2,886.11
<b>OR Sub-Total</b>	<b>9,750.64</b>	<b>5,151.18</b>	<b>171.34</b>	<b>15,073.16</b>	<b>9,927.80</b>	<b>5,209.26</b>	<b>171.16</b>	<b>15,308.21</b>
<b>Spokane Both</b>	<b>13,980.67</b>	<b>9,473.34</b>	<b>728.89</b>	<b>24,182.91</b>	<b>14,268.64</b>	<b>9,656.03</b>	<b>734.35</b>	<b>24,659.02</b>
Spokane GTN	1,930.59	1,306.67	100.47	3,337.73	1,970.30	1,331.87	101.15	3,403.32
Spokane NWP	8,205.04	5,553.72	426.99	14,185.75	8,373.80	5,660.83	429.89	14,464.53
<b>WA/ID Sub-Total</b>	<b>24,116.30</b>	<b>16,333.74</b>	<b>1,256.35</b>	<b>41,706.39</b>	<b>24,612.75</b>	<b>16,648.74</b>	<b>1,265.38</b>	<b>42,526.87</b>
<b>High Case Total</b>	<b>33,866.95</b>	<b>21,484.91</b>	<b>1,427.69</b>	<b>56,779.55</b>	<b>34,540.54</b>	<b>21,858.00</b>	<b>1,436.54</b>	<b>57,835.08</b>
<b>Low Case</b>								
Klam Falls	941.07	612.55	1.95	1,555.57	944.28	614.03	1.94	1,560.25
La Grande	530.19	331.16	78.66	940.02	529.82	330.46	78.55	938.83
Medford GTN	2,759.69	1,610.47	-	4,370.16	2,769.89	1,611.64	-	4,381.53
Medford NWP	1,239.86	724.36	-	1,964.21	1,244.44	724.92	-	1,969.36
Rosburg	1,072.23	810.12	15.16	1,897.51	1,084.72	812.49	15.10	1,912.31
<b>OR Sub-Total</b>	<b>6,543.04</b>	<b>4,088.67</b>	<b>95.77</b>	<b>10,727.48</b>	<b>6,573.14</b>	<b>4,093.54</b>	<b>95.59</b>	<b>10,762.28</b>
<b>Spokane Both</b>	<b>9,450.13</b>	<b>6,660.95</b>	<b>562.52</b>	<b>16,673.59</b>	<b>9,487.16</b>	<b>6,698.63</b>	<b>563.19</b>	<b>16,748.98</b>
Spokane GTN	1,305.69	918.76	77.59	2,302.03	1,310.79	923.95	77.68	2,312.42
Spokane NWP	5,549.20	3,905.07	329.75	9,784.03	5,570.87	3,927.18	330.15	9,828.20
<b>WA/ID Sub-Total</b>	<b>16,305.01</b>	<b>11,484.78</b>	<b>969.85</b>	<b>28,759.65</b>	<b>16,368.82</b>	<b>11,549.76</b>	<b>971.02</b>	<b>28,889.60</b>
<b>Low Case Total</b>	<b>22,848.05</b>	<b>15,573.45</b>	<b>1,065.62</b>	<b>39,487.13</b>	<b>22,941.96</b>	<b>15,643.30</b>	<b>1,066.61</b>	<b>39,651.88</b>

**Appendix 2.4 - C**  
**Annual Demand Total (MDth)**  
 By Class (Net of DSM Savings)

Area Expected Case	2025/2026				2026/2027			
	Residential	Commercial	Firm Industrial	Total	Residential	Commercial	Firm Industrial	Total
	Klam Falls	1,210.41	718.98	1.59	1,930.98	1,232.50	728.20	1.59
La Grande	626.56	354.02	58.09	1,038.67	632.22	355.56	58.09	1,045.87
Medford GTN	3,589.93	1,878.83	-	5,468.76	3,654.17	1,902.78	-	5,556.95
Medford NWP	1,612.87	845.00	-	2,457.86	1,641.73	855.77	-	2,497.49
Rosburg	1,501.43	953.19	15.23	2,469.84	1,543.45	966.85	15.23	2,525.53
<b>OR Sub-Total</b>	<b>8,541.19</b>	<b>4,750.01</b>	<b>74.91</b>	<b>13,366.11</b>	<b>8,704.06</b>	<b>4,809.16</b>	<b>74.91</b>	<b>13,588.13</b>
<b>Spokane Both</b>	<b>12,233.24</b>	<b>8,390.51</b>	<b>617.63</b>	<b>21,241.38</b>	<b>12,470.65</b>	<b>8,554.48</b>	<b>623.19</b>	<b>21,648.31</b>
Spokane GTN	1,689.55	1,157.32	85.19	2,932.06	1,722.30	1,179.93	85.96	2,988.19
Spokane NWP	7,180.64	4,919.00	362.06	12,461.69	7,319.81	5,015.14	365.32	12,700.26
<b>WA/ID Sub-Total</b>	<b>21,103.43</b>	<b>14,466.83</b>	<b>1,064.88</b>	<b>36,635.14</b>	<b>21,512.75</b>	<b>14,749.55</b>	<b>1,074.46</b>	<b>37,336.76</b>
<b>Base Case Total</b>	<b>29,644.61</b>	<b>19,216.84</b>	<b>1,139.79</b>	<b>50,001.24</b>	<b>30,216.81</b>	<b>19,558.71</b>	<b>1,149.36</b>	<b>50,924.89</b>
<b>High Case</b>								
Klam Falls	1,422.14	796.85	2.15	2,221.15	1,454.71	809.94	2.15	2,266.79
La Grande	697.21	373.29	153.79	1,224.30	705.00	375.34	153.79	1,234.13
Medford GTN	4,272.44	2,090.73	-	6,363.17	4,364.14	2,124.66	-	6,488.81
Medford NWP	1,919.50	940.20	-	2,859.70	1,960.70	955.45	-	2,916.15
Rosburg	1,860.40	1,093.22	15.21	2,968.84	1,921.32	1,113.01	15.21	3,049.54
<b>OR Sub-Total</b>	<b>10,171.69</b>	<b>5,294.29</b>	<b>171.16</b>	<b>15,637.14</b>	<b>10,405.88</b>	<b>5,378.40</b>	<b>171.15</b>	<b>15,955.42</b>
<b>Spokane Both</b>	<b>14,642.42</b>	<b>9,894.13</b>	<b>741.24</b>	<b>25,277.79</b>	<b>14,998.50</b>	<b>10,129.47</b>	<b>750.30</b>	<b>25,878.27</b>
Spokane GTN	2,021.85	1,364.71	102.07	3,488.64	2,070.97	1,397.18	103.28	3,571.42
Spokane NWP	8,592.91	5,800.43	433.80	14,827.14	8,801.65	5,938.41	438.94	15,179.00
<b>WA/ID Sub-Total</b>	<b>25,257.19</b>	<b>17,059.28</b>	<b>1,277.11</b>	<b>43,593.58</b>	<b>25,871.12</b>	<b>17,465.06</b>	<b>1,292.52</b>	<b>44,628.70</b>
<b>High Case Total</b>	<b>35,428.88</b>	<b>22,353.57</b>	<b>1,448.26</b>	<b>59,230.72</b>	<b>36,277.00</b>	<b>22,843.46</b>	<b>1,463.67</b>	<b>60,584.12</b>
<b>Low Case</b>								
Klam Falls	952.45	617.53	1.94	1,571.92	960.26	621.25	1.93	1,583.44
La Grande	531.01	330.53	78.55	940.09	532.49	330.78	78.55	941.81
Medford GTN	2,795.13	1,620.53	-	4,415.66	2,820.67	1,630.05	-	4,450.72
Medford NWP	1,255.78	728.95	-	1,984.73	1,267.25	733.24	-	2,000.49
Rosburg	1,102.95	818.25	15.10	1,936.30	1,121.46	824.21	15.09	1,960.77
<b>OR Sub-Total</b>	<b>6,637.32</b>	<b>4,115.80</b>	<b>95.58</b>	<b>10,848.70</b>	<b>6,702.13</b>	<b>4,139.52</b>	<b>95.57</b>	<b>10,937.22</b>
<b>Spokane Both</b>	<b>9,568.92</b>	<b>6,768.00</b>	<b>565.12</b>	<b>16,902.03</b>	<b>9,650.95</b>	<b>6,839.12</b>	<b>567.56</b>	<b>17,057.63</b>
Spokane GTN	1,322.06	933.52	77.95	2,333.53	1,333.38	943.33	78.28	2,354.99
Spokane NWP	5,618.79	3,967.87	331.27	9,917.94	5,666.88	4,009.58	332.71	10,009.17
<b>WA/ID Sub-Total</b>	<b>16,509.77</b>	<b>11,669.39</b>	<b>974.34</b>	<b>29,153.50</b>	<b>16,651.21</b>	<b>11,792.04</b>	<b>978.55</b>	<b>29,421.79</b>
<b>Low Case Total</b>	<b>23,147.10</b>	<b>15,785.19</b>	<b>1,069.92</b>	<b>40,002.21</b>	<b>23,353.34</b>	<b>15,931.56</b>	<b>1,074.12</b>	<b>40,359.01</b>



Appendix 2.4 D

Peak Day Demand - 11/2007 - 10/2027 (Net of DSM Savings)

Peak Day = February 15

Gas Year	Klam Falls	La Grande	Medford GTN	Medford NWP	Rosburg	Oregon	Spokane Both	Spokane GTN	Spokane NWP	WA/ID	Total
<b>Base</b>											
2007-2008	10.76	9.72	26.84	12.06	12.87	<b>72.25</b>	152.66	21.06	89.50	<b>263.22</b>	<b>335.46</b>
2008-2009	10.97	9.82	27.42	12.32	13.19	<b>73.71</b>	156.11	21.54	91.53	<b>269.18</b>	<b>342.89</b>
2009-2010	11.21	9.91	28.07	12.61	13.55	<b>75.35</b>	159.79	22.05	93.70	<b>275.54</b>	<b>350.89</b>
2010-2011	11.48	10.01	28.71	12.90	13.94	<b>77.04</b>	163.58	22.57	95.94	<b>282.09</b>	<b>359.14</b>
2011-2012	11.72	10.11	29.44	13.23	14.41	<b>78.92</b>	167.30	23.09	98.13	<b>288.51</b>	<b>367.43</b>
2012-2013	11.95	10.23	30.13	13.54	14.85	<b>80.69</b>	170.87	23.58	100.23	<b>294.69</b>	<b>375.38</b>
2013-2014	12.18	10.33	30.80	13.84	15.28	<b>82.44</b>	174.37	24.07	102.29	<b>300.72</b>	<b>383.16</b>
2014-2015	12.43	10.46	31.51	14.16	15.76	<b>84.31</b>	177.81	24.55	104.32	<b>306.68</b>	<b>390.99</b>
2015-2016	12.68	10.60	32.24	14.49	16.26	<b>86.27</b>	181.31	25.03	106.38	<b>312.72</b>	<b>398.99</b>
2016-2017	12.94	10.72	32.98	14.82	16.76	<b>88.22</b>	184.82	25.52	108.45	<b>318.79</b>	<b>407.01</b>
2017-2018	13.19	10.84	33.69	15.14	17.23	<b>90.08</b>	188.54	26.03	110.63	<b>325.20</b>	<b>415.28</b>
2018-2019	13.42	10.95	34.39	15.45	17.70	<b>91.91</b>	192.32	26.55	112.85	<b>331.72</b>	<b>423.63</b>
2019-2020	13.67	11.07	35.10	15.77	18.18	<b>93.79</b>	196.27	27.10	115.16	<b>338.52</b>	<b>432.31</b>
2020-2021	13.90	11.17	35.77	16.08	18.63	<b>95.55</b>	200.33	27.66	117.55	<b>345.54</b>	<b>441.09</b>
2021-2022	14.14	11.27	36.44	16.37	19.10	<b>97.33</b>	204.48	28.23	119.98	<b>352.69</b>	<b>450.01</b>
2022-2023	14.38	11.36	37.10	16.67	19.56	<b>99.07</b>	208.73	28.82	122.47	<b>360.01</b>	<b>459.08</b>
2023-2024	14.61	11.46	37.75	16.96	20.03	<b>100.81</b>	212.96	29.40	124.95	<b>367.30</b>	<b>468.11</b>
2024-2025	14.86	11.55	38.39	17.25	20.51	<b>102.56</b>	217.22	29.99	127.44	<b>374.65</b>	<b>477.21</b>
2025-2026	15.11	11.62	39.04	17.54	20.99	<b>104.30</b>	221.42	30.57	129.91	<b>381.90</b>	<b>486.20</b>
2026-2027	15.35	11.72	39.66	17.82	21.47	<b>106.02</b>	225.59	31.14	132.35	<b>389.09</b>	<b>495.11</b>
<b>High</b>											
2007-2008	10.84	9.86	27.06	12.16	13.07	<b>72.99</b>	155.95	21.51	91.43	<b>268.89</b>	<b>341.87</b>
2008-2009	10.99	9.84	27.48	12.35	13.33	<b>73.99</b>	158.95	21.93	93.20	<b>274.08</b>	<b>348.07</b>
2009-2010	11.52	10.15	28.91	12.99	14.09	<b>77.65</b>	167.59	23.12	98.28	<b>288.99</b>	<b>366.64</b>
2010-2011	12.01	10.37	30.09	13.52	14.79	<b>80.79</b>	175.14	24.17	102.72	<b>302.02</b>	<b>382.81</b>
2011-2012	12.47	10.60	31.40	14.10	15.59	<b>84.17</b>	181.09	25.20	106.21	<b>312.50</b>	<b>396.67</b>
2012-2013	12.85	10.81	32.54	14.62	16.32	<b>87.14</b>	187.41	26.03	109.93	<b>323.37</b>	<b>410.51</b>
2013-2014	13.26	11.00	33.67	15.13	17.04	<b>90.10</b>	193.52	26.90	113.52	<b>333.95</b>	<b>424.05</b>
2014-2015	13.64	11.21	34.76	15.62	17.76	<b>92.99</b>	199.08	27.59	116.79	<b>343.45</b>	<b>436.44</b>
2015-2016	14.03	11.43	35.91	16.13	18.54	<b>96.05</b>	204.78	28.29	120.14	<b>353.21</b>	<b>449.26</b>
2016-2017	14.40	11.59	36.96	16.61	19.26	<b>98.83</b>	209.99	28.99	123.21	<b>362.19</b>	<b>461.02</b>
2017-2018	14.72	11.74	37.90	17.03	19.91	<b>101.31</b>	215.05	29.69	126.17	<b>370.91</b>	<b>472.22</b>
2018-2019	15.07	11.88	38.95	17.50	20.62	<b>104.03</b>	220.80	30.48	129.55	<b>380.83</b>	<b>484.86</b>
2019-2020	15.43	12.05	39.98	17.97	21.32	<b>106.76</b>	226.65	31.29	132.97	<b>390.91</b>	<b>497.66</b>
2020-2021	15.76	12.18	40.92	18.39	22.06	<b>109.20</b>	232.54	32.10	136.43	<b>401.06</b>	<b>510.27</b>
2021-2022	16.10	12.32	41.87	18.82	22.84	<b>111.75</b>	238.77	32.96	140.08	<b>411.80</b>	<b>523.55</b>
2022-2023	16.42	12.44	42.78	19.23	23.29	<b>114.15</b>	244.72	33.78	143.57	<b>422.06</b>	<b>536.22</b>
2023-2024	16.74	12.55	43.67	19.62	23.95	<b>116.53</b>	250.78	34.62	147.12	<b>432.51</b>	<b>549.04</b>
2024-2025	17.07	12.65	44.52	20.01	24.60	<b>118.84</b>	256.68	35.43	150.57	<b>442.67</b>	<b>561.51</b>
2025-2026	17.42	12.76	45.46	20.43	25.31	<b>121.38</b>	262.92	36.29	154.22	<b>453.43</b>	<b>574.81</b>
2026-2027	17.78	12.88	46.33	20.82	25.99	<b>123.80</b>	269.08	37.14	157.84	<b>464.05</b>	<b>587.86</b>
<b>Low</b>											
2007-2008	10.58	9.69	26.50	11.91	12.79	<b>71.47</b>	151.44	20.89	88.79	<b>261.11</b>	<b>332.59</b>
2008-2009	10.33	9.41	25.93	11.65	12.54	<b>69.87</b>	148.15	20.44	86.87	<b>255.47</b>	<b>325.33</b>
2009-2010	10.48	9.49	26.34	11.83	12.75	<b>70.90</b>	150.59	20.78	88.31	<b>259.69</b>	<b>330.58</b>
2010-2011	10.66	9.58	26.77	12.03	13.01	<b>72.05</b>	153.28	21.15	89.90	<b>264.33</b>	<b>336.39</b>
2011-2012	10.77	9.62	27.11	12.18	13.23	<b>72.92</b>	154.57	21.33	90.66	<b>266.56</b>	<b>339.48</b>
2012-2013	10.87	9.68	27.42	12.32	13.43	<b>73.72</b>	155.61	21.48	91.29	<b>268.38</b>	<b>342.10</b>
2013-2014	10.97	9.72	27.73	12.46	13.64	<b>74.52</b>	156.55	21.61	92.06	<b>270.22</b>	<b>344.74</b>
2014-2015	11.08	9.77	28.05	12.61	13.86	<b>75.37</b>	157.83	21.79	92.61	<b>272.22</b>	<b>347.59</b>
2015-2016	11.20	9.83	28.39	12.76	14.10	<b>76.28</b>	159.24	21.99	93.45	<b>274.67</b>	<b>350.95</b>
2016-2017	11.32	9.89	28.74	12.91	14.34	<b>77.19</b>	160.66	22.19	94.29	<b>277.13</b>	<b>354.33</b>
2017-2018	11.43	9.94	29.06	13.05	14.56	<b>78.05</b>	162.25	22.40	95.22	<b>279.87</b>	<b>357.92</b>
2018-2019	11.53	9.99	29.39	13.20	14.79	<b>78.90</b>	163.86	22.63	96.17	<b>282.66</b>	<b>361.55</b>
2019-2020	11.63	10.04	29.72	13.34	15.00	<b>79.74</b>	165.56	22.86	97.16	<b>285.59</b>	<b>365.33</b>
2020-2021	11.73	10.08	30.04	13.49	15.22	<b>80.56</b>	167.31	23.10	98.19	<b>288.60</b>	<b>369.16</b>
2021-2022	11.84	10.13	30.31	13.62	15.44	<b>81.35</b>	169.10	23.35	99.24	<b>291.69</b>	<b>373.04</b>
2022-2023	11.92	10.15	30.55	13.73	15.63	<b>81.98</b>	170.58	23.55	100.10	<b>294.23</b>	<b>376.22</b>
2023-2024	12.00	10.16	30.80	13.84	15.82	<b>82.62</b>	172.03	23.75	100.96	<b>296.74</b>	<b>379.37</b>
2024-2025	12.08	10.18	31.02	13.94	16.01	<b>83.24</b>	173.50	23.96	101.82	<b>299.27</b>	<b>382.51</b>
2025-2026	12.17	10.19	31.25	14.05	16.21	<b>83.87</b>	174.92	24.15	102.65	<b>301.72</b>	<b>385.60</b>
2026-2027	12.26	10.21	31.48	14.15	16.41	<b>84.52</b>	176.47	24.37	103.56	<b>304.39</b>	<b>388.91</b>

Appendix 2.4 D

Peak Day Demand - 11/2007 - 10/2027 (Net of DSM Savings)

Peak Day = December 20

Gas Year	Klam Falls	La Grande	Medford GTN	Medford NWP	Rosburg	Oregon	Spokane Both	Spokane GTN	Spokane NWP	WA/ID	Total
<b>Base</b>											
2007-2008	13.86	8.48	41.02	18.43	16.33	<b>98.12</b>	125.17	17.27	73.38	<b>215.81</b>	<b>313.94</b>
2008-2009	14.15	8.57	42.00	18.87	16.62	<b>100.21</b>	128.21	17.69	75.17	<b>221.07</b>	<b>321.28</b>
2009-2010	14.46	8.66	43.05	19.34	17.06	<b>102.58</b>	131.40	18.13	77.06	<b>226.59</b>	<b>329.17</b>
2010-2011	14.80	8.74	44.10	19.81	17.53	<b>104.98</b>	134.74	18.59	79.02	<b>232.35</b>	<b>337.33</b>
2011-2012	15.15	8.82	45.18	20.30	18.04	<b>107.48</b>	138.09	19.06	80.99	<b>238.14</b>	<b>345.62</b>
2012-2013	15.48	8.91	46.35	20.82	18.64	<b>110.20</b>	141.01	19.46	82.71	<b>243.17</b>	<b>353.38</b>
2013-2014	15.78	9.01	47.41	21.30	19.21	<b>112.71</b>	143.66	19.83	84.26	<b>247.75</b>	<b>360.46</b>
2014-2015	16.09	9.10	48.48	21.79	19.78	<b>115.25</b>	146.09	20.18	85.71	<b>251.98</b>	<b>367.22</b>
2015-2016	16.42	9.22	49.61	22.29	20.40	<b>117.94</b>	149.01	20.57	87.43	<b>257.01</b>	<b>374.95</b>
2016-2017	16.76	9.34	50.79	22.82	21.05	<b>120.77</b>	151.97	20.98	89.17	<b>262.13</b>	<b>382.89</b>
2017-2018	17.10	9.45	51.96	23.35	21.70	<b>123.56</b>	155.05	21.41	90.97	<b>267.43</b>	<b>391.00</b>
2018-2019	17.43	9.55	53.07	23.85	22.32	<b>126.22</b>	158.21	21.84	92.83	<b>272.88</b>	<b>399.10</b>
2019-2020	17.74	9.64	54.19	24.35	22.93	<b>128.86</b>	161.42	22.28	94.71	<b>278.41</b>	<b>407.28</b>
2020-2021	18.07	9.75	55.31	24.86	23.56	<b>131.55</b>	164.77	22.75	96.67	<b>284.19</b>	<b>415.75</b>
2021-2022	18.38	9.84	56.38	25.34	24.15	<b>134.09</b>	168.23	23.22	98.70	<b>290.16</b>	<b>424.24</b>
2022-2023	18.70	9.93	57.43	25.81	24.75	<b>136.63</b>	171.76	23.71	100.77	<b>296.24</b>	<b>432.87</b>
2023-2024	19.02	10.01	58.48	26.28	25.35	<b>139.14</b>	175.38	24.21	102.89	<b>302.48</b>	<b>441.62</b>
2024-2025	19.33	10.09	59.51	26.74	25.97	<b>141.63</b>	178.99	24.71	105.01	<b>308.70</b>	<b>450.33</b>
2025-2026	19.66	10.17	60.52	27.20	26.59	<b>144.14</b>	182.62	25.21	107.13	<b>314.96</b>	<b>459.10</b>
2026-2027	19.98	10.24	61.55	27.66	27.22	<b>146.65</b>	186.20	25.70	109.23	<b>321.13</b>	<b>467.78</b>
<b>High</b>											
2007-2008	13.89	8.70	41.24	18.53	16.55	<b>98.91</b>	127.41	17.58	74.70	<b>219.69</b>	<b>318.60</b>
2008-2009	14.09	8.69	42.00	18.87	16.70	<b>100.36</b>	129.90	17.92	76.16	<b>223.98</b>	<b>324.34</b>
2009-2010	14.80	8.96	44.27	19.89	17.63	<b>105.56</b>	136.80	18.88	80.22	<b>235.90</b>	<b>341.46</b>
2010-2011	15.41	9.15	46.19	20.75	18.47	<b>109.98</b>	142.94	19.72	83.83	<b>246.49</b>	<b>356.47</b>
2011-2012	16.06	9.34	48.14	21.62	19.36	<b>114.53</b>	147.90	20.57	86.74	<b>255.21</b>	<b>369.73</b>
2012-2013	16.61	9.51	50.07	22.50	20.35	<b>119.05</b>	153.45	21.30	90.00	<b>264.75</b>	<b>383.80</b>
2013-2014	17.14	9.69	51.89	23.32	21.31	<b>123.35</b>	158.76	22.06	93.12	<b>273.94</b>	<b>397.29</b>
2014-2015	17.63	9.84	53.55	24.06	22.18	<b>127.25</b>	163.42	22.64	95.86	<b>281.92</b>	<b>409.18</b>
2015-2016	18.14	10.02	55.30	24.85	23.15	<b>131.46</b>	168.25	23.24	98.70	<b>290.19</b>	<b>421.65</b>
2016-2017	18.62	10.19	56.99	25.61	24.09	<b>135.50</b>	172.57	23.82	101.24	<b>297.64</b>	<b>433.14</b>
2017-2018	19.08	10.31	58.71	26.49	24.99	<b>139.58</b>	176.82	24.41	103.73	<b>304.95</b>	<b>441.53</b>
2018-2019	19.55	10.46	60.22	27.06	25.91	<b>143.21</b>	181.53	25.06	106.49	<b>313.08</b>	<b>456.29</b>
2019-2020	20.02	10.59	61.84	27.79	26.81	<b>147.05</b>	186.39	25.73	109.34	<b>321.46</b>	<b>468.51</b>
2020-2021	20.48	10.73	63.41	28.49	27.70	<b>150.81</b>	191.17	26.39	112.15	<b>329.70</b>	<b>480.51</b>
2021-2022	20.91	10.85	64.94	29.18	28.56	<b>154.44</b>	196.25	27.09	115.12	<b>338.46</b>	<b>492.90</b>
2022-2023	21.36	10.97	66.39	29.83	29.41	<b>157.96</b>	201.25	27.78	118.05	<b>347.08</b>	<b>505.04</b>
2023-2024	21.78	11.07	67.82	30.48	30.25	<b>161.40</b>	206.46	28.50	121.11	<b>356.07</b>	<b>517.47</b>
2024-2025	22.19	11.16	69.16	31.08	31.09	<b>164.68</b>	211.50	29.19	124.06	<b>364.75</b>	<b>529.43</b>
2025-2026	22.66	11.27	70.64	31.75	32.00	<b>168.32</b>	216.91	29.94	127.23	<b>374.07</b>	<b>542.39</b>
2026-2027	23.13	11.36	72.08	32.39	32.91	<b>171.87</b>	222.08	30.65	130.26	<b>382.98</b>	<b>554.85</b>
<b>Low</b>											
2007-2008	13.70	8.49	40.60	18.24	16.27	<b>97.29</b>	124.09	17.12	72.75	<b>213.96</b>	<b>311.26</b>
2008-2009	13.37	8.25	39.72	17.84	15.88	<b>95.05</b>	121.43	16.75	71.20	<b>209.38</b>	<b>304.43</b>
2009-2010	13.57	8.32	40.36	18.14	16.14	<b>96.53</b>	123.40	17.03	72.37	<b>212.80</b>	<b>309.33</b>
2010-2011	13.80	8.40	41.07	18.46	16.45	<b>98.17</b>	125.62	17.33	73.67	<b>216.62</b>	<b>314.79</b>
2011-2012	13.96	8.43	41.57	18.68	16.69	<b>99.32</b>	126.75	17.49	74.34	<b>218.58</b>	<b>317.90</b>
2012-2013	14.10	8.47	42.11	18.92	16.98	<b>100.58</b>	127.75	17.63	74.94	<b>220.32</b>	<b>320.89</b>
2013-2014	14.24	8.51	42.61	19.14	17.24	<b>101.74</b>	128.66	17.76	75.63	<b>222.05</b>	<b>323.79</b>
2014-2015	14.38	8.55	43.10	19.37	17.51	<b>102.91</b>	129.79	17.92	76.15	<b>223.86</b>	<b>326.76</b>
2015-2016	14.53	8.60	43.62	19.60	17.81	<b>104.16</b>	130.99	18.08	76.86	<b>225.94</b>	<b>330.09</b>
2016-2017	14.68	8.65	44.17	19.85	18.12	<b>105.47</b>	132.21	18.26	77.59	<b>228.06</b>	<b>333.53</b>
2017-2018	14.84	8.70	44.72	20.08	18.43	<b>106.77</b>	133.55	18.44	78.37	<b>230.36</b>	<b>337.13</b>
2018-2019	14.98	8.75	45.24	20.31	18.72	<b>108.00</b>	134.91	18.63	79.17	<b>232.71</b>	<b>340.72</b>
2019-2020	15.11	8.79	45.76	20.54	19.00	<b>109.20</b>	136.31	18.82	79.99	<b>235.12</b>	<b>344.31</b>
2020-2021	15.25	8.83	46.28	20.78	19.30	<b>110.44</b>	137.78	19.02	80.85	<b>237.65</b>	<b>348.09</b>
2021-2022	15.39	8.87	46.73	21.00	19.58	<b>111.57</b>	139.29	19.23	81.73	<b>240.25</b>	<b>351.82</b>
2022-2023	15.50	8.89	47.11	21.17	19.83	<b>112.50</b>	140.57	19.41	82.48	<b>242.46</b>	<b>354.96</b>
2023-2024	15.61	8.91	47.50	21.35	20.07	<b>113.43</b>	141.80	19.58	83.20	<b>244.58</b>	<b>358.01</b>
2024-2025	15.71	8.92	47.86	21.51	20.31	<b>114.31</b>	143.10	19.76	83.97	<b>246.83</b>	<b>361.14</b>
2025-2026	15.83	8.94	48.21	21.67	20.57	<b>115.22</b>	144.40	19.94	84.73	<b>249.07</b>	<b>364.29</b>
2026-2027	15.94	8.95	48.59	21.84	20.83	<b>116.17</b>	145.69	20.11	85.49	<b>251.29</b>	<b>367.46</b>



# **General Assumptions**

## **Appendix 6.1**

## Appendix 6.1 – General Assumptions

### Utility Natural Gas Escalation Rates\*

<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
0.8%	9.0%	0.0%	-3.2%	-1.4%	-1.9%	0.2%	0.7%	2.1%	2.6%
<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
3.4%	3.2%	2.3%	2.2%	1.7%	1.7%	1.7%	1.7%	1.7%	1.4%

\* Source: Global Insights, Inc 4/26/2007 Forecast.

### GDP Inflation Rates\*

<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
1.89%	1.99%	2.07%	2.01%	1.98%	2.01%	1.97%	1.88%	1.85%	1.85%
<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
1.88%	1.92%	1.95%	1.92%	1.96%	1.97%	1.99%	2.00%	1.99%	2.02%

\* Source: Global Insights, Inc 4/26/2007 Forecast.

**Real Discount Rate** = 4.18% - Weighted Average after Tax Cost of Capital (jurisdictionally weighted).

**AECO, Sumas, Rockies Prices** – See Attached

**NYMEX Prices** – Were closing 5/9/2007 prices. More current NYMEX prices (11/26/2007) were analyzed and determined that the change was not significant enough to warrant updating.

### Other Pricing:

Station 2 – Sumas minus \$.4172

Malin = AECO plus \$.2123

Spokane = AECO plus \$.2967

### Consultant Price Assumptions

	Consultant 1			Consultant 2			AEO 2007		
	2008	2010	2015	2008	2010	2015	2008	2010	2015
Forecasted HH Price (2007 \$)	\$ 8.07	\$ 7.06	\$ 6.73	\$ 7.83	\$ 6.58	\$ 6.18	\$ 8.31	\$ 6.62	\$ 5.75
US Economic Growth (% GDP)	3.50%	3.20%	3.20%	3.00%	3.00%	3.00%	3.05%	3.01%	3.00%
Total US Gas Demand bcf/d)	63.41	65.86	68.27	60.61	62.06	67.8	63.95	65.8	69.38
EG Demand (bcf/d)	18.6	19.81	21.54	17.93	19.36	25.4	17.44	17.48	19.48
World Oil Prices (2007\$)	\$ 65.53	\$ 61.17	\$ 63.93	\$ 55.32	\$ 52.62	\$ 46.87	\$ 67.59	\$ 60.61	\$ 52.59
US Gas Prod. (bcf/d)	53.27	52.45	49.77	48.32	47.78	46.5	53.22	53.21	53.89
LNG Imports (bcf/d)	2.76	5.82	10.28	4.14	6.84	11.8	3.04	4.97	8.19
Net (Canada & Mexico) Imports (bcf/d)	7.47	7.6	8.22	7.78	7.39	9	7.69	7.62	7.30
Mackenzie Delta Pipeline		1 bcf/d in service 2014			In service 2012			1.2 bcf/d in service 2012	
Alaska Pipeline			4 bcf/d in service 2020			In service 2017			3.9 bcf/d in service 2018

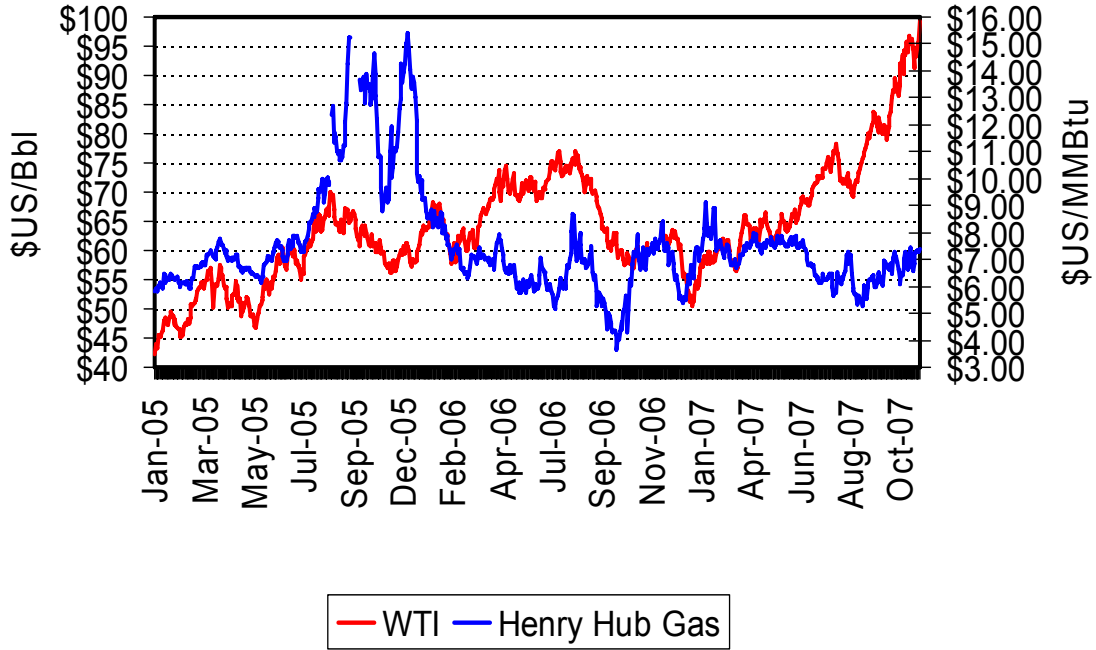
### Pipeline Rates

Northwest Pipeline – currently settled rates with pipeline rate increases every five years at GDP

GTN – currently filed rates with pipeline rate increases every five years at GDP

Canadian Pipelines – current rates with pipeline rate increases three years at GDP

**Natural Gas and WTI Oil Price Relationship:**



**Heating Degree Days – See Attached**



Appendix 6.1  
 La Grande Heating Degree Days  
 Source: NOAA with added peak days

Day of Month	January	February	March	April	May	June	July	August	September	October	November	December
1	35	22	17	23	28	22	1	0	0	10	34	28
2	39	25	27	22	26	9	0	0	0	10	22	24
3	41	24	24	23	20	12	0	0	0	11	17	28
4	52	21	27	18	22	18	0	0	0	13	27	31
5	66	29	24	14	22	15	0	4	5	14	28	37
6	56	27	31	18	17	3	1	1	3	11	21	33
7	39	26	24	11	20	0	2	3	0	5	23	35
8	30	25	24	11	14	0	0	0	0	3	25	33
9	25	28	18	11	13	0	0	0	7	14	30	31
10	24	35	19	14	11	4	0	0	11	17	25	33
11	34	31	22	22	3	8	0	0	18	18	24	49
12	30	28	29	22	0	13	0	0	15	14	21	54
13	27	61	23	24	0	8	0	0	9	12	14	37
14	31	68	22	26	11	1	0	0	6	13	25	29
15	33	74	31	14	14	0	0	0	4	9	33	30
16	33	61	32	21	6	0	0	5	14	7	30	31
17	34	60	28	19	9	0	5	0	6	11	32	33
18	35	50	29	22	15	0	0	0	12	19	26	51
19	33	49	31	22	14	0	0	0	3	15	30	58
20	34	42	28	12	11	1	8	8	7	19	29	64
21	31	32	30	6	6	3	9	3	7	21	26	58
22	35	24	26	0	0	8	0	1	16	24	31	51
23	34	22	22	23	0	2	0	5	12	21	31	26
24	35	29	16	26	4	11	0	5	8	24	29	31
25	34	30	21	19	2	4	4	8	17	28	33	35
26	34	23	18	25	5	1	1	1	10	23	34	34
27	32	15	18	18	0	0	4	5	7	18	31	35
28	27	18	20	21	4	0	7	0	14	19	33	40
29	24	0	30	23	15	0	0	0	6	26	26	34
30	24	0	31	28	18	4	0	0	0	20	30	34
31	31	0	24	0	14	0	0	4	0	24	0	36
	1072	979	766	558	344	147	42	53	217	493	820	1163
												6654





Appendix 6.1  
 Roseburg Heating Degree Days  
 Source: NOAA with added peak days

Day of Month	January	February	March	April	May	June	July	August	September	October	November	December
1	25	25	11	13	7	5	6	0	0	1	0	25
2	18	27	9	8	2	5	0	0	5	5	17	28
3	23	23	15	6	14	8	0	0	2	10	19	28
4	15	18	25	11	15	11	0	0	0	8	15	23
5	15	11	24	11	16	9	0	0	0	5	20	24
6	19	23	22	9	12	7	0	0	0	0	19	21
7	23	25	18	13	15	7	0	0	0	0	16	22
8	22	23	24	23	15	3	0	3	0	5	13	24
9	24	26	16	18	13	0	0	0	0	8	14	27
10	27	27	23	11	9	0	0	0	0	11	14	28
11	22	25	17	11	13	6	0	0	0	11	11	25
12	21	20	14	7	5	8	0	0	1	14	15	27
13	20	32	16	17	0	4	1	0	1	6	12	22
14	23	37	13	20	6	2	0	0	0	9	13	18
15	24	42	11	20	13	0	0	0	0	9	17	20
16	27	34	12	17	14	0	0	0	0	6	18	27
17	29	28	13	19	16	0	3	0	5	6	17	25
18	24	16	14	20	15	0	0	0	8	7	16	40
19	22	14	11	19	7	0	0	0	11	2	17	53
20	25	12	4	21	5	0	0	0	8	10	26	55
21	18	15	14	11	0	0	0	0	8	15	23	46
22	19	14	18	8	0	0	1	4	3	17	14	48
23	20	26	15	0	0	0	0	4	2	13	14	17
24	24	21	19	1	0	0	0	1	0	10	13	19
25	22	17	22	7	7	0	0	0	5	10	12	20
26	22	11	23	11	1	0	0	0	4	9	18	22
27	27	10	19	13	0	0	0	0	0	9	21	18
28	26	21	20	11	0	7	3	0	0	11	28	23
29	23	0	17	10	0	3	3	0	6	14	25	22
30	24	0	9	7	5	2	2	0	5	17	29	20
31	26	0	7	0	1	0	0	0	0	13	0	23
699	699	623	495	373	226	87	19	12	75	270	521	840
												4240



**Appendix 6.1  
Mid Price Case  
Real 2007\$**

	Nymex		AECO		Sumas		Rockies		Seasonal Shape																	
	86.0%		87.6%		80.5%																					
Year	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December		
2008	7.34	7.34	7.47	6.87																						
2009	7.96	6.85	6.97	6.41																						
2010	7.42	6.38	6.50	5.97																						
2011	6.82	5.87	5.97	5.49																						
2012	6.53	5.61	5.72	5.25																						
2013	6.38	5.49	5.59	5.14																						
2014	6.52	5.61	5.71	5.25																						
2015	6.73	5.79	5.90	5.42																						
2016	6.77	5.82	5.93	5.45																						
2017	6.80	5.85	5.96	5.47																						
2018	6.83	5.87	5.98	5.50																						
2019	7.01	6.03	6.14	5.64																						
2020	7.18	6.17	6.29	5.78																						
2021	7.34	6.31	6.43	5.91																						
2022	7.47	6.42	6.54	6.01																						
2023	7.59	6.53	6.65	6.11																						
2024	7.72	6.64	6.77	6.22																						
2025	7.86	6.76	6.88	6.33																						
2026	8.00	6.88	7.00	6.44																						
2027	8.11	6.97	7.10	6.53																						
AECO																										
2008	7.34	8.30	8.29	8.08	6.85	6.74	6.80	6.87	6.92	6.95	7.04	7.42	7.80	7.88	7.28	6.41	6.46	6.46	6.02	6.05	6.12	6.46	6.78	6.78	6.78	
2009	6.85	7.75	7.73	7.54	6.39	6.29	6.34	6.41	6.46	6.49	6.57	6.93	7.28	7.28	6.78	5.91	5.86	5.91	5.97	6.02	6.05	6.12	6.46	6.78	6.78	
2010	6.38	7.22	7.21	7.03	5.95	5.86	5.91	5.97	6.02	6.05	6.12	6.46	6.78	6.78	6.23	5.44	5.38	5.44	5.49	5.53	5.56	5.63	5.93	6.23	6.23	
2011	5.87	6.64	6.63	6.46	5.47	5.38	5.44	5.49	5.53	5.56	5.63	5.93	6.23	6.23	5.96	5.15	5.15	5.20	5.25	5.29	5.32	5.38	5.68	5.96	5.96	
2012	5.61	6.35	6.34	6.18	5.24	5.15	5.20	5.25	5.29	5.32	5.38	5.68	5.96	5.96	5.84	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2013	5.49	6.21	6.20	6.05	5.12	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	5.61	4.82	4.82	4.87	4.91	4.94	4.97	5.04	5.32	5.61	5.61	
2014	5.61	6.34	6.33	6.18	5.23	5.15	5.20	5.25	5.29	5.31	5.38	5.67	5.96	5.96	5.84	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2015	5.79	6.55	6.54	6.38	5.40	5.32	5.37	5.42	5.46	5.49	5.55	5.86	6.15	6.15	5.89	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2016	5.82	6.59	6.58	6.41	5.43	5.34	5.39	5.45	5.49	5.52	5.58	5.89	6.19	6.19	5.91	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2017	5.85	6.62	6.61	6.44	5.46	5.37	5.42	5.47	5.51	5.54	5.61	5.91	6.22	6.22	5.94	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2018	5.87	6.64	6.63	6.47	5.48	5.39	5.44	5.50	5.54	5.56	5.63	5.94	6.24	6.24	5.96	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2019	6.03	6.82	6.81	6.64	5.62	5.53	5.58	5.64	5.68	5.71	5.78	6.10	6.41	6.41	6.12	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2020	6.17	6.99	6.97	6.80	5.76	5.67	5.72	5.78	5.82	5.85	5.92	6.24	6.56	6.56	6.26	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2021	6.31	7.14	7.13	6.95	5.89	5.79	5.85	5.91	5.95	5.98	6.05	6.38	6.71	6.71	6.41	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2022	6.42	7.27	7.25	7.07	5.99	5.90	5.95	6.01	6.06	6.09	6.16	6.50	6.83	6.83	6.53	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2023	6.53	7.39	7.38	7.19	6.09	6.00	6.05	6.11	6.16	6.19	6.26	6.61	6.94	6.94	6.64	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2024	6.64	7.52	7.50	7.31	6.20	6.10	6.15	6.22	6.26	6.30	6.37	6.72	7.06	7.06	6.76	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2025	6.76	7.65	7.63	7.44	6.31	6.20	6.26	6.33	6.37	6.41	6.48	6.84	7.18	7.18	6.88	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2026	6.88	7.78	7.77	7.57	6.42	6.31	6.37	6.44	6.48	6.52	6.60	6.96	7.31	7.31	7.01	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	
2027	6.97	7.89	7.87	7.68	6.50	6.40	6.46	6.53	6.57	6.61	6.69	7.05	7.39	7.39	7.09	5.04	5.04	5.09	5.14	5.18	5.20	5.27	5.55	5.84	5.84	

**Appendix 6.1  
Mid Price Case**

Year	113%	113%	113%	110%	93%	92%	93%	94%	94%	94%	95%	96%	101%	106%
	January	February	March	April	May	June	July	August	September	October	November	December	November	December
2008	7.47	8.46	8.44	8.23	6.97	6.86	6.93	7.00	7.05	7.08	7.17	7.17	7.56	7.94
2009	6.97	7.89	7.88	7.68	6.51	6.40	6.46	6.53	6.58	6.61	6.69	6.69	7.05	7.41
2010	6.50	7.36	7.34	7.16	6.07	5.97	6.02	6.09	6.13	6.16	6.24	6.24	6.58	6.91
2011	5.97	6.76	6.75	6.58	5.57	5.48	5.54	5.59	5.63	5.66	5.73	5.73	6.04	6.35
2012	5.72	6.47	6.46	6.30	5.33	5.25	5.30	5.35	5.39	5.42	5.48	5.48	5.78	6.08
2013	5.59	6.33	6.32	6.16	5.22	5.13	5.18	5.24	5.27	5.30	5.36	5.36	5.66	5.94
2014	5.71	6.46	6.45	6.29	5.33	5.24	5.29	5.35	5.39	5.41	5.48	5.48	5.78	6.07
2015	5.90	6.67	6.66	6.50	5.50	5.41	5.47	5.52	5.56	5.59	5.66	5.66	5.97	6.27
2016	5.93	6.71	6.70	6.53	5.53	5.44	5.49	5.55	5.59	5.62	5.69	5.69	6.00	6.30
2017	5.96	6.74	6.73	6.56	5.56	5.47	5.52	5.58	5.62	5.65	5.71	5.71	6.02	6.33
2018	5.98	6.77	6.76	6.59	5.58	5.49	5.54	5.60	5.64	5.67	5.74	5.74	6.05	6.36
2019	6.14	6.95	6.93	6.76	5.73	5.64	5.69	5.75	5.79	5.82	5.89	5.89	6.21	6.53
2020	6.29	7.12	7.10	6.93	5.87	5.77	5.83	5.89	5.93	5.96	6.03	6.03	6.36	6.68
2021	6.43	7.28	7.26	7.08	6.00	5.90	5.96	6.02	6.06	6.09	6.17	6.17	6.50	6.83
2022	6.54	7.40	7.39	7.20	6.10	6.00	6.06	6.12	6.17	6.20	6.27	6.27	6.62	6.95
2023	6.65	7.53	7.51	7.33	6.21	6.11	6.16	6.23	6.27	6.31	6.38	6.38	6.73	7.07
2024	6.77	7.66	7.64	7.45	6.31	6.21	6.27	6.33	6.38	6.41	6.49	6.49	6.84	7.19
2025	6.88	7.79	7.78	7.58	6.42	6.32	6.38	6.44	6.49	6.52	6.60	6.60	6.96	7.32
2026	7.00	7.93	7.91	7.71	6.54	6.43	6.49	6.56	6.61	6.64	6.72	6.72	7.08	7.45
2027	7.10	8.03	8.02	7.82	6.63	6.52	6.58	6.65	6.70	6.73	6.81	6.81		
Rockies														
2008	6.87	7.77	7.76	7.56	6.41	6.30	6.36	6.43	6.48	6.51	6.59	6.59	6.95	7.30
2009	6.41	7.25	7.24	7.06	5.98	5.88	5.94	6.00	6.04	6.07	6.15	6.15	6.48	6.81
2010	5.97	6.76	6.75	6.58	5.57	5.48	5.54	5.59	5.63	5.66	5.73	5.73	6.04	6.35
2011	5.49	6.21	6.20	6.05	5.12	5.04	5.09	5.14	5.18	5.20	5.27	5.27	5.55	5.84
2012	5.25	5.94	5.93	5.78	4.90	4.82	4.87	4.92	4.95	4.98	5.04	5.04	5.31	5.58
2013	5.14	5.82	5.81	5.66	4.80	4.72	4.76	4.81	4.85	4.87	4.93	4.93	5.20	5.46
2014	5.25	5.94	5.93	5.78	4.90	4.82	4.86	4.91	4.95	4.97	5.03	5.03	5.31	5.58
2015	5.42	6.13	6.12	5.97	5.06	4.98	5.02	5.07	5.11	5.14	5.20	5.20	5.48	5.76
2016	5.45	6.16	6.15	6.00	5.08	5.00	5.05	5.10	5.14	5.16	5.23	5.23	5.51	5.79
2017	5.47	6.19	6.18	6.03	5.11	5.02	5.07	5.12	5.16	5.19	5.25	5.25	5.54	5.82
2018	5.50	6.22	6.21	6.05	5.13	5.04	5.09	5.14	5.18	5.21	5.27	5.27	5.56	5.84
2019	5.64	6.38	6.37	6.21	5.26	5.18	5.23	5.28	5.32	5.35	5.41	5.41	5.71	6.00
2020	5.78	6.54	6.53	6.36	5.39	5.31	5.36	5.41	5.45	5.48	5.54	5.54	5.85	6.14
2021	5.91	6.69	6.67	6.51	5.51	5.42	5.48	5.53	5.57	5.60	5.67	5.67	5.98	6.28
2022	6.01	6.80	6.79	6.62	5.61	5.52	5.57	5.63	5.67	5.70	5.77	5.77	6.08	6.39
2023	6.11	6.92	6.91	6.73	5.70	5.61	5.66	5.72	5.76	5.79	5.86	5.86	6.18	6.50
2024	6.22	7.03	7.02	6.85	5.80	5.71	5.76	5.82	5.86	5.89	5.96	5.96	6.29	6.61
2025	6.33	7.16	7.15	6.97	5.90	5.81	5.86	5.92	5.97	6.00	6.07	6.07	6.40	6.72
2026	6.44	7.28	7.27	7.09	6.01	5.91	5.96	6.03	6.07	6.10	6.17	6.17	6.51	6.84
2027	6.53	7.38	7.37	7.19	6.09	5.99	6.05	6.11	6.15	6.19	6.26	6.26		

**Appendix 6.1  
High Price Case  
Real 2007\$**

	Nymex		AECO		Summas		Rockies		Seasonal Shape																
	86.0%		87.6%		80.5%																				
Year	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	
2008	9.00	7.74	7.88	7.24																					
2009	8.67	7.46	7.60	6.98									113%												
2010	8.27	7.11	7.25	6.66									113%												
2011	8.27	7.11	7.25	6.66									110%												
2012	8.27	7.11	7.25	6.66									93%												
2013	8.27	7.11	7.25	6.66									92%												
2014	8.27	7.11	7.25	6.66									93%												
2015	8.27	7.11	7.25	6.66									94%												
2016	8.27	7.11	7.25	6.66									94%												
2017	8.27	7.11	7.25	6.66									95%												
2018	8.27	7.11	7.25	6.66									96%												
2019	8.27	7.11	7.25	6.66									101%												
2020	8.27	7.11	7.25	6.66									106%												
2021	8.41	7.24	7.37	6.77																					
2022	8.56	7.36	7.50	6.89																					
2023	8.70	7.48	7.62	7.01																					
2024	8.85	7.62	7.76	7.13																					
2025	9.01	7.75	7.89	7.25																					
2026	9.13	7.86	8.00	7.35																					
2027	9.26	7.96	8.11	7.45																					
AECO																									
2008	7.74	8.75	8.74	8.52	7.22	7.10	7.17	7.24	7.29	7.33	7.07	7.16	7.54	7.93											
2009	7.46	8.44	8.43	8.21	6.96	6.85	6.91	6.98	7.03	7.07	6.74	7.16	7.54	7.93											
2010	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2011	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2012	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2013	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2014	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2015	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2016	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2017	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2018	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2019	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2020	7.11	8.05	8.03	7.83	6.64	6.53	6.59	6.66	6.71	6.74	6.74	6.82	7.19	7.56											
2021	7.24	8.19	8.17	7.97	6.75	6.64	6.71	6.77	6.82	6.86	6.94	7.06	7.32	7.69											
2022	7.36	8.33	8.31	8.10	6.87	6.75	6.82	6.89	6.94	6.97	7.06	7.18	7.44	7.82											
2023	7.48	8.47	8.45	8.24	6.98	6.87	6.93	7.01	7.06	7.09	7.18	7.30	7.57	7.95											
2024	7.62	8.62	8.60	8.39	7.10	6.99	7.06	7.13	7.18	7.22	7.30	7.42	7.70	8.09											
2025	7.75	8.77	8.75	8.53	7.23	7.11	7.18	7.25	7.31	7.34	7.43	7.53	7.84	8.24											
2026	7.86	8.89	8.87	8.65	7.33	7.21	7.28	7.35	7.41	7.45	7.53	7.64	7.94	8.35											
2027	7.96	9.01	8.99	8.77	7.43	7.31	7.38	7.45	7.51	7.55	7.64	7.94	8.35												

**Appendix 6.1  
High Price Case**

	113%	113%	113%	110%	93%	92%	93%	94%	94%	94%	95%	96%	101%	106%
	January	February	March	April	May	June	July	August	September	October	November	December	November	December
Sumas	7.88	8.92	8.68	7.35	7.23	7.30	7.38	7.11	7.17	7.43	7.47	7.56	7.97	8.38
2008	7.88	8.92	8.68	7.35	7.23	7.30	7.38	7.11	7.17	7.43	7.47	7.56	7.97	8.38
2009	7.60	8.60	8.37	7.09	6.97	7.04	7.11	6.78	6.83	7.09	7.20	7.29	7.69	8.08
2010	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2011	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2012	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2013	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2014	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2015	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2016	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2017	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2018	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2019	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2020	7.25	8.20	8.18	7.98	6.76	6.65	6.78	6.83	6.87	6.95	6.87	6.95	7.33	7.70
2021	7.37	8.34	8.33	8.12	6.88	6.77	6.83	6.90	6.95	7.07	7.10	7.19	7.58	7.97
2022	7.50	8.48	8.47	8.25	6.99	6.88	7.02	7.07	7.19	7.23	7.31	7.44	7.85	8.24
2023	7.62	8.63	8.61	8.40	7.11	7.00	7.14	7.19	7.23	7.31	7.35	7.44	7.98	8.39
2024	7.76	8.78	8.76	8.54	7.24	7.12	7.26	7.31	7.35	7.44	7.48	7.57	7.98	8.39
2025	7.89	8.93	8.91	8.69	7.36	7.24	7.39	7.44	7.48	7.55	7.58	7.67	8.09	8.50
2026	8.00	9.05	9.04	8.81	7.46	7.34	7.49	7.55	7.58	7.65	7.69	7.78		
2027	8.11	9.18	9.16	8.93	7.57	7.44	7.59	7.65	7.69	7.78				
<b>Rockies</b>														
2008	7.24	8.19	8.18	7.97	6.76	6.65	6.78	6.83	6.86	6.95	6.86	6.95	7.32	7.70
2009	6.98	7.90	7.89	7.69	6.51	6.41	6.54	6.58	6.62	6.70	6.62	6.70	7.06	7.42
2010	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2011	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2012	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2013	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2014	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2015	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2016	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2017	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2018	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2019	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2020	6.66	7.53	7.52	7.33	6.21	6.11	6.23	6.28	6.31	6.39	6.31	6.39	6.73	7.08
2021	6.77	7.66	7.65	7.46	6.32	6.22	6.34	6.39	6.42	6.50	6.42	6.50	6.85	7.20
2022	6.89	7.79	7.78	7.59	6.43	6.32	6.45	6.50	6.53	6.61	6.53	6.61	6.97	7.32
2023	7.01	7.93	7.91	7.71	6.54	6.43	6.49	6.56	6.61	6.74	6.64	6.72	7.09	7.45
2024	7.13	8.06	8.05	7.85	6.65	6.54	6.60	6.67	6.76	6.84	6.76	6.84	7.21	7.58
2025	7.25	8.21	8.19	7.99	6.77	6.66	6.72	6.79	6.84	6.87	6.87	6.96	7.34	7.71
2026	7.35	8.32	8.31	8.10	6.86	6.75	6.81	6.88	6.93	6.97	6.97	7.05	7.44	7.82
2027	7.45	8.43	8.42	8.21	6.95	6.84	6.91	6.98	7.03	7.06	7.06	7.15		

**Appendix 6.1  
Low Price Case**

Real 2007\$	Nymex	AECO	86.0%	87.6%	80.5%
			Sumas	Rockies	Seasonal Shape
			February	March	January
2008	8.07	6.94	7.07	6.50	113%
2009	7.01	6.03	6.14	5.65	February
2010	6.60	5.68	5.78	5.31	March
2011	6.25	5.38	5.48	5.03	April
2012	6.11	5.25	5.35	4.92	May
2013	5.96	5.12	5.22	4.80	June
2014	5.98	5.14	5.24	4.81	July
2015	5.97	5.13	5.23	4.80	August
2016	6.09	5.24	5.34	4.90	September
2017	6.28	5.40	5.50	5.06	October
2018	6.34	5.46	5.56	5.11	November
2019	6.42	5.52	5.62	5.17	December
2020	6.55	5.63	5.73	5.27	106%
2021	6.62	5.70	5.80	5.33	
2022	6.76	5.81	5.92	5.44	
2023	6.89	5.93	6.04	5.55	
2024	7.04	6.06	6.17	5.67	
2025	7.11	6.11	6.22	5.72	
2026	7.19	6.18	6.30	5.79	
2027	7.29	6.27	6.38	5.87	

AECO	113%	113%	110%	93%	93%	92%	92%	94%	94%	95%	95%	96%	96%	101%	101%	106%
	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April
2008	6.94	7.85	7.84	7.64	6.48	6.37	6.43	6.50	6.55	6.58	6.66	7.02	7.38			
2009	6.03	6.82	6.81	6.64	5.63	5.54	5.59	5.65	5.69	5.72	5.79	6.10	6.41			
2010	5.68	6.42	6.41	6.25	5.30	5.21	5.26	5.31	5.35	5.38	5.44	5.74	6.03			
2011	5.38	6.08	6.07	5.92	5.02	4.94	4.98	5.03	5.07	5.10	5.16	5.44	5.72			
2012	5.25	5.94	5.93	5.78	4.90	4.82	4.87	4.92	4.95	4.98	5.04	5.31	5.58			
2013	5.12	5.80	5.79	5.64	4.78	4.70	4.75	4.80	4.83	4.86	4.91	5.18	5.45			
2014	5.14	5.82	5.81	5.66	4.80	4.72	4.77	4.81	4.85	4.88	4.93	5.20	5.47			
2015	5.13	5.81	5.80	5.65	4.79	4.71	4.76	4.80	4.84	4.86	4.92	5.19	5.46			
2016	5.24	5.93	5.92	5.77	4.89	4.81	4.85	4.90	4.94	4.96	5.02	5.30	5.57			
2017	5.40	6.11	6.10	5.95	5.04	4.96	5.01	5.06	5.10	5.12	5.18	5.47	5.74			
2018	5.46	6.17	6.16	6.01	5.09	5.01	5.06	5.11	5.14	5.17	5.23	5.52	5.80			
2019	5.52	6.25	6.24	6.08	5.15	5.07	5.12	5.17	5.21	5.23	5.30	5.58	5.87			
2020	5.63	6.37	6.36	6.20	5.25	5.17	5.22	5.27	5.31	5.34	5.40	5.69	5.98			
2021	5.70	6.45	6.44	6.27	5.32	5.23	5.28	5.33	5.37	5.40	5.46	5.76	6.06			
2022	5.81	6.58	6.57	6.40	5.42	5.34	5.39	5.44	5.48	5.51	5.58	5.88	6.18			
2023	5.93	6.71	6.70	6.53	5.53	5.44	5.49	5.55	5.59	5.62	5.69	6.00	6.30			
2024	6.06	6.85	6.84	6.67	5.65	5.56	5.61	5.67	5.71	5.74	5.81	6.13	6.44			
2025	6.11	6.91	6.90	6.73	5.70	5.61	5.66	5.72	5.76	5.79	5.86	6.18	6.50			
2026	6.18	6.99	6.98	6.81	5.77	5.67	5.73	5.79	5.83	5.86	5.93	6.25	6.57			
2027	6.27	7.09	7.08	6.90	5.85	5.75	5.81	5.87	5.91	5.94	6.01					



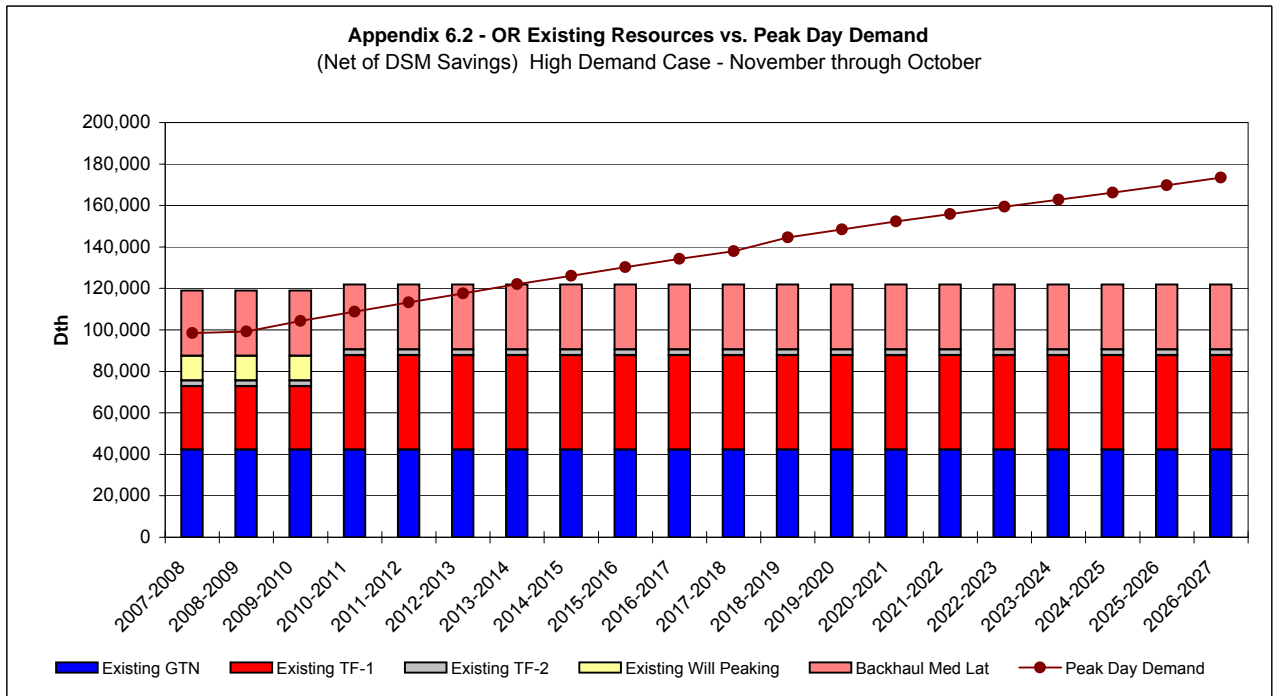
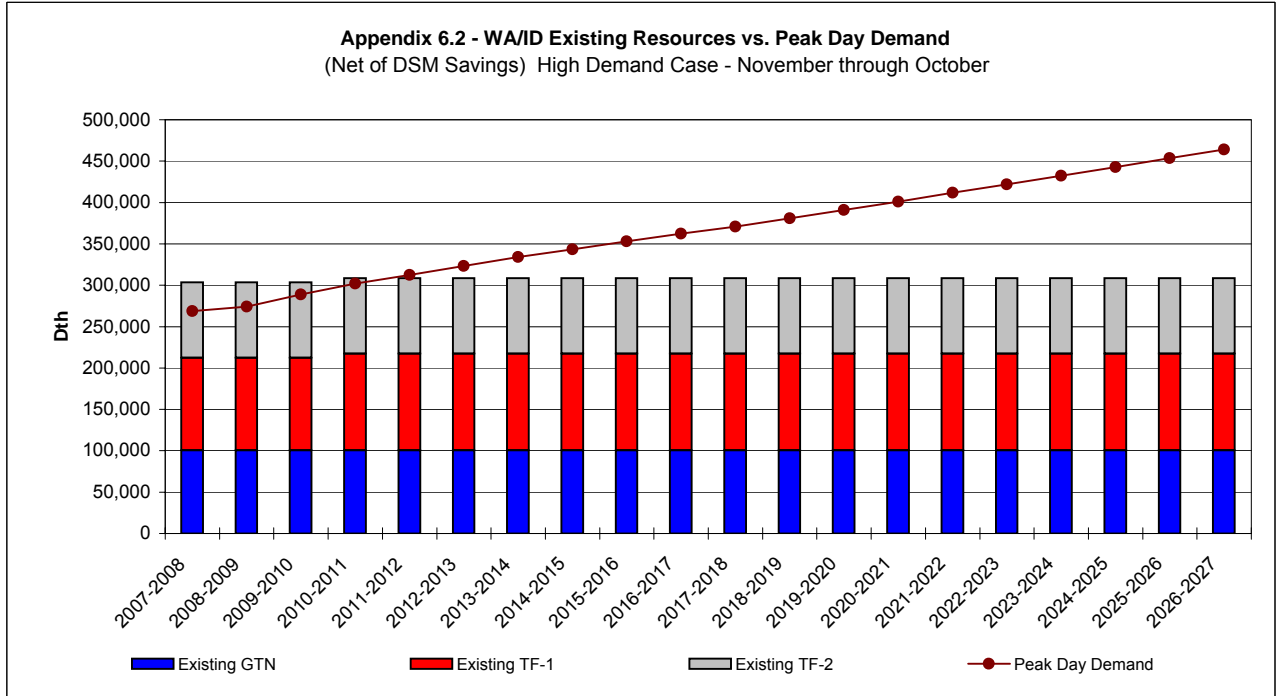
**Appendix 6.1  
Low Price Case**

Sumas	113% January	113% February	113% March	110% April	93% May	92% June	93% July	94% August	94% September	95% October	96% November	101% December	106% December
2008	7.07	8.00	7.99	7.79	6.60	6.49	6.55	6.62	6.67	6.70	6.78	7.15	7.51
2009	6.14	6.95	6.94	6.77	5.73	5.64	5.69	5.75	5.79	5.82	5.89	6.21	6.53
2010	5.78	6.54	6.53	6.37	5.39	5.31	5.36	5.41	5.45	5.48	5.55	5.85	6.15
2011	5.48	6.20	6.19	6.03	5.11	5.03	5.08	5.13	5.17	5.19	5.25	5.54	5.82
2012	5.35	6.05	6.04	5.89	4.99	4.91	4.96	5.01	5.04	5.07	5.13	5.41	5.69
2013	5.22	5.90	5.89	5.75	4.87	4.79	4.84	4.88	4.92	4.95	5.01	5.28	5.55
2014	5.24	5.93	5.92	5.77	4.89	4.81	4.85	4.90	4.94	4.97	5.03	5.30	5.57
2015	5.23	5.92	5.91	5.76	4.88	4.80	4.84	4.89	4.93	4.96	5.01	5.29	5.56
2016	5.34	6.04	6.03	5.88	4.98	4.90	4.94	4.99	5.03	5.06	5.12	5.40	5.67
2017	5.50	6.23	6.22	6.06	5.14	5.05	5.10	5.15	5.19	5.22	5.28	5.57	5.85
2018	5.56	6.29	6.28	6.12	5.18	5.10	5.15	5.20	5.24	5.27	5.33	5.62	5.91
2019	5.62	6.36	6.35	6.19	5.25	5.16	5.21	5.26	5.30	5.33	5.39	5.69	5.98
2020	5.73	6.49	6.48	6.32	5.35	5.26	5.31	5.37	5.41	5.44	5.50	5.80	6.10
2021	5.80	6.57	6.56	6.39	5.41	5.33	5.38	5.43	5.47	5.50	5.57	5.87	6.17
2022	5.92	6.70	6.69	6.52	5.53	5.44	5.49	5.54	5.58	5.61	5.68	5.99	6.29
2023	6.04	6.83	6.82	6.65	5.63	5.54	5.60	5.65	5.69	5.72	5.79	6.11	6.42
2024	6.17	6.98	6.97	6.79	5.76	5.66	5.72	5.77	5.82	5.85	5.92	6.24	6.56
2025	6.22	7.04	7.03	6.85	5.81	5.71	5.77	5.83	5.87	5.90	5.97	6.30	6.62
2026	6.30	7.12	7.11	6.93	5.87	5.78	5.83	5.89	5.94	5.97	6.04	6.37	6.69
2027	6.38	7.22	7.21	7.03	5.96	5.86	5.92	5.98	6.02	6.05	6.12		
Rockies													
2008	6.50	7.35	7.34	7.15	6.06	5.96	6.02	6.08	6.13	6.16	6.23	6.57	6.91
2009	5.65	6.39	6.38	6.22	5.27	5.18	5.23	5.28	5.32	5.35	5.42	5.71	6.00
2010	5.31	6.01	6.00	5.85	4.96	4.88	4.92	4.97	5.01	5.04	5.10	5.37	5.65
2011	5.03	5.70	5.69	5.54	4.70	4.62	4.66	4.71	4.75	4.77	4.83	5.09	5.35
2012	4.92	5.56	5.55	5.41	4.59	4.51	4.55	4.60	4.64	4.66	4.71	4.97	5.22
2013	4.80	5.43	5.42	5.28	4.47	4.40	4.44	4.49	4.52	4.55	4.60	4.85	5.10
2014	4.81	5.45	5.44	5.30	4.49	4.42	4.46	4.51	4.54	4.56	4.62	4.87	5.12
2015	4.80	5.44	5.43	5.29	4.48	4.41	4.45	4.50	4.53	4.55	4.61	4.86	5.11
2016	4.90	5.55	5.54	5.40	4.57	4.50	4.54	4.59	4.62	4.65	4.70	4.96	5.21
2017	5.06	5.72	5.71	5.57	4.72	4.64	4.69	4.73	4.77	4.79	4.85	5.12	5.38
2018	5.11	5.78	5.77	5.62	4.76	4.69	4.73	4.78	4.82	4.84	4.90	5.17	5.43
2019	5.17	5.85	5.84	5.69	4.82	4.74	4.79	4.84	4.87	4.90	4.96	5.23	5.49
2020	5.27	5.96	5.95	5.80	4.92	4.84	4.88	4.93	4.97	5.00	5.05	5.33	5.60
2021	5.33	6.03	6.02	5.87	4.98	4.90	4.94	4.99	5.03	5.05	5.12	5.39	5.67
2022	5.44	6.16	6.15	5.99	5.08	5.00	5.04	5.09	5.13	5.16	5.22	5.50	5.78
2023	5.55	6.28	6.27	6.11	5.18	5.09	5.14	5.19	5.23	5.26	5.32	5.61	5.90
2024	5.67	6.41	6.40	6.24	5.29	5.20	5.25	5.31	5.35	5.37	5.44	5.73	6.03
2025	5.72	6.47	6.46	6.30	5.34	5.25	5.30	5.35	5.39	5.42	5.49	5.79	6.08
2026	5.79	6.55	6.54	6.37	5.40	5.31	5.36	5.42	5.46	5.48	5.55	5.85	6.15
2027	5.87	6.64	6.63	6.46	5.47	5.39	5.44	5.49	5.53	5.56	5.63		

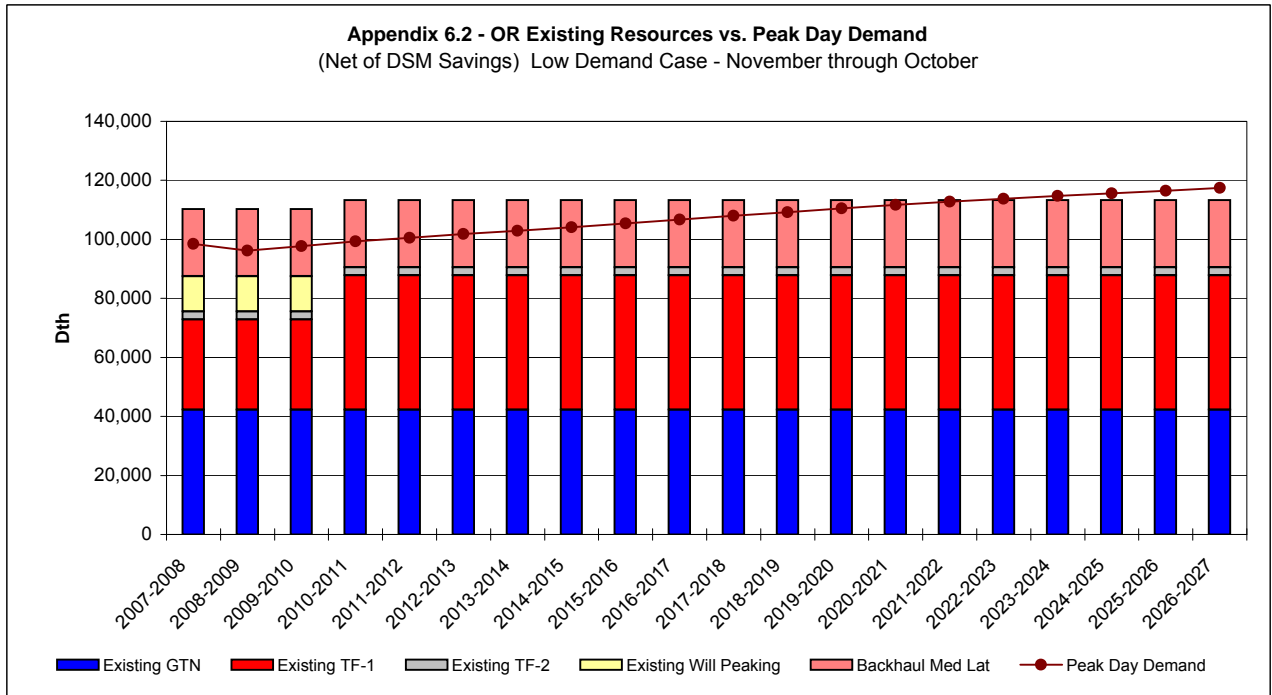
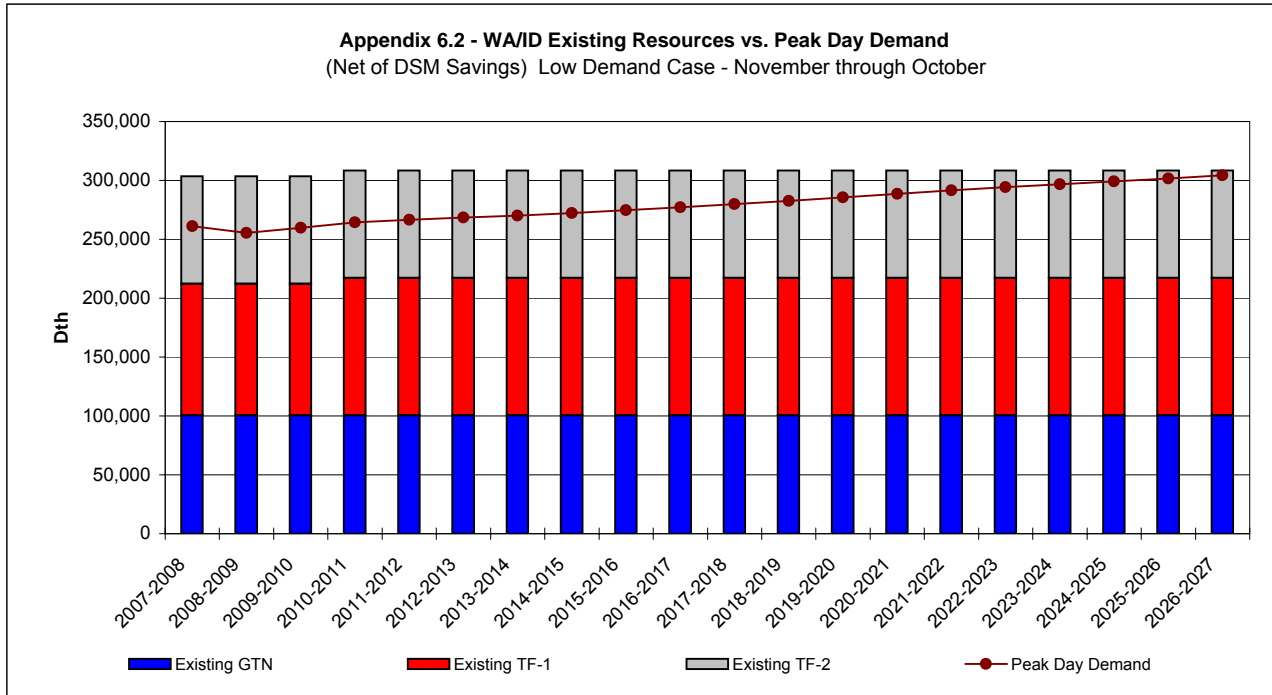
# **Existing Resource Comparisons**

## **Appendix 6.2**

# EXISTING RESOURCES



# EXISTING RESOURCES





# Served and Unserved Demand

## Appendix 6.3

**Appendix 6.3 - Peak Day Demand - Served and Unserved (MDth/d)  
Before Resource Additions & Net of DSM Savings**

<u>Case</u>	<u>Gas Year</u>	<u>La Grande Served</u>	<u>La Grande Unserved</u>	<u>La Grande Total</u>	<u>WA/ID Served</u>	<u>WA/ID Unserved</u>	<u>WA/ID Total</u>
High	2007-2008	9.86	-	9.86	268.89	-	268.89
High	2008-2009	9.84	-	9.84	274.08	-	274.08
High	2009-2010	10.15	-	10.15	288.99	-	288.99
High	2010-2011	10.25	0.12	10.37	302.02	-	302.02
High	2011-2012	10.25	0.35	10.60	307.42	5.08	312.50
High	2012-2013	10.25	0.55	10.81	307.52	15.85	323.37
High	2013-2014	10.25	0.75	11.00	307.67	26.28	333.95
High	2014-2015	10.25	0.96	11.21	307.63	35.82	343.45
High	2015-2016	10.25	1.18	11.43	307.23	45.98	353.21
High	2016-2017	10.25	1.34	11.59	305.66	56.53	362.19
High	2017-2018	10.25	1.48	11.74	302.65	68.27	370.91
High	2018-2019	10.25	1.63	11.88	301.21	79.62	380.83
High	2019-2020	10.25	1.80	12.05	299.82	91.08	390.91
High	2020-2021	10.25	1.93	12.18	298.64	102.42	401.06
High	2021-2022	10.25	2.07	12.32	297.43	114.37	411.80
High	2022-2023	10.25	2.18	12.44	296.29	125.77	422.06
High	2023-2024	10.25	2.29	12.55	295.18	137.33	432.51
High	2024-2025	10.25	2.40	12.65	295.99	146.68	442.67
High	2025-2026	10.25	2.51	12.76	296.85	156.57	453.43
High	2026-2027	10.25	2.63	12.88	297.70	166.35	464.05

<u>Case</u>	<u>Gas Year</u>	<u>Klamath Falls Served</u>	<u>Klamath Falls Unserved</u>	<u>Klamath Falls Total</u>	<u>Medford/Roseburg Served</u>	<u>Medford/Roseburg Unserved</u>	<u>Medford/Roseburg Total</u>
High	2007-2008	13.89	-	13.89	74.72	-	74.72
High	2008-2009	14.09	-	14.09	75.36	-	75.36
High	2009-2010	14.80	-	14.80	79.39	-	79.39
High	2010-2011	15.03	0.38	15.41	83.01	-	83.01
High	2011-2012	15.03	1.03	16.06	86.65	-	86.65
High	2012-2013	15.03	1.58	16.61	87.24	2.98	90.22
High	2013-2014	15.03	2.11	17.14	87.24	6.73	93.97
High	2014-2015	15.03	2.59	17.63	87.24	10.04	97.28
High	2015-2016	15.03	3.11	18.14	87.24	13.44	100.68
High	2016-2017	15.03	3.59	18.62	87.24	16.73	103.97
High	2017-2018	15.03	4.04	19.08	87.24	19.95	107.19
High	2018-2019	15.03	4.52	19.55	87.24	25.96	113.20
High	2019-2020	15.03	4.98	20.02	87.24	29.20	116.44
High	2020-2021	15.03	5.44	20.48	87.24	32.36	119.60
High	2021-2022	15.03	5.88	20.91	87.24	35.44	122.68
High	2022-2023	15.03	6.32	21.36	87.24	38.39	125.63
High	2023-2024	15.03	6.75	21.78	87.24	41.30	128.54
High	2024-2025	15.03	7.16	22.19	87.24	44.09	131.33
High	2025-2026	15.03	7.63	22.66	87.24	47.15	134.39
High	2026-2027	15.03	8.10	23.13	87.24	50.13	137.37

**Appendix 6.3 - Peak Day Demand - Served and Unserved (MDth/d)  
Before Resource Additions & Net of DSM Savings**

<u>Case</u>	<u>Gas Year</u>	<u>La Grande Served</u>	<u>La Grande Unserved</u>	<u>La Grande Total</u>	<u>WA/ID Served</u>	<u>WA/ID Unserved</u>	<u>WA/ID Total</u>
Low	2007-2008	9.69	-	9.69	261.11	-	261.11
Low	2008-2009	9.41	-	9.41	255.47	-	255.47
Low	2009-2010	9.49	-	9.49	259.69	-	259.69
Low	2010-2011	9.58	-	9.58	264.33	-	264.33
Low	2011-2012	9.62	-	9.62	266.56	-	266.56
Low	2012-2013	9.68	-	9.68	268.38	-	268.38
Low	2013-2014	9.72	-	9.72	270.22	-	270.22
Low	2014-2015	9.77	-	9.77	272.22	-	272.22
Low	2015-2016	9.83	-	9.83	274.67	-	274.67
Low	2016-2017	9.89	-	9.89	277.13	-	277.13
Low	2017-2018	9.94	-	9.94	279.87	-	279.87
Low	2018-2019	9.99	-	9.99	282.66	-	282.66
Low	2019-2020	10.04	-	10.04	285.59	-	285.59
Low	2020-2021	10.08	-	10.08	288.60	-	288.60
Low	2021-2022	10.13	-	10.13	291.69	-	291.69
Low	2022-2023	10.15	-	10.15	294.23	-	294.23
Low	2023-2024	10.16	-	10.16	296.74	-	296.74
Low	2024-2025	10.18	-	10.18	299.27	-	299.27
Low	2025-2026	10.19	-	10.19	301.72	-	301.72
Low	2026-2027	10.21	-	10.21	304.39	-	304.39

<u>Case</u>	<u>Gas Year</u>	<u>Klamath Falls Served</u>	<u>Klamath Falls Unserved</u>	<u>Klamath Falls Total</u>	<u>Medford/Roseburg Served</u>	<u>Medford/Roseburg Unserved</u>	<u>Medford/Roseburg Total</u>
Low	2007-2008	13.70	-	13.70	75.11	-	75.11
Low	2008-2009	13.37	-	13.37	73.44	-	73.44
Low	2009-2010	13.57	-	13.57	74.64	-	74.64
Low	2010-2011	13.80	-	13.80	75.98	-	75.98
Low	2011-2012	13.96	-	13.96	76.94	-	76.94
Low	2012-2013	14.10	-	14.10	78.00	-	78.00
Low	2013-2014	14.24	-	14.24	78.99	-	78.99
Low	2014-2015	14.38	-	14.38	79.98	-	79.98
Low	2015-2016	14.53	-	14.53	81.03	-	81.03
Low	2016-2017	14.68	-	14.68	82.14	-	82.14
Low	2017-2018	14.84	-	14.84	83.23	-	83.23
Low	2018-2019	14.98	-	14.98	84.27	-	84.27
Low	2019-2020	15.03	0.07	15.11	85.31	-	85.31
Low	2020-2021	15.03	0.22	15.25	86.36	-	86.36
Low	2021-2022	15.03	0.36	15.39	87.24	0.07	87.31
Low	2022-2023	15.03	0.47	15.50	87.24	0.87	88.11
Low	2023-2024	15.03	0.57	15.61	87.24	1.68	88.92
Low	2024-2025	15.03	0.68	15.71	87.24	2.44	89.68
Low	2025-2026	15.03	0.80	15.83	87.24	3.21	90.45
Low	2026-2027	15.03	0.91	15.94	87.24	4.03	91.27





# **Supply-Side Resources**

## **Appendix 6.4**

### Appendix 6.4 - Supply-Side Resources Potential Additional Supply Resources

Facility/Location	Annual (Dth)	Daily (Dth) Delivery	Year Avail. 3/	Lead Time	Investment Cost \$(000's)	Variable Cost \$(000's)	Availability
<b>WA/ID</b>							
AECO Supply	Varies	Varies	1	<1 year	n/a	Commodity	Daily
Sumas/Station 2	Varies	Varies	1	<1 year	n/a	Commodity	Daily
Rockies	Varies	Varies	1	<1 year	n/a	Commodity	Daily
WA/ID Satellite LNG #1	25,000	5,000	10	7 years	7,000	Commodity + \$1.0MM/yr	Peaking
WA/ID Satellite LNG #2	50,000	10,000	10	7 years	12,000	Commodity + \$1.0MM/yr	Peaking
<b>Oregon</b>							
AECO Supply	Varies	Varies	1	<1 year	n/a	Commodity	Daily
Sumas/Station 2 Supply	Varies	Varies	1	<1 year	n/a	Commodity	Daily
Rockies Supply	Varies	Varies	1	<1 year	n/a	Commodity	Daily
Malin Supply	Varies	Varies	1	<1 year	n/a	Commodity	Daily
KFalls Lateral Purchase 2/	0	0	1	<1 year	3,000	none	n/a
KFalls Lateral Enhancement 2/	2,190,000	6,000	1	<1 year	0	Commodity	Annual
La Grande Dist. Enhance. #1	1,460,000	4,000	3	2 years	3,000	Commodity	Annual
Medford Satellite LNG #1	90,000	15,000	5	7 years	14,000	Commodity + \$1.5MM/yr	Peaking
Medford Satellite LNG #2	90,000	15,000	10	7 years	14,000	Commodity + \$1.5MM/yr	Peaking
California Storage 3/	1,000,000	10,000		<1 year	\$2.00 per Dth Inventory	n/a	Peaking
California Storage 3/	1,000,000	10,000		<1 year	\$2.00 per Dth Inventory	n/a	Peaking
Roseburg Satellite LNG	90,000	15,000	10	7 years	14,000	Commodity + \$1.0MM/yr	Peaking
Klamath Falls Satellite LNG	25,000	5,000	5	7 years	7,000	Commodity + \$1.0MM/yr	Peaking
Med. Company Owned LNG	n/a	n/a	n/a	n/a	n/a	n/a	Peaking

1/ Utilizes Malin supply

2/ This column is intended to indicate the first year in which the resource is available. The resource is assumed to be available in each subsequent year

3/ Requires redelivery service via backhauls

**Appendix 6.4 - Supply-Side Resources**  
**Potential Contract Demand Expansions/Additions**

Location	Pipeline/ Facility	Identification	Daily (Dth) Capacity	Year 3/ Available	Lead Time	Capital Cost \$ (000's)	Cost Dth 4/	Notes
<b>WA/ID</b>								
	NWP	NWP Capacity Release Recalls	17,000	4	1 year	n/a	NWP Rate	Recall long-term capacity releases - 2012
	NWP	NWP from GTN #1	25,000	4	3 years	4,000	NWP Rate	Expansion to facilitate additional GTN deliveries
	NWP	NWP from GTN #2	25,000	8	3 years	4,300	NWP Rate	Expansion to facilitate additional GTN deliveries
	NWP	NWP from GTN #3	25,000	12	3 years	4,600	NWP Rate	Expansion to facilitate additional GTN deliveries
	NWP	NWP from GTN #4	50,000	4	3 years	8,000	NWP Rate	Expansion to facilitate additional GTN deliveries
	NWP	NWP from GTN #5	75,000	8	3 years	12,000	NWP Rate	Expansion to facilitate additional GTN deliveries
	NWP	NWP from GTN #6	40,000	12	3 years	6,600	NWP Rate	Expansion to facilitate additional GTN deliveries
	TransCanada AECO to WA/ID	AECO to Spokane #1	25,000	1	<1 year	n/a	GTN/TC Rates	Existing available capacity from AECO to Stanfield. GTN capacity assumed to be winter only.
	TransCanada AECO to WA/ID	AECO to Spokane #2	25,000	1	<1 year	n/a	GTN/TC Rates	Existing available capacity from AECO to Stanfield.
	TransCanada AECO to WA/ID	AECO to Spokane #3	25,000	1	<1 year	n/a	GTN/TC Rates	Existing available capacity from AECO to Stanfield. GTN capacity assumed to be winter only.
	TransCanada AECO to WA/ID	AECO to Spokane #4	50,000	1	<1 year	n/a	GTN/TC Rates	Existing available capacity from AECO to Stanfield.
	TransCanada AECO to WA/ID	AECO to Stanfield #5	60,000	1	<1 year	n/a	GTN/TC Rates	Existing available capacity from AECO to Stanfield.
	TransCanada AECO to WA/ID	AECO to Stanfield #6	40,000	1	<1 year	n/a	GTN/TC Rates	Existing available capacity from AECO to Stanfield.
	NWP	NWP JP Transport Expansion #1	25,000	4	4 years	n/a	NWP Rate X 3.0	Transport Expansion for JP to WA/ID
	NWP	NWP JP Transport Expansion #2	50,000	4	4 years	n/a	NWP Rate X 3.0	Transport Expansion for JP to WA/ID
	NWP	NWP JP Transport Expansion #3	100,000	4	4 years	n/a	NWP Rate X 3.0	Transport Expansion for JP to WA/ID
	NWP	NWP Sumas to WA/ID #1	20,000	5	4 years	n/a	NWP Rate X 4.0	Transport Expansion for Sumas to WA/ID
	NWP	NWP Sumas to WA/ID #2	20,000	10	4 years	n/a	NWP Rate X 4.0	Transport Expansion for Sumas to WA/ID
	NWP	NWP Rocks to WA/ID #1	20,000	5	4 years	n/a	NWP Rate X 4.0	Transport Expansion for Rocks to WA/ID
	NWP	NWP Rocks to WA/ID #2	20,000	10	4 years	n/a	NWP Rate X 4.0	Transport Expansion for Rocks to WA/ID
<b>Oregon</b>								
	NWP	NWP Capacity Release Recalls	6,700	4	1 year	n/a	NWP Rate	Recall long-term capacity releases - 2012
	Medford Lateral Expansion 2/5/	GTN Med. Lateral Expansion #1	20,000	4	3 years	n/a	Existing GTN Rate	Expansion of Medford lateral with compression. Allows NWP cap. to be redirected to Roseburg
	Medford Lateral Expansion 2/5/	GTN Med. Lateral Expansion #1	25,000	4	3 years	n/a	Existing GTN Rate	Expansion of Medford lateral with compression. Allows NWP cap. to be redirected to Roseburg
	Medford Lateral Expansion 2/5/	GTN Med. Lateral Expansion #2	20,000	8	3 years	n/a	Existing GTN Rate	Expansion of Medford lateral with compression. Allows NWP cap. to be redirected to Roseburg
	Medford Lateral Expansion 2/5/	GTN Med. Lateral Expansion #2	25,000	8	3 years	n/a	Existing GTN Rate	Expansion of Medford lateral with compression. Allows NWP cap. to be redirected to Roseburg
	Medford Lateral Expansion 2/5/	GTN Med. Lateral Expansion #3	25,000	12	3 years	n/a	Existing GTN Rate	Expansion of Medford lateral with compression. Allows NWP cap. to be redirected to Roseburg
	Med. Lat. Klamath Expansion 2/	GTN Med. Lateral Expansion #4	5,000	4	3 years	n/a	Existing GTN Rate	Expansion of Medford lateral with compression. Klamath deliveries only
	NWP Zone 24,26,16,12,9,8 1/	NWP Sumas to Medford Exp. #1	20,000	4	4 years	n/a	NWP Rate X 5.0	Transport Expansion for Sumas to Medford
	NWP Zone 24,26,16,12,9,8 1/	NWP Rocks to Medford Exp. #1	20,000	4	4 years	n/a	NWP Rate X 5.0	Transport Expansion for Rocks to Medford
	NWP Zone 26,16,12,9,8 1/	NWP JP to Medford Exp. #1	20,000	4	4 years	n/a	NWP Rate X 3.5	Transport Expansion for JP to Medford
	California Storage Transport	CA Storage Backhaul #1	10,000	1	<1 year	n/a	CGT, GTN Rates	Current PG&E CGT, GTN mainline and Medford rates. Combined with CA storage above
	California Storage Transport	CA Storage Backhaul #2	10,000	1	<1 year	n/a	CGT, GTN Rates	Current PG&E CGT, GTN mainline and Medford rates. Combined with CA storage above

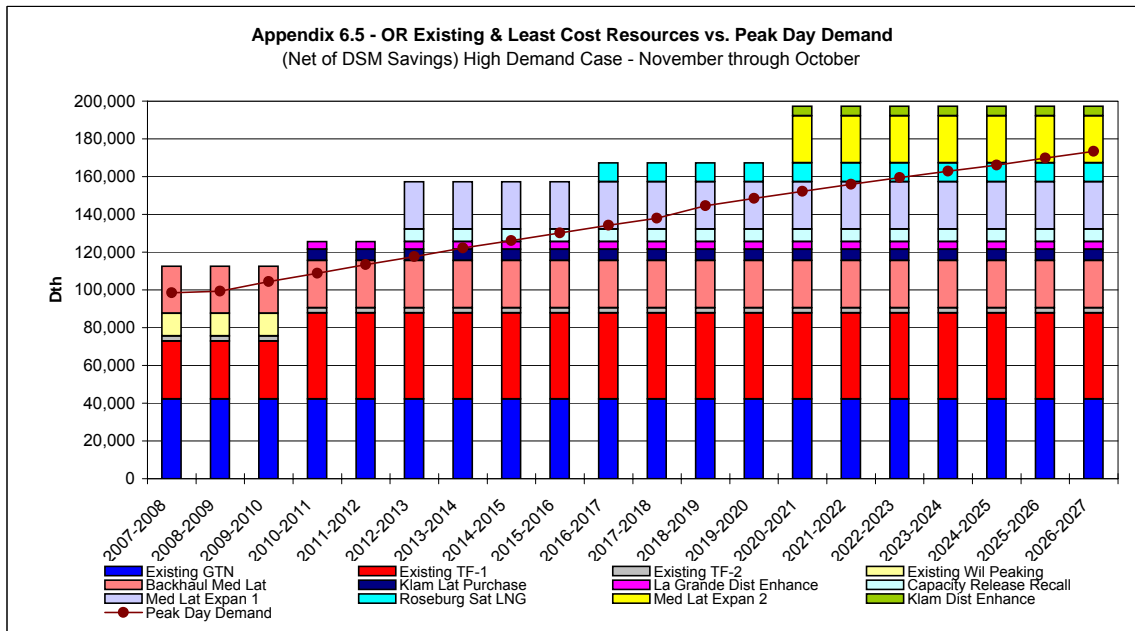
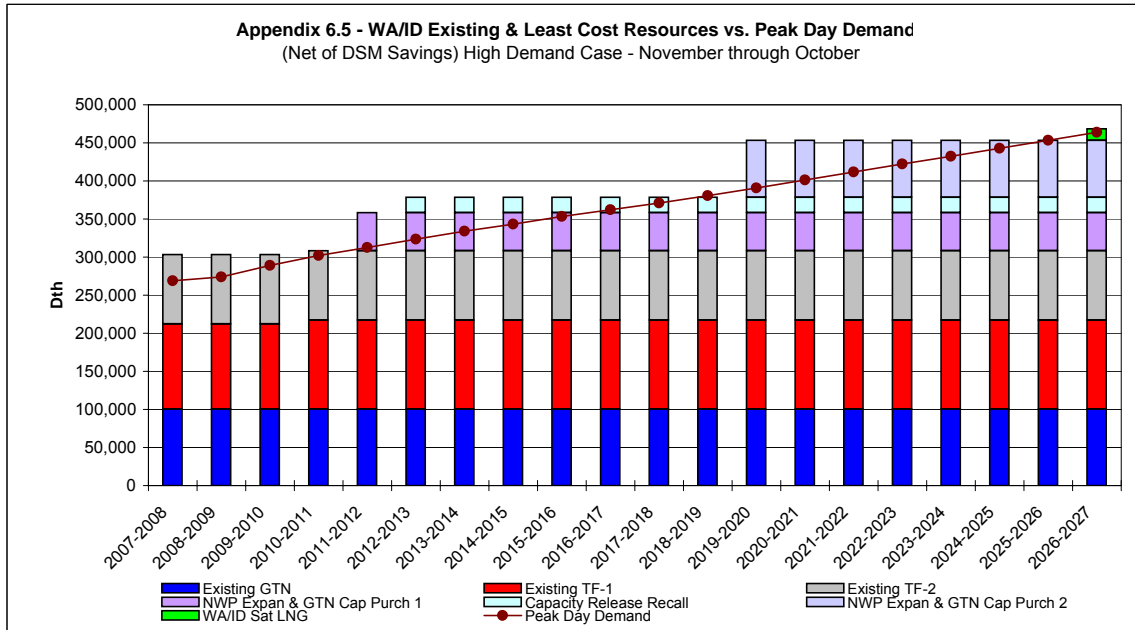
1/ Assumes additional participation in expansion by other customers  
 2/ Utilizes Main supply  
 3/ This column is intended to indicate the first year in which the resource is available. The resource is assumed to be available in each subsequent year until utilized  
 4/ All existing rates escalated at inflation rate  
 5/ Requires a distribution system enhancement in Medford area to facilitate expansion deliveries. Avista anticipates this enhancement being completed in 2007 and is driven by Integrity Management related activity in the Medford area. The approximate capital cost of this project is \$11MM and will likely be incurred whether or not a GTN Medford lateral expansion is selected by the SENDOUT model for resource additions.  
 6/ Transportation resources are assumed to be annual contracts. However, to the extent winter only capacity is available the company will pursue those options.



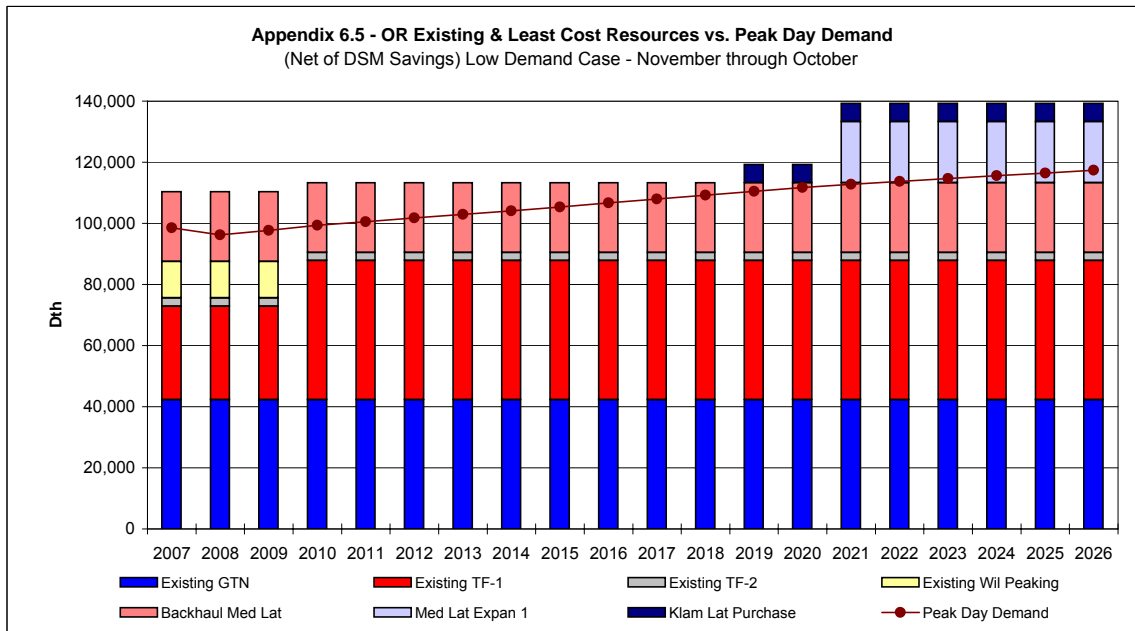
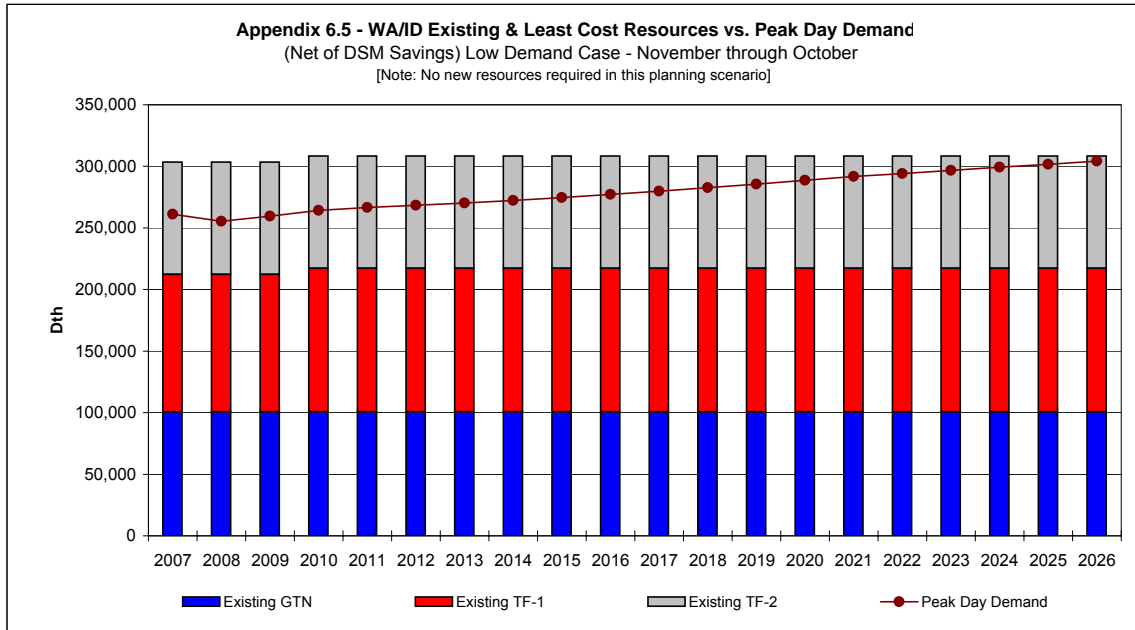
# **Future Resource Comparisons**

## **Appendix 6.5**

## EXISTING AND LEAST COST RESOURCES



## EXISTING AND LEAST COST RESOURCES



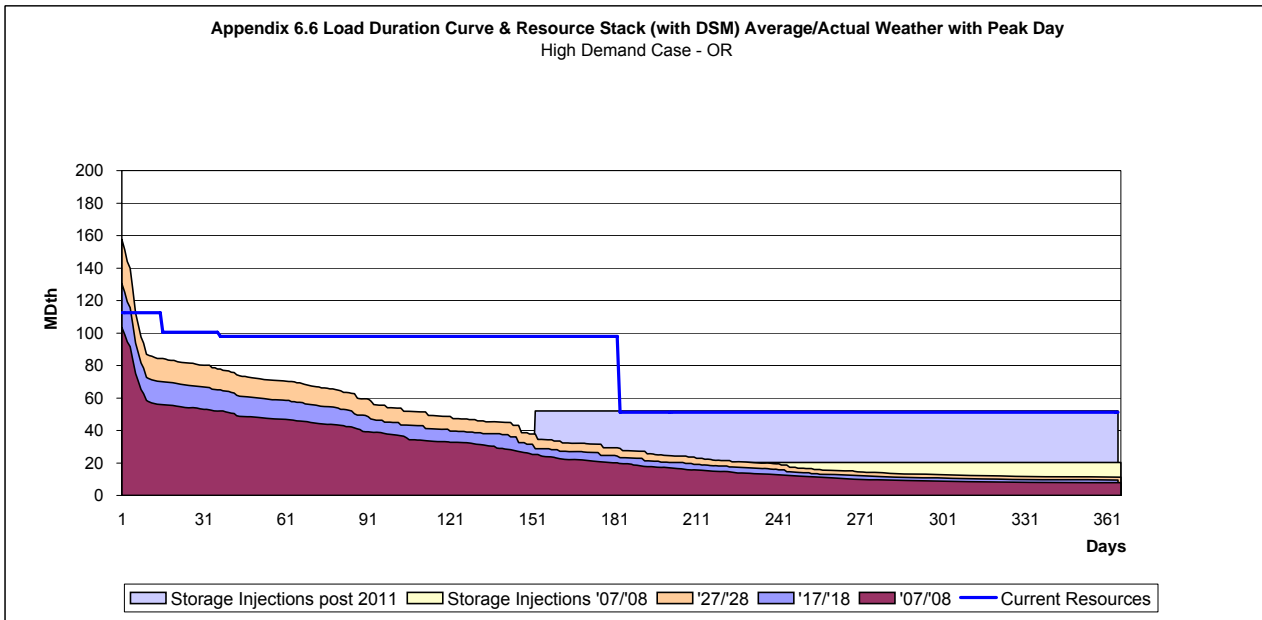
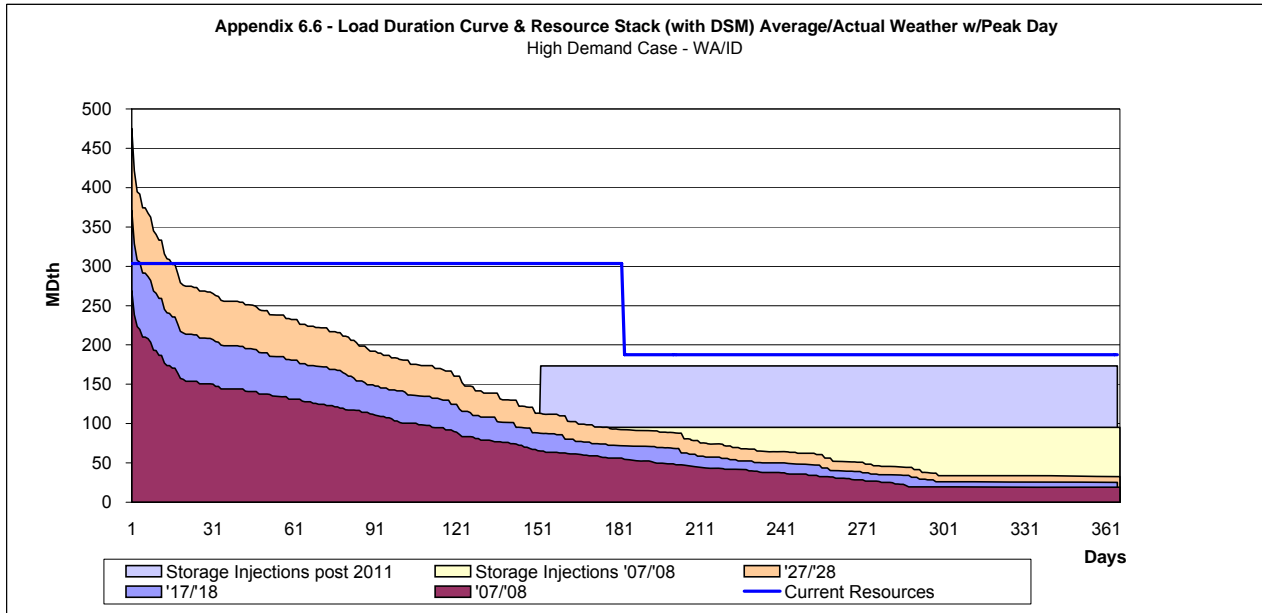




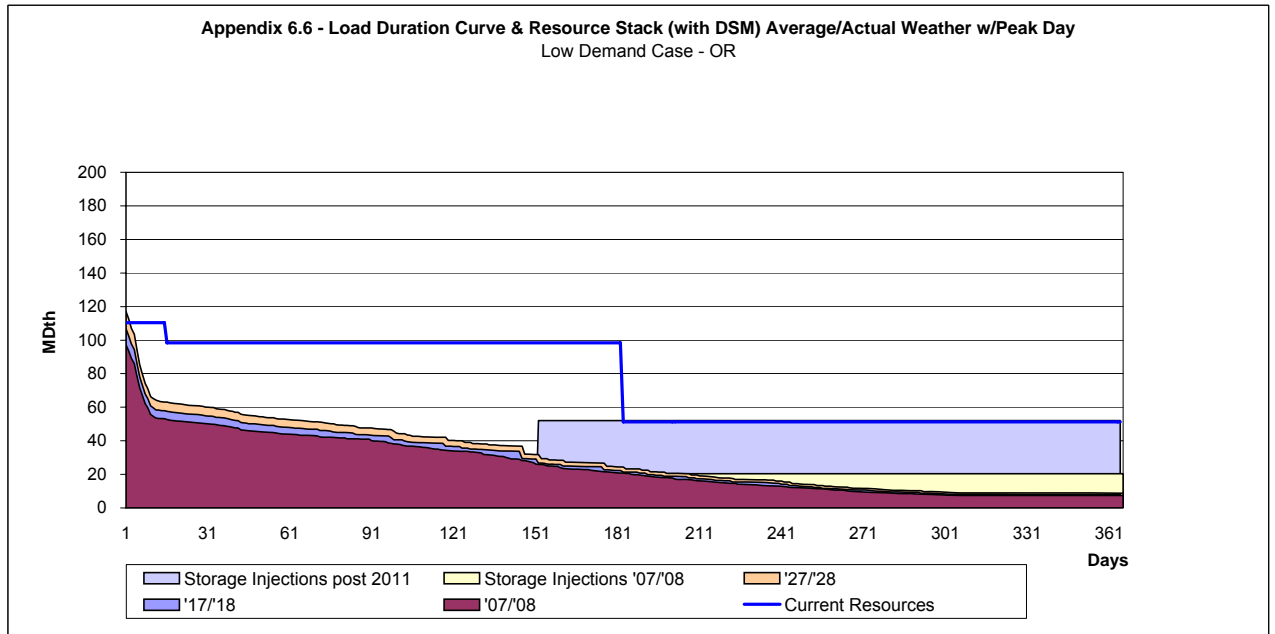
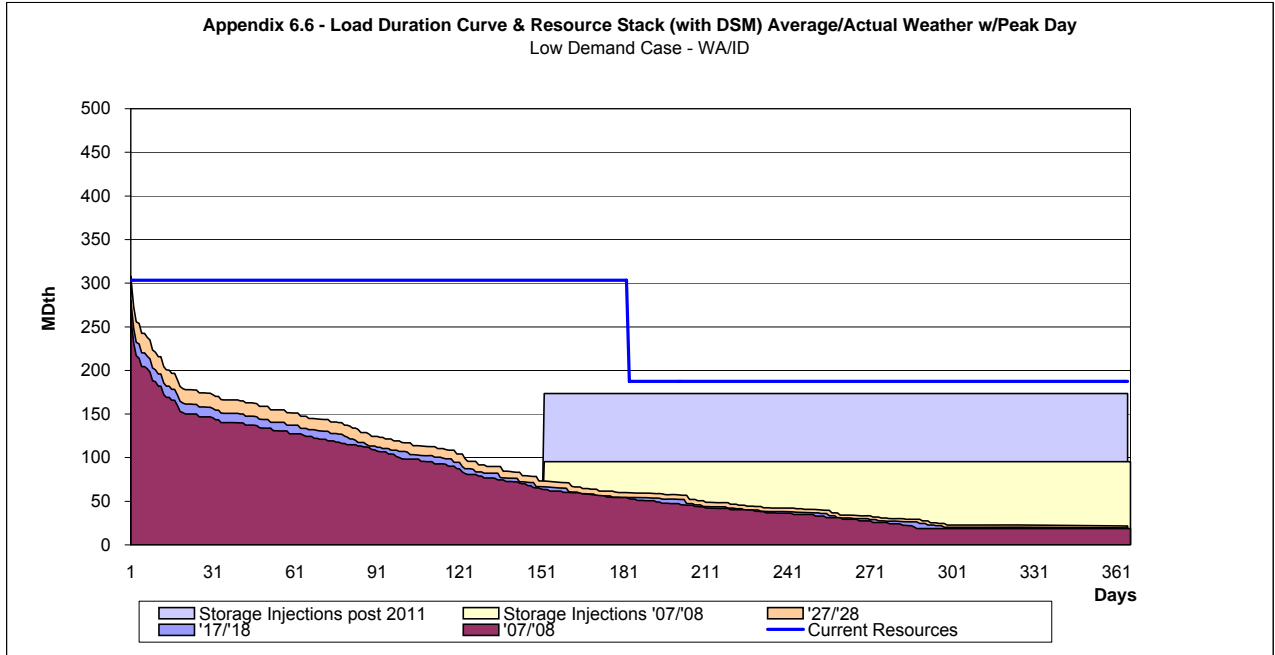
# Load Duration Curves

## Appendix 6.6

## Load Duration Curves



## Load Duration Curves





# **Resource Selections**

## **Appendix 6.7**

### Appendix 6.7 - Least Cost Supply-Side Resource Additions Selected by SENDOUT®

Appendix 6.7, 2007 Avista Natural Gas IRP

#### High Demand Case

Item #	Region	Type	Quantity 2/	Timing	Rates/Charges	Description
<b>Washington/Idaho</b>						
1	WA/ID	Capacity Release	20,078	November 2012	NWP TF-1 Rate	Recall long-term capacity releases - 2012
2	WA/ID	Transportation	50,000 - 75,000	November 2011 & 2019	NWP Expansion Rate	WA/ID area expansions to facilitate the delivery in and around Spokane, Lewiston, etc. from GTN into NWP
3	WA/ID	Transportation	50,000	November 2011	TransCanada Rates from Alberta to Stanfield	Acquisition of existing capacity from Alberta to Stanfield on the TransCanada pipelines. Assumed current transportation rates (escalated for inflation). Assumed winter-only capacity on GTN
4	WA/ID	Transportation	75,000	November 2019	TransCanada Rates from Alberta to Stanfield	Acquisition of existing capacity from Alberta to Stanfield on the TransCanada pipelines. Assumed current transportation rates (escalated for inflation). Assumed winter-only capacity on GTN
5	WA/ID	Satellite LNG	15,000	November 2026	Commodity plus Variable	Provides for peaking services and alleviates the need for further costly pipeline construction.
<b>Oregon</b>						
6	OR	Capacity Release	6,700	November 2012	NWP TF-1 Rate	Recall long-term capacity releases - 2012
7	Klamath Falls	Distribution Enhancement	6,000	November 2010	n/a	Purchase of NWP Klamath pipeline segment. Purchase price is approximately \$3 MM capital cost. Purchase may occur as early as 2008/2009 and the price can be allocated towards additional infrastructure. Contract capacity is to be relocated elsewhere.
8	La Grande	Distribution Enhancement	4,000	November 2010	n/a	La Grande distribution system enhancement to install high-pressure distribution system looping from adjacent city gate station such that the La Grande distribution system will be reinforced. The expected capital cost for this enhancement is approximately \$3MM
9	Medford/Roseburg	Distribution Enhancement	n/a	November 2012	n/a	Distribution system enhancement to allow more GTN-based deliveries to the Medford area. This will allow Avista to redirect NWP Grants Pass Lateral deliveries from Medford to Roseburg. The expected capital cost for this Integrity Management related activity is approximately \$14.2MM.
10	Medford/Roseburg	Transportation	25,000	November 2012	GTN's Med. Lat. Rate	GTN expansion of the Medford Lateral. Assumed current lateral rates, escalated for inflation, for expansion. Item #9 above required to facilitate this option.
11	Medford/Roseburg	Transportation	25,000	November 2020	GTN's Med. Lat. Rate	GTN expansion of the Medford Lateral. Assumed current lateral rates, escalated for inflation, for expansion. Item #9 above required to facilitate this option.
12	Roseburg	Satellite LNG	10,000	November 2016	Commodity plus Variable	Supply alleviates Grants Pass Lateral issues and provides peaking services.
13	Klamath Falls	Transportation	5,000	November 2020	GTN's Med. Lat. Rate	GTN expansion of the Medford Lateral. Assumed current lateral rates, escalated for inflation, for expansion. Item #7 above required to facilitate this option.

1/ Does not include DSM therm savings. Therms associated with DSM programs included in DSM Appendix.

2/ Quantity Dth/d unless otherwise noted

**Appendix 6.7 - Least Cost Supply-Side Resource Additions Selected by SENDOUT®**

**Low Demand Case**

Item #	Region	Type	Quantity 2/	Timing	Rates/Charges	Description
1	Klamath Falls	Distribution Enhancement	6,000	Nov-19	n/a	Purchase of NWP Klamath pipeline segment. Purchase price is approximately \$3 MM capital cost. Purchase may occur as early as 2008/2009 and the price can be allocated towards additional infrastructure. Contract capacity is to be relocated elsewhere. Not needed for peak needs in this case but provides other core benefits.
2	Medford/Roseburg	Distribution Enhancement	n/a	Nov-21	n/a	Distribution system enhancement to allow more GTN-based deliveries to the Medford area. This will allow Avista to redirect NWP Grants Pass Lateral deliveries from Medford to Roseburg. The expected capital cost GTN expansion of the Medford Lateral. Assumed current lateral rates, escalated by inflation, for expansion. Item #2 above required to facilitate this option
3	Medford/Roseburg	Transportation	20,000	Nov-21	GTN's Med. Lat. Rate	

1/ Does not include DSM therm savings. Terms associated with DSM programs included in DSM Appendix.

2/ Quantity Div'd unless otherwise noted





# **Demand-Side Management Savings**

## **Appendix 6.8**

**Appendix 6.8 - Annual and Annual Average Demand Served by Demand-Side Management 1**

Case	Gas Year	Annual Klamath		Daily Klamath		Annual LaGrande		Daily LaGrande		Annual Medford		Daily Medford		Annual Roseburg		Daily Roseburg		Annual Oregon		Daily Oregon		Annual WAVID		Daily WAVID		Annual Total System DSM		Daily Total System DSM	
		(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)	(MWh)	(MDth/d)
Expected	<b>2007-2008</b>	3.589	0.010	1.695	0.005	11.117	0.030	3.112	0.009	19.513	0.053	67.664	0.185	87.177	0.239														
Expected	<b>2008-2009</b>	7.408	0.020	3.381	0.009	22.142	0.060	6.202	0.017	39.134	0.107	134.837	0.368	173.971	0.475														
Expected	<b>2009-2010</b>	11.112	0.030	5.072	0.014	33.214	0.091	9.303	0.025	58.701	0.161	202.255	0.554	260.956	0.715														
Expected	<b>2010-2011</b>	14.816	0.041	7.044	0.019	44.285	0.121	12.404	0.034	78.549	0.215	269.674	0.739	348.223	0.954														
Expected	<b>2011-2012</b>	18.580	0.051	8.829	0.024	55.584	0.152	15.561	0.043	98.554	0.269	338.321	0.924	436.875	1.194														
Expected	<b>2012-2013</b>	22.223	0.061	10.566	0.029	66.427	0.182	18.607	0.051	117.824	0.323	500.544	1.371	618.368	1.694														
Expected	<b>2013-2014</b>	25.927	0.071	12.327	0.034	77.644	0.213	21.708	0.059	137.606	0.377	694.854	1.904	832.461	2.281														
Expected	<b>2014-2015</b>	29.789	0.081	14.695	0.040	92.751	0.253	25.609	0.070	162.845	0.445	881.620	2.409	1,044.465	2.854														
Expected	<b>2015-2016</b>	32.318	0.089	15.868	0.043	104.962	0.288	27.237	0.075	180.385	0.494	1,020.652	2.796	1,201.038	3.291														
Expected	<b>2016-2017</b>	34.645	0.095	16.937	0.046	110.941	0.304	28.610	0.078	191.134	0.524	1,155.248	3.165	1,346.381	3.689														
Expected	<b>2017-2018</b>	37.091	0.101	18.063	0.049	117.471	0.321	30.109	0.082	202.734	0.554	1,232.522	3.368	1,435.256	3.921														
Expected	<b>2018-2019</b>	39.481	0.108	19.181	0.053	125.588	0.344	31.605	0.087	215.855	0.591	1,309.797	3.588	1,525.652	4.180														
Expected	<b>2019-2020</b>	42.011	0.115	20.359	0.056	132.596	0.363	33.179	0.091	228.145	0.625	1,392.710	3.816	1,620.854	4.441														
Expected	<b>2020-2021</b>	44.125	0.121	21.356	0.058	137.980	0.377	35.662	0.097	239.124	0.653	1,464.292	4.001	1,703.415	4.654														
Expected	<b>2021-2022</b>	48.821	0.134	22.407	0.061	143.930	0.394	37.075	0.102	252.232	0.691	1,541.539	4.223	1,793.772	4.914														
Expected	<b>2022-2023</b>	51.104	0.140	23.383	0.064	149.423	0.409	38.385	0.105	262.296	0.719	1,617.415	4.431	1,879.711	5.150														
Expected	<b>2023-2024</b>	53.570	0.147	24.424	0.067	155.608	0.426	39.853	0.109	273.454	0.749	1,700.313	4.658	1,973.767	5.408														
Expected	<b>2024-2025</b>	55.672	0.152	25.334	0.069	160.410	0.438	41.006	0.112	282.422	0.772	1,762.283	4.815	2,044.705	5.587														
Expected	<b>2025-2026</b>	57.956	0.159	26.309	0.072	165.904	0.455	42.316	0.116	292.485	0.801	1,831.275	5.017	2,123.760	5.819														
Expected	<b>2026-2027</b>	60.221	0.165	27.280	0.075	171.243	0.469	43.603	0.119	302.348	0.828	1,900.267	5.206	2,202.615	6.035														

**Appendix 6.8 - Annual and Annual Average Demand Served by Demand-Side Management 1**

Case	Gas Year	Annual Klamath		Daily Klamath		Annual LaGrande		Daily LaGrande		Annual Medford		Daily Medford		Annual Roseburg		Daily Roseburg		Annual Oregon		Daily Oregon		Annual WA/ID		Daily WA/ID		Annual Total System DSM		Daily Total System DSM	
		(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)
High	2007-2008	3.589	0.010	1.695	0.005	11.117	0.030	3.112	0.009	19.513	0.053	67.664	0.185	87.177	0.239														
High	2008-2009	7.408	0.020	3.381	0.009	22.142	0.060	6.202	0.017	39.134	0.107	134.837	0.368	173.971	0.475														
High	2009-2010	11.112	0.030	5.072	0.014	33.214	0.091	9.303	0.025	58.701	0.161	202.255	0.554	260.956	0.715														
High	2010-2011	14.816	0.041	6.763	0.019	44.285	0.121	12.404	0.034	78.268	0.214	269.674	0.739	347.942	0.953														
High	2011-2012	18.580	0.051	8.829	0.024	55.584	0.152	15.561	0.043	98.554	0.269	338.321	0.924	436.875	1.194														
High	2012-2013	22.223	0.061	10.566	0.029	66.427	0.182	18.607	0.051	117.824	0.323	457.131	1.252	574.954	1.575														
High	2013-2014	25.927	0.071	12.327	0.034	77.508	0.212	21.716	0.059	137.478	0.377	587.382	1.609	724.860	1.986														
High	2014-2015	29.669	0.081	14.088	0.038	92.245	0.252	25.712	0.070	161.714	0.442	881.074	2.407	1,042.788	2.849														
High	2015-2016	32.269	0.088	15.848	0.043	105.939	0.290	28.100	0.077	182.157	0.499	1,043.901	2.860	1,226.058	3.359														
High	2016-2017	34.592	0.095	16.937	0.046	112.107	0.307	29.584	0.081	193.220	0.529	1,129.535	3.095	1,322.755	3.624														
High	2017-2018	37.030	0.101	18.049	0.049	118.880	0.325	31.168	0.085	205.128	0.560	1,232.522	3.368	1,437.650	3.928														
High	2018-2019	39.481	0.108	19.181	0.053	125.588	0.344	32.710	0.090	216.960	0.594	1,309.797	3.588	1,526.756	4.183														
High	2019-2020	42.011	0.115	20.349	0.056	132.596	0.363	34.381	0.094	229.338	0.628	1,392.710	3.816	1,622.047	4.444														
High	2020-2021	44.125	0.121	21.356	0.058	137.980	0.377	35.662	0.097	239.124	0.653	1,464.292	4.001	1,703.415	4.654														
High	2021-2022	46.380	0.127	22.407	0.061	143.930	0.394	37.075	0.102	249.791	0.684	1,541.539	4.223	1,791.331	4.908														
High	2022-2023	51.104	0.140	23.383	0.064	149.423	0.409	38.385	0.105	262.296	0.719	1,617.415	4.431	1,879.711	5.150														
High	2023-2024	53.570	0.147	24.424	0.067	155.608	0.426	39.853	0.109	273.454	0.749	1,700.313	4.658	1,973.767	5.408														
High	2024-2025	55.672	0.152	25.334	0.069	160.410	0.438	41.006	0.112	282.422	0.772	1,762.283	4.815	2,044.705	5.587														
High	2025-2026	57.956	0.159	26.309	0.072	165.904	0.455	42.316	0.116	292.485	0.801	1,831.275	5.017	2,123.760	5.819														
High	2026-2027	60.221	0.165	27.280	0.075	171.243	0.469	43.603	0.119	302.348	0.828	1,900.267	5.206	2,202.615	6.035														

**Appendix 6.8 - Annual and Annual Average Demand Served by Demand-Side Management 1**

Case	Gas Year	Annual Klamath		Daily Klamath		Annual LaGrande		Daily LaGrande		Annual Medford		Daily Medford		Annual Roseburg		Daily Roseburg		Annual Oregon		Daily Oregon		Annual WA/ID		Daily WA/ID		Annual Total System DSM		Daily Total System DSM	
		(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)	(MDth)	(MDth/d)
Low	2007-2008	3.589	0.010	1.695	0.005	11.117	0.030	3.112	0.009	19.513	0.053	67.664	0.185	87.177	0.239														
Low	2008-2009	7.408	0.020	3.381	0.009	22.142	0.060	6.202	0.017	39.134	0.107	134.837	0.368	173.971	0.475														
Low	2009-2010	11.112	0.030	5.072	0.014	33.214	0.091	9.303	0.025	58.701	0.161	202.255	0.554	260.956	0.715														
Low	2010-2011	14.816	0.041	7.044	0.019	44.285	0.121	12.404	0.034	78.549	0.215	269.674	0.739	348.223	0.954														
Low	2011-2012	18.580	0.051	8.829	0.024	55.584	0.152	15.561	0.043	98.554	0.269	419.532	1.146	518.087	1.416														
Low	2012-2013	22.252	0.061	10.566	0.029	68.291	0.187	18.607	0.051	119.716	0.328	603.431	1.653	723.147	1.981														
Low	2013-2014	26.065	0.071	12.859	0.035	81.157	0.222	22.490	0.062	142.571	0.391	772.054	2.115	914.625	2.506														
Low	2014-2015	29.840	0.082	14.713	0.040	92.922	0.254	25.702	0.070	163.178	0.446	924.198	2.525	1,087.376	2.971														
Low	2015-2016	32.415	0.089	15.871	0.043	105.297	0.288	27.316	0.075	180.900	0.496	1,043.901	2.860	1,224.801	3.356														
Low	2016-2017	34.700	0.095	16.953	0.046	111.453	0.305	28.706	0.079	191.812	0.526	1,155.248	3.165	1,347.060	3.691														
Low	2017-2018	37.091	0.101	18.067	0.049	119.137	0.326	30.155	0.082	204.450	0.559	1,232.522	3.368	1,436.972	3.926														
Low	2018-2019	39.481	0.108	19.190	0.053	125.588	0.344	31.605	0.087	215.864	0.591	1,309.797	3.588	1,525.660	4.180														
Low	2019-2020	42.011	0.115	20.359	0.056	132.596	0.363	34.381	0.094	229.347	0.628	1,392.710	3.816	1,622.057	4.444														
Low	2020-2021	46.403	0.127	21.356	0.058	137.980	0.377	35.662	0.097	241.402	0.660	1,464.292	4.001	1,705.694	4.660														
Low	2021-2022	48.821	0.134	22.407	0.061	143.930	0.394	37.075	0.102	252.232	0.691	1,541.539	4.223	1,793.772	4.914														
Low	2022-2023	51.104	0.140	23.383	0.064	149.423	0.409	38.385	0.105	262.296	0.719	1,617.415	4.431	1,879.711	5.150														
Low	2023-2024	53.570	0.147	24.424	0.067	155.608	0.426	39.853	0.109	273.454	0.749	1,700.313	4.658	1,973.767	5.408														
Low	2024-2025	55.672	0.152	25.334	0.069	160.410	0.438	41.006	0.112	282.422	0.772	1,762.283	4.815	2,044.705	5.587														
Low	2025-2026	57.956	0.159	26.309	0.072	165.904	0.455	42.316	0.116	292.485	0.801	1,831.275	5.017	2,123.760	5.819														
Low	2026-2027	60.221	0.165	27.280	0.075	176.733	0.484	43.603	0.119	307.837	0.843	1,900.267	5.206	2,208.104	6.050														

# **Demand-Side Management Selected Measures**

## **Appendix 6.9**

## Appendix 6.9 - Washington/Idaho Preliminary Evaluation Results

	Program	WA/ID
Energy Star Pressure Steamer	Non-residentialcooking	Must Take
Programmable Thermostats	Non-residentialHVAC	Must Take
Radiant heat	Non-residentialHVAC	Must Take
Low Flow Showerheads	Non-residentialDHW	Must Take
Pool blanket	ResidentialDHW	Must Take
Programmable Thermostat	ResidentialHVAC	Must Take
Wall insulation	Non-residentialshell	Must Take
Pool blanket	Non-residentialpool	Must Take
Pool blanket	ResidentialDHW	Must Take
horizontal axis clothes washer	Residentialappliances	Must Take
Crematoria	Non-residentialcrematoria	Must Take
Programmable Thermostat	ResidentialHVAC	Must Take
Roof insulation	Non-residentialshell	Must Take
Pizza / Deck Oven	Non-residentialcooking	Must Take
Warm Up Control	Non-residentialHVAC	Must Take
Coin-Op Gas Clothes Dryer	Non-residentialappliances	Must Take
Demand control ventilation	Non-residentialHVAC	Must Take
Conveyer Broiler	Non-residentialcooking	Must Take
Cheesemelter	Non-residentialcooking	Must Take
Salamander	Non-residentialcooking	Must Take
Tankless Water Heater	Non-residentialDHW	Must Take
Fireplace dampers	Residentialshell	Must Take
Vent Damper	Non-residentialHVAC	Must Take
Comm. Gas Clothes Dryer	Non-residentialappliances	Must Take
Boiler	Non-residentialDHW	Must Take
Condensing Storage Water Heater	Non-residentialDHW	Must Take
Kiln	Non-residentialkiln	Must Take
Boiler Tune-up	Non-residentialHVAC	Must Take
Duct sealing	ResidentialHVAC	Must Take
High efficiency boiler	ResidentialHVAC	Must Take
high Efficiency furnace	ResidentialHVAC	Must Take
Walls insulation	Residentialshell	Must Take
Window (WA/ID)	Residentialshell	Must Take
Attic insulation	Residentialshell	Must Take
Duct sealing	ResidentialHVAC	Must Take
Condensing Boiler	Non-residentialDHW	Must Take
Duct insulation retrofit	ResidentialHVAC	Must Take
Recirculation Controls	Non-residentialDHW	Must Take
Charbroiler	Non-residentialcooking	Must Take
Recirculation Controls	Non-residentialHVAC	Must Take
Occupancy sensors for PTAC units	Non-residentialHVAC	Must Take
Duct insulation retrofit	ResidentialHVAC	Must Take

## Appendix 6.9 - Washington/Idaho Preliminary Evaluation Results

	Program	WA/ID
Floor insulation	Residentialshell	SENDOUT®
Condensing Tank Water Heater	Non-residentialDHW	SENDOUT®
BBQ / Rotisserie Oven	Non-residentialcooking	SENDOUT®
High efficiency furnace	ResidentialHVAC	SENDOUT®
Wall insulation	Residentialshell	SENDOUT®
Window (WA/ID)	Residentialshell	SENDOUT®
Condensing boiler	ResidentialDHW	SENDOUT®
Condensing boiler	ResidentialHVAC	SENDOUT®
Air sealing weatherstripping	Residentialshell	SENDOUT®
Air sealing weatherstripping	Residentialshell	SENDOUT®
Floor insulation	Residentialshell	SENDOUT®
Tankless water heater	ResidentialDHW	SENDOUT®
Convection Oven	Non-residentialcooking	SENDOUT®
Coin-op clothes washer	Non-residentialappliances	SENDOUT®
Attic insulation	Residentialshell	SENDOUT®
Power Burner	Non-residentialHVAC	SENDOUT®
Gas Pool Heater	Non-residentialpool	SENDOUT®
Gas Pool Heater	ResidentialHVAC	SENDOUT®
Gas Pool Heater	ResidentialHVAC	SENDOUT®
Energy recovery ventilation	Non-residentialHVAC	SENDOUT®
Rack / Tray Oven	Non-residentialcooking	SENDOUT®
Infrared Fryer Griddle	Non-residentialcooking	Screened Out
Combi Oven	Non-residentialcooking	Screened Out
Infrared General Purpose Fryer	Non-residentialcooking	Screened Out
Direct vent gas unit heater	ResidentialHVAC	SENDOUT®
Energy Star Home	Residentialwhole home	Screened Out
Direct vent gas unit heater	ResidentialHVAC	SENDOUT®
Exterior doors	Residentialshell	Screened Out
Exterior doors	Residentialshell	Screened Out
Revolving Oven	Non-residentialcooking	Screened Out
Pipe insulation	ResidentialDHW	Screened Out
Pipe insulation	ResidentialDHW	Screened Out
Passive solar water heating	ResidentialDHW	Screened Out
Passive solar water heating	ResidentialDHW	Screened Out
Oven Conveyer	Non-residentialcooking	Screened Out
Window retrofit	Non-residentialshell	Screened Out
Solar water	Non-residentialDHW	Screened Out
Salamander (Broiler)	Non-residentialcooking	Screened Out
Comm clothes washer	Non-residentialappliances	Screened Out
Cheesemelter (broiler)	Non-residentialcooking	Screened Out
Gas Spa Heater	Non-residentialpool	Screened Out
Gas Spa Heater	ResidentialHVAC	Screened Out
Gas Spa Heater	ResidentialHVAC	Screened Out
Open Burner	Non-residentialcooking	Screened Out
Combo boiler (hydronic)	ResidentialDHW	Screened Out
Combo boiler (air)	ResidentialDHW	Screened Out
Exterior doors	Residentialshell	Screened Out
Exterior doors	Residentialshell	Screened Out



## Appendix 6.9 - Oregon Program Preliminary Evaluation Results

Program	Roseburg	Medford	LaGrande	Klamath Falls
Wall insulationResidentialshell	Mandated	Mandated	Mandated	Mandated
Floor insulationResidentialshell	Mandated	Mandated	Mandated	Mandated
Attic insulationResidentialshell	Mandated	Mandated	Mandated	Mandated
Air sealing weatherstrippingResidentialshell	Mandated	Mandated	Mandated	Mandated
Pre-rinse sprayersNon-residentialDHW	Must Take	Must Take	Must Take	Must Take
horizontal axis clothes washerResidentialappliances	Must Take	Must Take	Must Take	Must Take
Energy Star Pressure SteamerNon-residentialcooking	Must Take	Must Take	Must Take	Must Take
Programmable ThermostatResidentialHVAC	Must Take	Must Take	Must Take	Must Take
Radiant heatNon-residentialHVAC	Must Take	Must Take	Must Take	Must Take
Pool blanket - MFHResidentialDHW	Must Take	Must Take	Must Take	Must Take
Programmable ThermostatResidentialHVAC	Must Take	Must Take	Must Take	Must Take
Pool blanket - Non resNon-residentialpool	Must Take	Must Take	Must Take	Must Take
Pool blanket - SFHResidentialDHW	Must Take	Must Take	Must Take	Must Take
CrematoriaNon-residentialcrematoria	Must Take	Must Take	Must Take	Must Take
Wall insulationNon-residentialshell	Must Take	Must Take	Must Take	Must Take
Coin-Op Gas Clothers DryerNon-residentialappliances	Must Take	Must Take	Must Take	Must Take
Pizza / Deck OvenNon-residentialcooking	Must Take	Must Take	Must Take	Must Take
Roof insulationNon-residentialshell	Must Take	Must Take	Must Take	Must Take
Programmable ThermostatResidentialHVAC	Must Take	Must Take	Must Take	Must Take
Conveyer BroilerNon-residentialcooking	Must Take	Must Take	Must Take	Must Take
CheesemelterNon-residentialcooking	Must Take	Must Take	Must Take	Must Take
SalamanderNon-residentialcooking	Must Take	Must Take	Must Take	Must Take
Demand control ventilationNon-residentialHVAC	Must Take	Must Take	Must Take	Must Take
Warm Up ControlNon-residentialHVAC	Must Take	Must Take	Must Take	Must Take
Tankless Water HeaterNon-residentialDHW	Must Take	Must Take	Must Take	Must Take
BoilerNon-residentialDHW	Must Take	Must Take	Must Take	Must Take
KilnNon-residentialkiln	Must Take	Must Take	Must Take	Must Take
Comm. Gas Clothes DryerNon-residentialappliances	Must Take	Must Take	Must Take	Must Take
Condensing Storage Water HeaterNon-residentialDHW	Must Take	Must Take	Must Take	Must Take
High efficiency boilerResidentialDHW	Must Take	Must Take	Must Take	Must Take
Fireplace dampersResidentialshell	Must Take	Must Take	Must Take	Must Take
high Efficiency furnaceResidentialHVAC	Must Take	Must Take	Must Take	Must Take
Vent DamperNon-residentialHVAC	Must Take	Must Take	Must Take	Must Take
Condensing BoilerNon-residentialDHW	Must Take	Must Take	Must Take	Must Take
Duct sealing - SFHResidentialHVAC	Must Take	Must Take	Must Take	Must Take
High efficiency boilerResidentialHVAC	Must Take	Must Take	Must Take	Must Take
CharbroilerNon-residentialcooking	Must Take	Must Take	Must Take	Must Take
Recirculation ControlsNon-residentialDHW	Must Take	Must Take	Must Take	Must Take
Condensing Tank Water HeaterNon-residentialDHW	Must Take	Must Take	Must Take	Must Take
Boiler Tune-upNon-residentialHVAC	Must Take	Must Take	Must Take	Must Take
BBQ / Rotisserie OvenNon-residentialcooking	Must Take	Must Take	Must Take	Must Take
Duct sealing - MFHResidentialHVAC	Must Take	Must Take	Must Take	Must Take
Recirculation ControlsNon-residentialHVAC	Must Take	Must Take	Must Take	Must Take
Duct commissioningResidentialHVAC	Must Take	Must Take	Must Take	Must Take
High efficiency furnaceResidentialHVAC	Must Take	Must Take	Must Take	Must Take
Occupancy sensors for PTAC unitsNon-residentialHVAC	Must Take	Must Take	Must Take	Must Take

## Appendix 6.9 - Oregon Program Preliminary Evaluation Results

Program	Roseburg	Medford	LaGrande	Klamath Falls
Convection OvenNon-residentialcooking	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Tankless water heaterResidentialDHW	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Rack / Tray OvenNon-residentialcooking	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Infrared Fryer GriddleNon-residentialcooking	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Gas Pool HeaterNon-residentialpool	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Gas Pool HeaterResidentialHVAC	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Gas Pool HeaterResidentialHVAC	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Energy recovery ventilationNon-residentialHVAC	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Combi OvenNon-residentialcooking	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Infrared General Purpose FryerNon-residentialcooking	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Power BurnerNon-residentialHVAC	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Revolving OvenNon-residentialcooking	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Energy Star HomeResidentialwhole home	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Exterior doorsResidentialshell	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Exterior doorsResidentialshell	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Direct vent gas unit heaterResidentialHVAC	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Direct vent gas unit heaterResidentialHVAC	Screened Out	Screened Out	Screened Out	Screened Out
Window retrofitNon-residentialshell	SENDOUT®	SENDOUT®	SENDOUT®	SENDOUT®
Coin-op clothes washerNon-residentialappliances	Screened Out	Screened Out	Screened Out	Screened Out
Passive solar water heatingResidentialDHW	Screened Out	Screened Out	Screened Out	Screened Out
Passive solar water heatingResidentialDHW	Screened Out	Screened Out	Screened Out	Screened Out
Oven ConveyerNon-residentialcooking	Screened Out	Screened Out	Screened Out	Screened Out
Comm clothes washerNon-residentialappliances	Screened Out	Screened Out	Screened Out	Screened Out
Salamander (Broiler)Non-residentialcooking	Screened Out	Screened Out	Screened Out	Screened Out
Solar waterNon-residentialDHW	Screened Out	Screened Out	Screened Out	Screened Out
Cheesemelter (broiler)Non-residentialcooking	Screened Out	Screened Out	Screened Out	Screened Out
Gas Spa HeaterNon-residentialpool	Screened Out	Screened Out	Screened Out	Screened Out
Open BurnerNon-residentialcooking	Screened Out	Screened Out	Screened Out	Screened Out
Combo boiler (hydronic)ResidentialDHW	Screened Out	Screened Out	Screened Out	Screened Out
Gas Spa HeaterResidentialHVAC	Screened Out	Screened Out	Screened Out	Screened Out
Gas Spa HeaterResidentialHVAC	Screened Out	Screened Out	Screened Out	Screened Out
Combo boiler (air)ResidentialDHW	Screened Out	Screened Out	Screened Out	Screened Out
Exterior doorsResidentialshell	Screened Out	Screened Out	Screened Out	Screened Out
Exterior doorsResidentialshell	Screened Out	Screened Out	Screened Out	Screened Out



# **Demand-Side Management Programs – OR Only**

## **Appendix 6.10**

## Appendix 6.10 - Oregon Measure Final Status and Resource Acquisition

Measure	Sector	Incremental measure cost	Measure life	Energy savings/unit	Non-Energy benefits	Levelized TRC	2007/2008	CY 2008 unit goal	CY 2008 therm goal	CY 2009 unit goal	CY 2009 therm goal	Category	Final status
							Annual acquisition						
Wall insulation	Residential	\$ 744	45	66	\$ -	\$ 1.03	1,992	34	2,254	39	2,563	Dark green	Mandated
Air sealing weatherstripping	Residential	\$ 250	10	38	\$ -	\$ 1.03	948	28	1,073	32	1,220	Dark green	Mandated
Floor insulation	Residential	\$ 1,244	45	96	\$ -	\$ 1.19	7,698	91	8,714	103	9,906	Dark green	Mandated
Attic insulation	Residential	\$ 666	45	44	\$ -	\$ 1.38	7,872	201	8,910	229	10,129	Dark green	Mandated
Pre-rinse sprayers	Non-residential	\$ 10	5	176	\$ 91	\$ (0.12)	70,400	400	70,400	-	-	Green	Special pass
Energy Star Pressure Steamer	Non-residential	\$ 111	20	643	\$ -	\$ 0.02	1,286	2	1,290	2	1,326	Green	Spreadsheet pass
Programmable Thermostats	Non-residential	\$ 25	20	117	\$ -	\$ 0.02	1,172	10	1,176	10	1,209	Green	Spreadsheet pass
Radiant heat	Non-residential	\$ 25	20	117	\$ -	\$ 0.02	586	5	588	5	604	Green	Spreadsheet pass
horizontal axis clothes washer	Residential	\$ 70	13	17	\$ 61	\$ 0.07	6,800	453	7,697	515	8,750	Green	Spreadsheet pass
Pool blanket - MFH	Residential	\$ 25	20	41	\$ -	\$ 0.07	0	-	-	-	-	Green	Spreadsheet pass
Programmable Thermostat	Residential	\$ 25	20	31	\$ -	\$ 0.09	0	-	-	-	-	Green	Spreadsheet pass
Pool blanket - Non res	Non-residential	\$ 2,200	10	2,720	\$ -	\$ 0.13	2,720	1	2,729	1	2,805	Green	Spreadsheet pass
Pool blanket - SFH	Residential	\$ 1,100	10	1,360	\$ -	\$ 0.13	1,360	1	1,539	1	1,750	Green	Spreadsheet pass
Crematoria	Non-residential	\$ 9,872	30	5,537	\$ -	\$ 0.17	0	-	-	-	-	Green	Spreadsheet pass
Coin-Op Gas Clothes Dryer	Non-residential	\$ 613	11	419	\$ 144	\$ 0.16	1,257	3	1,261	3	1,296	Green	Spreadsheet pass
Wall insulation	Non-residential	\$ 0	30	0	\$ -	\$ 0.17	1	5	1	5	1	Green	Spreadsheet pass
Pizza / Deck Oven	Non-residential	\$ 466	20	256	\$ -	\$ 0.20	256	1	257	1	264	Green	Spreadsheet pass
Programmable Thermostat	Residential	\$ 25	20	12	\$ -	\$ 0.22	309	28	350	32	398	Green	Spreadsheet pass
Conveyer Broiler	Non-residential	\$ 1,182	15	661	\$ -	\$ 0.22	661	1	663	1	682	Green	Spreadsheet pass
Roof insulation	Non-residential	\$ 0	30	0	\$ -	\$ 0.24	1	5	1	5	1	Green	Spreadsheet pass
Cheesemelter	Non-residential	\$ 408	15	203	\$ -	\$ 0.25	203	1	204	1	209	Green	Spreadsheet pass
Warm Up Control	Non-residential	\$ 300	10	180	\$ -	\$ 0.26	180	1	180	1	185	Green	Spreadsheet pass
Salamander	Non-residential	\$ 300	15	137	\$ -	\$ 0.27	137	1	137	1	141	Green	Spreadsheet pass
Demand control ventilation	Non-residential	\$ 1	20	0	\$ -	\$ 0.30	1	3	1	3	1	Green	Spreadsheet pass
Tankless Water Heater	Non-residential	\$ 600	20	211	\$ -	\$ 0.31	1,055	5	1,058	5	1,088	Green	Spreadsheet pass
Comm. Gas Clothes Dryer	Non-residential	\$ 1,586	11	740	\$ -	\$ 0.31	740	1	742	1	763	Green	Spreadsheet pass
Boiler	Non-residential	\$ 11,928	20	3,854	\$ -	\$ 0.34	3,854	1	3,867	1	3,975	Green	Spreadsheet pass
Condensing Storage Water Heater	Non-residential	\$ 848	15	308	\$ -	\$ 0.34	308	1	309	1	318	Green	Spreadsheet pass
Kiln	Non-residential	\$ 199	30	49	\$ -	\$ 0.39	0	-	-	-	-	Green	Spreadsheet pass
Fireplace dampers	Residential	\$ 500	15	150	\$ -	\$ 0.41	3,748	28	4,243	32	4,823	Green	Spreadsheet pass
Vent Damper	Non-residential	\$ 304	12	101	\$ -	\$ 0.42	0	-	-	-	-	Green	Spreadsheet pass
High efficiency boiler	Residential	\$ 160	20	40	\$ -	\$ 0.44	40	1	45	1	51	Green	Spreadsheet pass
High efficiency space heater	Residential	\$ 275	20	64	\$ -	\$ 0.47	322	6	364	6	414	Green	Spreadsheet pass
Condensing Boiler	Non-residential	\$ 36,701	20	7,524	\$ -	\$ 0.53	7,524	1	7,549	1	7,760	Green	Spreadsheet pass
Recirculation Controls	Non-residential	\$ 1,311	10	386	\$ -	\$ 0.53	386	1	387	1	398	Green	Spreadsheet pass
Boiler Tune-up	Non-residential	\$ 100	5	50	\$ -	\$ 0.51	50	1	50	1	51	Green	Spreadsheet pass
Charbroiler	Non-residential	\$ 1,313	15	298	\$ -	\$ 0.55	298	1	299	1	307	Green	Spreadsheet pass
Duct sealing - SFH	Residential	\$ 500	20	94	\$ -	\$ 0.58	4,687	57	5,305	64	6,031	Green	Spreadsheet pass
High efficiency boiler	Residential	\$ 160	20	30	\$ -	\$ 0.58	30	1	34	1	39	Green	Spreadsheet pass
Condensing Tank Water Heater	Non-residential	\$ 3,855	15	771	\$ -	\$ 0.62	771	1	774	1	795	Green	Spreadsheet pass
BBQ / Rotisserie Oven	Non-residential	\$ 1,003	15	198	\$ -	\$ 0.63	198	1	199	1	204	Green	Spreadsheet pass
Duct sealing - MFH	Residential	\$ 300	20	47	\$ -	\$ 0.70	235	6	266	6	302	Green	Spreadsheet pass
Duct commissioning	Residential	\$ 300	20	45	\$ -	\$ 0.73	449	11	508	13	578	Green	Spreadsheet pass
Recirculation Controls	Non-residential	\$ 200	25	26	\$ -	\$ 0.77	26	1	26	1	27	Green	Spreadsheet pass
High efficiency furnace	Residential	\$ 450	20	64	\$ -	\$ 0.76	64,400	1,132	72,895	1,287	82,865	Green	Spreadsheet pass
Occupancy sensors for PTAC units	Non-residential	\$ 200	20	26	\$ -	\$ 0.86	0	-	-	-	-	Green	Spreadsheet pass
Tankless water heater	Residential	\$ 700	15	102	\$ -	\$ 0.85	7,650	85	8,659	97	9,843	Yellow	SENDOUT pass
Convection Oven	Non-residential	\$ 2,696	20	324	\$ -	\$ 0.91	324	1	325	1	334	Yellow	SENDOUT pass
Rack / Tray Oven	Non-residential	\$ 9,709	20	1,013	\$ -	\$ 1.05	1,013	1	1,016	1	1,045	Yellow	SENDOUT pass
Infrared Fryer Griddle	Non-residential	\$ 2,146	20	194	\$ -	\$ 1.21	194	1	195	1	200	Yellow	SENDOUT pass
Combi Oven	Non-residential	\$ 1,667	15	164	\$ -	\$ 1.26	164	1	165	1	169	Yellow	SENDOUT pass
Power Burner	Non-residential	\$ 913	12	101	\$ -	\$ 1.26	101	1	101	1	104	Yellow	SENDOUT pass
Gas Pool Heater	Non-residential	\$ 3,364	20	280	\$ -	\$ 1.32	280	1	280	1	288	Yellow	SENDOUT pass
Gas Pool Heater, SFH	Residential	\$ 3,364	20	280	\$ -	\$ 1.32	280	1	316	1	360	Yellow	SENDOUT pass
Gas Pool Heater, MFH	Residential	\$ 3,364	20	280	\$ -	\$ 1.32	280	1	316	1	360	Yellow	SENDOUT pass
Energy recovery ventilation	Non-residential	\$ 4	20	0	\$ -	\$ 1.33	2	5	2	5	2	Yellow	SENDOUT pass
Infrared General Purpose Fryer	Non-residential	\$ 3,186	15	300	\$ -	\$ 1.32	300	1	301	1	309	Yellow	SENDOUT pass
Revolving Oven	Non-residential	\$ 4,870	20	364	\$ -	\$ 1.46	364	1	365	1	375	Yellow	SENDOUT pass
Energy Star Home	Residential	\$ 2,870	31	145	\$ -	\$ 1.90	7,272	57	8,231	64	9,357	Yellow	SENDOUT fail
Exterior doors	Residential	\$ 100	30	5	\$ -	\$ 1.95	0	0	0	0	0	Yellow	SENDOUT pass
Exterior doors	Residential	\$ 100	30	5	\$ -	\$ 1.95	0	0	0	0	0	Yellow	SENDOUT pass

	CY 2008 therms	CY 2009 therms
SENDOUT-accepted residential programs	123,491	140,381
SENDOUT-accepted non-residential programs	26,498	27,240
Estimated site-specific acquisition	56,808	58,399
Adjustment for non-res program duplication	(2,650)	(2,724)
Estimated pre-rinse sprayer acquisition	70,400	-
Enhanced commercial / industrial delivery	75,000	75,000
	<u>349,547</u>	<u>298,296</u>

# **Oregon Public Utility Commission IRP Standard and Guidelines**

## **Appendix 6.11**

## Appendix 6.11 Oregon Public Utility Commission IRP Standard and Guidelines

Guideline Number	Description of Requirement	Fulfillment of Requirement
<b>Guideline 1: Substantive Requirements</b>		
<b>1.a.1</b>	All resources must be evaluated on a consistent and comparable basis.	All resource options including Demand side and Supply side are modeled in SENDOUT utilizing the same common assumptions, approach and methodology.
<b>1.a.2</b>	All known resources for meeting the utility's load should be considered, including supply-side options which focus on the generation, purchase and transmission of power – or gas purchases, transportation, and storage – and demand-side options which focus on conservation and demand response.	Avista considered a range of resources including demand-side management, distribution system enhancements, interstate pipeline transportation, transport backhauls, and storage options including liquefied natural gas. Chapter 3 and Appendix 6.10 and 6.11 documents Avista's demand-side management resources considered. Chapter 5 and Appendix 6.4 documents supply-side resources. Chapter 6 documents how Avista developed and assessed each of these resources.
<b>1.a.3</b>	Utilities should compare different resource fuel types, technologies, lead times, in-service dates, durations and locations in portfolio risk modeling.	Avista considered various combinations of technologies, lead times, in-service dates, durations, and locations. Chapter 6 provides details about the modeling methodology and results. Chapter 5 describes resource attributes and Appendix 6.4 summarizes the resources' lead times, in-service dates and locations.
<b>1.a.4</b>	Consistent assumptions and methods should be used for evaluation of all resources.	Appendix 6.1 documents general assumptions used in Avista's SENDOUT® modeling software. All portfolio resources both demand and supply side were evaluated within SENDOUT using the same sets of inputs.
<b>1.a.5</b>	The after-tax marginal weighted-average cost of capital (WACC) should be used to discount all future resource costs.	Avista applied its after-tax WACC of 4.18% to discount all future resource costs. (See general assumptions at Appendix 6.1)
<b>1.b.1</b>	Risk and uncertainty must be considered. Electric utilities only	Not Applicable
<b>1.b.2</b>	Risk and uncertainty must be considered. Natural gas utilities should consider demand (peak, swing and base-load), commodity supply and price, transportation availability and price, and costs to comply with any regulation of greenhouse gas (GHG) emissions.	After considering the influencers on demand, Avista focused on three scenarios (Table 1.1) for SENDOUT modeling purposes. Demand coefficients were developed for base, shoulder and winter demand (Appendix 2.3) while peak demand was contemplated through modeling a weather planning standard of the coldest day on record (see heating degree day data in Appendix 6.1).
		Avista evaluated several price forecasts (Figure 6.12) and selected high, medium and low price scenarios for modeling purposes (Figures 6.13 & 6.14).

Guideline Number	Description of Requirement	Fulfillment of Requirement
		<p>Avista also ran Monte Carlo simulations using VectorGas™ for price and weather variables to analyze demand sensitivity and resulting resource timing and selection.</p> <p>Avista considered potential GHG emissions regulatory compliance costs in Chapter 7.</p>
	<p>Utilities should identify in their plans any additional sources of risk and uncertainty.</p>	<p>Avista evaluated additional risks and uncertainties, including the level of DSM achievable potential (Chapter 3). See Chapter 6 for a discussion of the other sources of risk and uncertainty considered but not necessarily modeled for scenario and stochastic risk analysis.</p>
1c	<p>The primary goal must be the selection of a portfolio of resources with the best combination of expected costs and associated risks and uncertainties for the utility and its customers.</p>	<p>Gas utilities are different from electric utilities in the number and combinations of resources available. Gas utilities do not have multiple portfolios of resources. Therefore, Avista considers a resource mix of all the supply side and demand side options as our alternative to portfolios. Avista inputs the supply side and demand side measures into SENDOUT® and allows the model to pick a suite of resources. Each scenario has a different resource mix based on the assumptions of the scenario. Avista evaluated cost/risk tradeoffs for each of the scenarios considered. For example, we considered large scale LNG but after considering the lead time, cost, and assessment of the risks we determined it was not a viable option at this time.</p> <p>See Chapter 6 for the company's risk analysis and determination of the preferred resource mix.</p>
	<p>The planning horizon for analyzing resource choices should be at least 20 years and account for end effects. Utilities should consider all costs with a reasonable likelihood of being included in rates over the long term, which extends beyond the planning horizon and the life of the resource.</p> <p>Utilities should use present value of revenue requirement (PVR) as the key cost metric. The plan should include analysis of current and estimated future costs of all long-lived resources such as power plants, gas storage facilities and pipelines, as well as all short-lived resources such as gas supply and short-term power purchases.</p>	<p>Avista used a 20-year study period for portfolio modeling. Avista contemplated possible costs beyond the planning period that could affect rates including end effects such as infrastructure decommission costs and concluded there were no significant costs reasonably likely to impact rates under different resource selection scenarios.</p>
	<p>To address risk, the plan should include at a minimum: 1) Two measures of PVR risk: one</p>	<p>Avista's SENDOUT modeling software utilizes a PVR cost metric methodology applied to both long and short-lived resources.</p>
		<p>Avista, through its VectorGas software, modeled 200 scenarios around varying gas price inputs via Monte Carlo iterations developing a distribution of Total 20</p>



Guideline Number	Description of Requirement	Fulfillment of Requirement
	that measures the variability of costs and one that measures the severity of bad outcomes. 2) Discussion of the proposed use and impact on costs and risks of physical and financial hedging.	year cost estimates utilizing SENDOUT's PVRM methodology. Chapter 6 further describes this analysis while Figure 6.15 summarizes this analysis graphically. The variability of costs is plotted against the Expected Case while the scenarios beyond the 95 <sup>th</sup> percentile capture the severity of bad outcomes.  Chapter 5 discusses Avista's physical and financial hedging methodology.
	The utility should explain in its plan how its resource choices appropriately balance cost and risk.	Chapter 6 and Appendix 6.7 summarizes the results of Avista's cost/risk tradeoff analysis, and describes what criteria the company used to determine what resource combinations provide an appropriate balance between cost and risk.
<b>1d</b>	The plan must be consistent with the long-run public interest as expressed in Oregon and federal energy policies.	Avista considered current and expected state and federal energy policies in portfolio modeling. Chapter 6 describes the decision process used to derive portfolios, which includes consideration of state resource policy directions.
<b>Guideline 2: Procedural Requirements</b>		
<b>2a</b>	The public, including other utilities, should be allowed significant involvement in the preparation of the IRP. Involvement includes opportunities to contribute information and ideas, as well as to receive information. Parties must have an opportunity to make relevant inquiries of the utility formulating the plan.	Chapter 1 provides an overview of the public process and documents the details on public meetings held for the 2007 IRP.
2b	While confidential information must be protected, the utility should make public, in its plan, any non-confidential information that is relevant to its resource evaluation and action plan.	The entire IRP, as well as the Technical Advisory Committee process, includes all of the non-confidential information the company used for portfolio evaluation and selection. Avista also provided stakeholders with non-confidential information to support public meeting discussions via email. The draft plan was also made available on Avista's website for public viewing during this period.
2c	The utility must provide a draft IRP for public review and comment prior to filing a final plan with the Commission.	Avista distributed a draft IRP document for external review to TAC members on September 6, 2007 and requested comments by October 31, 2007. The draft plan was also made available on Avista's website for public viewing during this period.
<b>Guideline 3: Plan Filing, Review and Updates</b>		
<b>3a</b>	Utility must file an IRP within two years of its previous IRP acknowledgement order.	This Plan complies with this requirement as the 2006 Natural Gas IRP was acknowledged on 9/16/06.
<b>3b</b>	Utility must present the results of its filed plan to	Avista will adhere to this guideline.

Guideline Number	Description of Requirement	Fulfillment of Requirement
<b>3c - g</b>	<p>the Commission at a public meeting prior to the deadline for written public comment.</p> <p>These guides discuss Commission comments and acknowledgement and the IRP annual update.</p>	Not applicable.
<b>Guideline 4: Plan Components</b>		
<b>4a</b>	<p>At a minimum, the plan must include the following elements:</p> <p>An explanation of how the utility met each of the substantive and procedural requirements.</p>	<p>The purpose of this table is to comply with this guideline by providing an overview of how Avista met each of the substantive and procedural requirements for a natural gas IRP.</p>
<b>4b</b>	<p>Analysis of high and low load growth scenarios in addition to stochastic load risk analysis with an explanation of major assumptions.</p>	<p>Avista developed low, medium and high demand growth forecasts for scenario analysis. Stochastic variability of demand was also captured in the risk analysis. Chapter 2 describes the demand forecast data and Chapter 6 provides the scenario and risk analysis results. Appendix 6.1 details major assumptions.</p>
<b>4c</b>	<p>For electric utilities only</p>	Not Applicable
<b>4d</b>	<p>A determination of the peaking, swing and base-load gas supply and associated transportation and storage expected for each year of the plan, given existing resources; and identification of gas supplies (peak, swing and base-load), transportation and storage needed to bridge the gap between expected loads and resources.</p>	<p>This plan complies with the requirement with resource summaries documented in Figure 1.3 (and duplicated in Figure 6.17) for the expected case. Appendix 6.5 summarizes the high and low demand scenarios. Additionally, figure 6.21 shows that the need for resources primarily occurs on and around the peak day. Appendix 6.6 summarizes the high and low case.</p> <p>Appendix 6.4 details all the supply side options considered and Appendix 6.9 and 6.10 provides details on the demand side options. Table 6.6 identifies the resources selected by the model for the expected case, and Appendix 6.7 details the resources for the high and low cases.</p>
<b>4e</b>	<p>Identification and estimated costs of all supply-side and demand-side resource options, taking into account anticipated advances in technology</p>	<p>Chapter 3 and Appendix 6.9 and 6.10 identify the demand-side resources and costs included in this IRP. Chapter 6 and Appendix 6.4 identify the supply-side resources and costs.</p>
<b>4f</b>	<p>Analysis of measures the utility intends to take to provide reliable service, including cost-risk tradeoffs.</p>	<p>Chapter 4 discusses the modeling tools, customer growth forecasting and cost-risk considerations used to maintain and plan a reliable gas delivery system. The Chapter also captures a summary of the reliability analysis process demonstrated at the second TAC meeting.</p>
<b>4g</b>	<p>Identification of key assumptions about the future</p>	<p>Chapter 5 discusses the diversified infrastructure and multiple supply basin approach that acts to mitigate certain reliability risks.</p> <p>Appendix 6.1 and Chapter 6 describe the key assumptions and alternative</p>

Guideline Number	Description of Requirement	Fulfillment of Requirement
<b>4h</b>	(e.g. fuel prices and environmental compliance costs) and alternative scenarios considered.	scenarios used in this IRP.
<b>4i</b>	Construction of a representative set of resource portfolios to test various operating characteristics, resource types, fuels and sources, technologies, lead times, in-service dates, durations and general locations - system-wide or delivered to a specific portion of the system.	This Plan documents the development and results for resource options evaluated in this IRP (see also Appendix 6.4, 6.9, and 6.10). See also guideline <b>1c</b> for further discussion on resource mix alternatives to portfolios.
<b>4j</b>	Evaluation of the performance of the candidate portfolios over the range of identified risks and uncertainties.	We evaluated our candidate portfolio by performing stochastic analysis using VectorGas™ varying price under 200 different scenarios. Additionally, we test the portfolio of options with the use of SENDOUT® under deterministic scenarios where demand and price vary. For resources selected, we assess other risk factors such as varying lead times required and potential for cost overruns outside of the amounts included in the modeling assumptions.
<b>4k</b>	Results of testing and rank ordering of the portfolios by cost and risk metric, and interpretation of those results	Avista's four distinct geographic Oregon service territories limit many resource option synergies which inherently reduces available portfolio options. Feasibility uncertainty, lead time variability and uncertain cost escalation around certain resource options also reduce reasonably viable options. Chapter 6 describes resource options reviewed including discussion on uncertainties in lead times and costs as well as viability and resource availability (e.g. LNG). Appendix 6.4 summarizes the potential resource options identifying investment and variable costs, asset availability and lead time requirements while results of resources selected are identified in Table 6.6 as well as graphically presented in Figure 6.19 for the expect case and Appendix 6.5 for High and Low demand cases.
<b>4l</b>	Analysis of the uncertainties associated with each portfolio evaluated	See the responses to 1.b above.
<b>4m</b>	Selection of a portfolio that represents the best combination of cost and risk for the utility and its customers	Avista evaluated cost/risk tradeoffs for each of the risk analysis portfolios considered. Chapter 6 shows the company's portfolio risk analysis, as well as the process and determination of the preferred portfolio.
<b>4n</b>	Identification and explanation of any inconsistencies of the selected portfolio with any state and federal energy policies that may affect a utility's plan and any barriers to implementation	This IRP is presumed to have no inconsistencies.
<b>4n</b>	An action plan with resource activities the utility intends to undertake over the next two to four years to acquire the identified resources,	Chapter 8 presents the 2008-09 IRP Action Plan with focus on the following areas: <ul style="list-style-type: none"> <li>• Modeling</li> </ul>

Guideline Number	Description of Requirement	Fulfillment of Requirement
<b>Guideline 5: Transmission</b>		
<b>5</b>	<p>regardless of whether the activity was acknowledged in a previous IRP, with the key attributes of each resource specified as in portfolio testing.</p> <p>Portfolio analysis should include costs to the utility for the fuel transportation and electric transmission required for each resource being considered. In addition, utilities should consider fuel transportation and electric transmission facilities as resource options, taking into account their value for making additional purchases and sales, accessing less costly resources in remote locations, acquiring alternative fuel supplies, and improving reliability.</p>	<ul style="list-style-type: none"> <li>• Supply/capacity</li> <li>• Forecasting</li> <li>• Regulatory communication</li> <li>• DSM Goals</li> </ul> <p>Not applicable to Avista's gas utility operations.</p>
<b>Guideline 6: Conservation</b>		
<b>6a</b>	<p>Each utility should ensure that a conservation potential study is conducted periodically for its entire service territory.</p>	<p>In our 2006 IRP, Avista retained the services of RLW Analytics to provide data regarding cost, energy-efficiency and technical potential characteristics for DM measures. Using the information from the work of RLW Analytics as a starting point and incorporating any new information, Avista completes a comprehensive assessment of the potential for utility acquisition of energy-efficiency resources into the regularly-scheduled Integrated Resource Planning process.</p>
<b>6b</b>	<p>To the extent that a utility controls the level of funding for conservation programs in its service territory, the utility should include in its action plan all best cost/risk portfolio conservation resources for meeting projected resource needs, specifying annual savings targets.</p>	<p>In Avista's Action Plan in Chapter 8 we include our conservation programs annual savings targets and reference to Appendix 6.10 for the program's specific details.</p> <p>A discussion on the treatment of conservation programs is included in Chapter 3 while selection methodology is documented in Chapter 6.</p>
<b>6c</b>	<p>To the extent that an outside party administers conservation programs in a utility's service territory at a level of funding that is beyond the utility's control, the utility should: 1) determine the amount of conservation resources in the best cost/ risk portfolio without regard to any limits on funding of conservation programs; and 2) identify</p>	<p>Not applicable. See the response for 6.b above.</p>

Guideline Number	Description of Requirement	Fulfillment of Requirement
	the preferred portfolio and action plan consistent with the outside party's projection of conservation acquisition.	
<b>Guideline 7: Demand Response</b>		
<b>7</b>	Plans should evaluate demand response resources, including voluntary rate programs, on par with other options for meeting energy, capacity, and transmission needs (for electric utilities) or gas supply and transportation needs (for natural gas utilities).	<p>Avista has periodically evaluated conceptual approaches to meeting capacity constraints using demand-response and similar voluntary programs. In the past these have failed to be the most cost-effective response to the constraint.</p> <p>Avista is in the process of developing a separate natural gas distribution capacity value as part of the overall avoided cost structure in anticipation of improvements in technology that may allow for the cost-effective use of demand-response options. Avista is currently testing an electric demand-response technology that may be expanded to incorporate natural gas demand-response if suitable equipment can be acquired.</p>
<b>Guideline 8: Environmental Costs</b>		
<b>8</b>	Utilities should include, in their base-case analyses, the regulatory compliance costs they expect for CO <sub>2</sub> , NO <sub>x</sub> , SO <sub>2</sub> , and Hg emissions. Utilities should analyze the range of potential CO <sub>2</sub> regulatory costs in Order No. 93-695, from \$0 - \$40 (1990\$). In addition, utilities should perform sensitivity analysis on a range of reasonably possible cost adders for NO <sub>x</sub> , SO <sub>2</sub> , and Hg, if applicable.	<p>Avista's current direct gas distribution system infrastructure does not result in any CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, or Hg emissions. Upstream gas system infrastructure (pipelines, storage facilities, and gathering systems) do produce CO<sub>2</sub> emissions via compressors used to pressurize and move gas throughout the system.</p> <p>The Environmental Externalities discussion in Chapter 7 describes our process for addressing these costs.</p>
<b>Guideline 9: Direct Access Loads</b>		
<b>9</b>	An electric utility's load-resource balance should exclude customer loads that are effectively committed to service by an alternative electricity supplier.	Not applicable to Avista's gas utility operations.
<b>Guideline 10: Multi-state utilities</b>		
<b>10</b>	Multi-state utilities should plan their generation and transmission systems, or gas supply and delivery, on an integrated-system basis that achieves a best cost/risk portfolio for all their retail customers.	The 2007 IRP conforms to the multi-state planning approach.

Guideline Number	Description of Requirement	Fulfillment of Requirement
<b>Guideline 11: Reliability</b>		
<b>11</b>	Electric utilities should analyze reliability within the risk modeling of the actual portfolios being considered. Loss of load probability, expected planning reserve margin, and expected and worst-case unserved energy should be determined by year for top-performing portfolios. Natural gas utilities should analyze, on an integrated basis, gas supply, transportation, and storage, along with demand-side resources, to reliably meet peak, swing, and base-load system requirements. Electric and natural gas utility plans should demonstrate that the utility's chosen portfolio achieves its stated reliability, cost and risk objectives.	Avista analyzes on an integrated basis gas supply, transportation, and storage, along with demand-side resources to reliably meet peak, swing, and base-load system requirements. As stated in Chapter 5, Avista's strategy is to reliably serve our customers on all days, including the peak day. To emphasize our commitment to reliability our assessment of resources favors firm (contractually dependable) resources. Acquisition costs of non-firm resources may be less costly. However, after consideration of risk, these assets do not meet our reliability requirements.
<b>Guideline 12: Distributed Generation</b>		
<b>12</b>	Electric utilities should evaluate distributed generation technologies on par with other supply-side resources and should consider, and quantify where possible, the additional benefits of distributed generation.	Not applicable to Avista's gas utility operations.
<b>Guideline 13: Resource Acquisition</b>		
<b>13a</b>	An electric utility should: identify its proposed acquisition strategy for each resource in its action plan; Assess the advantages and disadvantages of owning a resource instead of purchasing power from another party; identify any Benchmark Resources it plans to consider in competitive bidding.	Not applicable to Avista's gas utility operations.
<b>13b</b>	Natural gas utilities should either describe in the IRP their bidding practices for gas supply and transportation, or provide a description of those practices following IRP acknowledgment.	This information will be provided following IRP acknowledgment.



# Avoided Cost Determination

## Appendix 7.1



## Appendix 7.1 - SENDOUT® Marginal Cost Determination by Region - Summary

### Expected Case

Figures Include Transportation and Storage, Excludes Environmental Externalities - 2007\$/Dtt

Year	Year of Forecast	Annual						Winter					
		Klamath Falls	La Grande	Medford	Roseburg	OR Total	WA/ID	Klamath Falls	La Grande	Medford	Roseburg	OR Total	WA/ID
2007/2008	1	\$7.37	\$7.31	\$7.29	\$7.31	\$7.32	\$7.29	\$7.99	\$7.94	\$7.85	\$7.94	\$7.93	\$7.86
2008/2009	2	\$7.10	\$6.94	\$6.99	\$6.94	\$6.99	\$6.94	\$8.03	\$7.72	\$7.80	\$7.72	\$7.82	\$7.81
2009/2010	3	\$6.62	\$6.48	\$6.51	\$6.48	\$6.52	\$6.47	\$7.51	\$7.25	\$7.31	\$7.25	\$7.33	\$7.29
2010/2011	4	\$6.15	\$6.05	\$6.06	\$6.05	\$6.08	\$6.12	\$6.95	\$6.75	\$6.78	\$6.75	\$6.81	\$6.75
2011/2012	5	\$5.79	\$5.50	\$5.64	\$5.50	\$5.61	\$5.80	\$6.42	\$5.78	\$6.10	\$5.78	\$6.02	\$6.34
2012/2013	6	\$5.65	\$5.15	\$5.39	\$5.15	\$5.34	\$5.51	\$6.23	\$5.26	\$5.74	\$5.26	\$5.62	\$6.13
2013/2014	7	\$5.73	\$5.30	\$5.54	\$5.30	\$5.47	\$5.65	\$6.26	\$5.36	\$5.84	\$5.36	\$5.71	\$6.16
2014/2015	8	\$5.91	\$5.45	\$5.70	\$5.45	\$5.62	\$5.78	\$6.44	\$5.55	\$6.03	\$5.55	\$5.89	\$6.34
2015/2016	9	\$5.97	\$5.55	\$5.79	\$5.55	\$5.72	\$5.93	\$6.54	\$5.69	\$6.15	\$5.69	\$6.02	\$6.47
2016/2017	10	\$6.00	\$5.62	\$5.84	\$5.62	\$5.77	\$5.86	\$6.57	\$5.81	\$6.22	\$5.81	\$6.10	\$6.50
2017/2018	11	\$6.02	\$5.64	\$5.86	\$5.64	\$5.79	\$5.86	\$6.60	\$5.83	\$6.25	\$5.83	\$6.13	\$6.53
2018/2019	12	\$6.16	\$5.80	\$6.01	\$5.80	\$5.94	\$6.05	\$6.72	\$6.00	\$6.39	\$6.00	\$6.28	\$6.63
2019/2020	13	\$6.32	\$5.96	\$6.17	\$5.96	\$6.10	\$6.20	\$6.89	\$6.18	\$6.57	\$6.18	\$6.45	\$6.80
2020/2021	14	\$6.46	\$6.15	\$6.33	\$6.15	\$6.27	\$6.32	\$7.04	\$6.46	\$6.78	\$6.46	\$6.68	\$6.95
2021/2022	15	\$6.58	\$6.27	\$6.46	\$6.48	\$6.45	\$6.47	\$7.17	\$6.60	\$6.92	\$7.10	\$6.95	\$7.09
2022/2023	16	\$6.69	\$6.40	\$6.58	\$6.61	\$6.57	\$6.57	\$7.30	\$6.75	\$7.06	\$7.26	\$7.09	\$7.19
2023/2024	17	\$6.81	\$6.54	\$6.70	\$6.95	\$6.75	\$6.69	\$7.42	\$6.92	\$7.21	\$7.92	\$7.37	\$7.31
2024/2025	18	\$6.92	\$6.67	\$6.83	\$7.09	\$6.88	\$6.81	\$7.54	\$7.09	\$7.35	\$8.10	\$7.52	\$7.44
2025/2026	19	\$7.05	\$6.85	\$6.98	\$7.26	\$7.03	\$6.93	\$7.67	\$7.35	\$7.55	\$8.36	\$7.73	\$7.57
2026/2027	20	\$7.15	\$6.98	\$7.09	\$7.60	\$7.20	\$7.04	\$7.78	\$7.52	\$7.69	\$9.02	\$8.01	\$7.69

## Appendix 7.1 - SENDOUT® Marginal Cost Determination by Region - Annual

### Expected Case

Figures Include Transportation and Storage, Excludes Environmental Externalities - 2007\$/Dth

Year	Month	Klam Falls	La Grande	Medford	Roseburg	OR Total	WA/ID
2007	Nov	6.65	6.48	6.53	6.48	6.54	6.46
2007	Dec	7.48	8.01	7.43	8.01	7.73	7.66
2008	Jan	8.73	8.58	8.54	8.58	8.61	8.53
2008	Feb	8.70	8.42	8.48	8.42	8.50	8.42
2008	Mar	8.39	8.20	8.26	8.20	8.26	8.20
2008	Apr	6.75	6.66	6.71	6.66	6.70	6.71
2008	May	6.98	6.88	6.93	6.88	6.92	6.86
2008	Jun	6.61	6.53	6.57	6.53	6.56	6.68
2008	Jul	7.11	7.16	7.11	7.16	7.13	7.03
2008	Aug	7.12	7.03	7.07	7.03	7.06	7.06
2008	Sep	6.79	6.71	6.75	6.71	6.74	6.85
2008	Oct	7.12	7.02	7.07	7.02	7.06	7.06
	Avg.	<b>7.37</b>	<b>7.31</b>	<b>7.29</b>	<b>7.31</b>	<b>7.32</b>	<b>7.29</b>
2008	Nov	7.75	7.53	7.59	7.53	7.60	7.53
2008	Dec	8.23	7.53	7.79	7.53	7.77	8.04
2009	Jan	8.17	8.04	8.00	8.04	8.06	7.98
2009	Feb	8.15	7.85	7.91	7.85	7.94	7.85
2009	Mar	7.84	7.65	7.71	7.65	7.71	7.65
2009	Apr	6.20	6.12	6.16	6.12	6.15	5.44
2009	May	6.47	6.38	6.43	6.38	6.42	6.38
2009	Jun	6.17	6.10	6.14	6.10	6.13	6.24
2009	Jul	6.63	6.68	6.63	6.68	6.66	6.56
2009	Aug	6.64	6.57	6.60	6.57	6.60	6.59
2009	Sep	6.34	6.26	6.30	6.26	6.29	6.39
2009	Oct	6.65	6.57	6.61	6.57	6.60	6.60
	Avg.	<b>7.11</b>	<b>6.94</b>	<b>6.99</b>	<b>6.94</b>	<b>6.99</b>	<b>6.94</b>
2009	Nov	7.26	7.03	7.10	7.03	7.11	7.03
2009	Dec	7.70	7.24	7.39	7.24	7.39	7.52
2010	Jan	7.63	7.51	7.47	7.51	7.53	7.45
2010	Feb	7.62	7.33	7.39	7.33	7.42	7.32
2010	Mar	7.33	7.14	7.20	7.14	7.20	7.14
2010	Apr	5.78	5.70	5.74	5.70	5.73	5.12
2010	May	6.03	5.95	5.99	5.95	5.98	5.95
2010	Jun	5.77	5.70	5.73	5.70	5.72	5.82
2010	Jul	6.18	6.23	6.18	6.23	6.21	6.12
2010	Aug	6.01	5.94	5.97	5.94	5.97	6.02
2010	Sep	5.91	5.84	5.88	5.84	5.87	5.97
2010	Oct	6.21	6.13	6.17	6.13	6.16	6.16
	Avg.	<b>6.62</b>	<b>6.48</b>	<b>6.52</b>	<b>6.48</b>	<b>6.52</b>	<b>6.47</b>
2010	Nov	6.77	6.56	6.62	6.56	6.62	6.56
2010	Dec	7.18	6.98	7.00	6.98	7.03	7.03
2011	Jan	7.03	6.92	6.87	6.92	6.93	6.86
2011	Feb	7.02	6.74	6.80	6.74	6.82	6.74
2011	Mar	6.76	6.57	6.62	6.57	6.63	6.56
2011	Apr	5.33	5.26	5.29	5.26	5.28	5.35
2011	May	5.57	5.50	5.54	5.50	5.53	5.47
2011	Jun	5.60	5.53	5.56	5.53	5.56	5.55
2011	Jul	5.69	5.86	5.69	5.86	5.77	6.52
2011	Aug	5.73	5.66	5.69	5.66	5.68	5.69
2011	Sep	5.43	5.37	5.40	5.37	5.39	5.49
2011	Oct	5.72	5.64	5.68	5.64	5.67	5.67
	Avg.	<b>6.15</b>	<b>6.05</b>	<b>6.06</b>	<b>6.05</b>	<b>6.08</b>	<b>6.12</b>
2011	Nov	6.13	6.02	6.08	6.02	6.06	6.02
2011	Dec	6.45	3.70	5.09	3.70	4.74	6.46
2012	Jan	6.58	6.62	6.58	6.62	6.60	6.56
2012	Feb	6.56	6.32	6.44	6.32	6.41	6.36
2012	Mar	6.39	6.29	6.34	6.29	6.33	6.28
2012	Apr	5.09	5.02	5.06	5.02	5.05	4.93
2012	May	5.30	5.23	5.26	5.23	5.25	5.23
2012	Jun	5.35	5.29	5.32	5.29	5.31	5.31
2012	Jul	5.44	5.61	5.44	5.61	5.52	6.27
2012	Aug	5.48	5.41	5.44	5.41	5.44	5.44
2012	Sep	5.21	5.14	5.17	5.14	5.17	5.26
2012	Oct	5.46	5.39	5.43	5.39	5.42	5.41
	Avg.	<b>5.79</b>	<b>5.50</b>	<b>5.64</b>	<b>5.50</b>	<b>5.61</b>	<b>5.79</b>

## Appendix 7.1 - SENDOUT® Marginal Cost Determination by Region - Annual

### Expected Case

Figures Include Transportation and Storage, Excludes Environmental Externalities - 2007\$/Dth

Year	Month	Klam Falls	La Grande	Medford	Roseburg	OR Total	WA/ID
2012	Nov	5.88	5.77	5.82	5.77	5.81	5.77
2012	Dec	6.18	1.85	4.02	1.85	3.47	6.14
2013	Jan	6.44	6.47	6.44	6.47	6.45	6.42
2013	Feb	6.42	6.16	6.29	6.16	6.25	6.20
2013	Mar	6.26	6.14	6.20	6.14	6.19	6.14
2013	Apr	5.26	4.42	4.84	4.42	4.73	3.51
2013	May	5.21	5.12	5.16	5.12	5.15	5.12
2013	Jun	4.98	4.90	4.94	4.90	4.93	5.01
2013	Jul	5.32	5.50	5.32	5.50	5.41	6.06
2013	Aug	5.37	5.30	5.33	5.30	5.32	5.33
2013	Sep	5.10	5.03	5.06	5.03	5.05	5.14
2013	Oct	5.41	5.25	5.33	5.25	5.31	5.28
	Avg.	<b>5.65</b>	<b>5.16</b>	<b>5.40</b>	<b>5.16</b>	<b>5.34</b>	<b>5.51</b>
2013	Nov	5.75	5.63	5.72	5.63	5.68	5.63
2013	Dec	6.05	2.11	4.11	2.11	3.60	6.02
2014	Jan	6.56	6.61	6.62	6.61	6.60	6.55
2014	Feb	6.55	6.29	6.46	6.29	6.40	6.34
2014	Mar	6.40	6.28	6.37	6.28	6.33	6.28
2014	Apr	5.37	5.02	5.22	5.02	5.16	4.44
2014	May	5.32	5.23	5.30	5.23	5.27	5.23
2014	Jun	5.10	5.00	5.07	5.00	5.04	5.12
2014	Jul	5.44	5.61	5.49	5.61	5.54	6.17
2014	Aug	5.48	5.41	5.47	5.41	5.44	5.44
2014	Sep	5.23	5.13	5.20	5.13	5.17	5.24
2014	Oct	5.53	5.37	5.48	5.37	5.44	5.40
	Avg.	<b>5.73</b>	<b>5.31</b>	<b>5.54</b>	<b>5.31</b>	<b>5.47</b>	<b>5.65</b>
2014	Nov	5.87	5.76	5.84	5.76	5.81	5.76
2014	Dec	6.18	2.29	4.27	2.29	3.76	6.15
2015	Jan	6.78	6.83	6.84	6.83	6.82	6.77
2015	Feb	6.77	6.51	6.67	6.51	6.62	6.55
2015	Mar	6.60	6.48	6.57	6.48	6.53	6.48
2015	Apr	5.55	4.77	5.19	4.77	5.07	4.01
2015	May	5.50	5.40	5.48	5.40	5.44	5.40
2015	Jun	5.28	5.17	5.25	5.17	5.21	5.29
2015	Jul	5.61	5.79	5.67	5.79	5.71	6.34
2015	Aug	5.65	5.59	5.65	5.59	5.62	5.61
2015	Sep	5.41	5.31	5.38	5.31	5.35	5.42
2015	Oct	5.71	5.54	5.65	5.54	5.61	5.57
	Avg.	<b>5.91</b>	<b>5.45</b>	<b>5.71</b>	<b>5.45</b>	<b>5.63</b>	<b>5.78</b>
2015	Nov	6.07	5.95	6.04	5.95	6.00	5.95
2015	Dec	6.37	2.50	4.47	2.50	3.96	6.38
2016	Jan	6.82	6.87	6.88	6.87	6.86	6.81
2016	Feb	6.81	6.69	6.78	6.69	6.74	6.68
2016	Mar	6.63	6.51	6.61	6.51	6.57	6.51
2016	Apr	5.58	5.20	5.42	5.20	5.35	5.01
2016	May	5.52	5.42	5.50	5.42	5.46	5.42
2016	Jun	5.32	5.20	5.28	5.20	5.25	5.31
2016	Jul	5.64	5.82	5.70	5.82	5.75	6.37
2016	Aug	5.69	5.62	5.68	5.62	5.65	5.64
2016	Sep	5.45	5.35	5.42	5.35	5.39	5.46
2016	Oct	5.74	5.57	5.69	5.57	5.64	5.60
	Avg.	<b>5.97</b>	<b>5.56</b>	<b>5.79</b>	<b>5.56</b>	<b>5.72</b>	<b>5.93</b>
2016	Nov	6.10	5.98	6.07	5.98	6.03	5.98
2016	Dec	6.42	2.98	4.72	2.98	4.27	6.42
2017	Jan	6.85	6.90	6.91	6.90	6.89	6.84
2017	Feb	6.84	6.73	6.82	6.73	6.78	6.72
2017	Mar	6.67	6.54	6.64	6.54	6.60	6.54
2017	Apr	5.62	5.23	5.46	5.23	5.39	4.44
2017	May	5.55	5.45	5.53	5.45	5.50	5.45
2017	Jun	5.33	5.25	5.32	5.25	5.29	5.41
2017	Jul	5.67	5.72	5.72	5.72	5.71	5.61
2017	Aug	5.71	5.66	5.70	5.66	5.68	5.70
2017	Sep	5.49	5.41	5.47	5.41	5.44	5.56
2017	Oct	5.78	5.66	5.75	5.66	5.71	5.67
	Avg.	<b>6.00</b>	<b>5.63</b>	<b>5.84</b>	<b>5.63</b>	<b>5.77</b>	<b>5.86</b>

## Appendix 7.1 - SENDOUT® Marginal Cost Determination by Region - Annual

### Expected Case

Figures Include Transportation and Storage, Excludes Environmental Externalities - 2007\$/Dth

Year	Month	Klam Falls	La Grande	Medford	Roseburg	OR Total	WA/ID
2017	Nov	6.12	6.00	6.09	6.00	6.05	6.00
2017	Dec	6.45	3.01	4.76	3.01	4.30	6.45
2018	Jan	6.87	6.93	6.94	6.93	6.92	6.87
2018	Feb	6.86	6.75	6.84	6.75	6.80	6.74
2018	Mar	6.70	6.57	6.67	6.57	6.63	6.57
2018	Apr	5.64	5.26	5.48	5.26	5.41	4.14
2018	May	5.57	5.47	5.55	5.47	5.52	5.47
2018	Jun	5.36	5.27	5.34	5.27	5.31	5.43
2018	Jul	5.70	5.75	5.75	5.75	5.74	5.64
2018	Aug	5.74	5.69	5.73	5.69	5.71	5.73
2018	Sep	5.51	5.44	5.50	5.44	5.47	5.58
2018	Oct	5.80	5.68	5.77	5.68	5.73	5.69
	Avg.	<b>6.03</b>	<b>5.65</b>	<b>5.87</b>	<b>5.65</b>	<b>5.80</b>	<b>5.86</b>
2018	Nov	6.15	6.03	6.12	6.03	6.08	6.03
2018	Dec	6.47	3.30	4.92	3.30	4.50	6.42
2019	Jan	7.06	7.11	7.12	7.11	7.10	7.04
2019	Feb	7.05	6.92	7.02	6.92	6.98	6.92
2019	Mar	6.87	6.74	6.84	6.74	6.80	6.74
2019	Apr	5.78	5.39	5.61	5.39	5.54	5.08
2019	May	5.72	5.61	5.69	5.61	5.66	5.61
2019	Jun	5.51	5.43	5.49	5.43	5.47	5.58
2019	Jul	5.84	5.90	5.90	5.90	5.88	5.78
2019	Aug	5.88	5.83	5.88	5.83	5.85	5.87
2019	Sep	5.71	5.60	5.67	5.60	5.64	5.74
2019	Oct	5.96	5.83	5.92	5.83	5.89	5.84
	Avg.	<b>6.17</b>	<b>5.81</b>	<b>6.02</b>	<b>5.81</b>	<b>5.95</b>	<b>6.06</b>
2019	Nov	6.32	6.19	6.29	6.19	6.25	6.19
2019	Dec	6.64	3.47	5.09	3.47	4.67	6.60
2020	Jan	7.23	7.28	7.29	7.28	7.27	7.22
2020	Feb	7.21	7.08	7.18	7.08	7.14	7.08
2020	Mar	7.04	6.91	7.01	6.91	6.96	6.90
2020	Apr	5.93	5.52	5.75	5.52	5.68	5.09
2020	May	5.86	5.76	5.84	5.76	5.80	5.76
2020	Jun	5.65	5.56	5.63	5.56	5.60	5.72
2020	Jul	5.98	6.05	6.05	6.05	6.03	5.93
2020	Aug	6.03	5.97	6.02	5.97	6.00	6.02
2020	Sep	5.85	5.74	5.81	5.74	5.78	5.88
2020	Oct	6.12	5.99	6.09	5.99	6.05	6.00
	Avg.	<b>6.32</b>	<b>5.96</b>	<b>6.17</b>	<b>5.96</b>	<b>6.10</b>	<b>6.20</b>
2020	Nov	6.46	6.33	6.43	6.33	6.39	6.33
2020	Dec	6.79	4.26	5.56	4.26	5.22	6.76
2021	Jan	7.39	7.44	7.45	7.44	7.43	7.38
2021	Feb	7.38	7.25	7.35	7.25	7.31	7.25
2021	Mar	7.19	7.06	7.16	7.06	7.12	7.06
2021	Apr	6.06	5.64	5.88	5.64	5.81	5.08
2021	May	5.98	5.88	5.96	5.88	5.92	5.88
2021	Jun	5.78	5.69	5.75	5.69	5.73	5.85
2021	Jul	6.12	6.18	6.18	6.18	6.17	6.06
2021	Aug	6.16	6.11	6.16	6.11	6.13	6.15
2021	Sep	5.97	5.86	5.94	5.86	5.91	6.01
2021	Oct	6.26	6.12	6.22	6.12	6.18	6.13
	Avg.	<b>6.46</b>	<b>6.15</b>	<b>6.34</b>	<b>6.15</b>	<b>6.28</b>	<b>6.33</b>
2021	Nov	6.60	6.48	6.57	6.48	6.53	6.48
2021	Dec	6.95	4.45	5.73	4.45	6.01	6.95
2022	Jan	7.52	7.57	7.58	7.57	7.56	7.50
2022	Feb	7.50	7.38	7.47	7.38	7.43	7.37
2022	Mar	7.32	7.19	7.29	7.19	7.25	7.18
2022	Apr	6.16	5.74	5.98	5.74	5.91	5.51
2022	May	6.10	5.99	6.07	5.99	6.04	5.99
2022	Jun	5.89	5.80	5.87	5.80	5.84	5.95
2022	Jul	6.22	6.29	6.29	6.29	6.27	6.16
2022	Aug	6.27	6.22	6.27	6.22	6.25	6.26
2022	Sep	6.12	5.97	6.07	5.97	6.03	6.11
2022	Oct	6.37	6.23	6.33	6.23	6.29	6.24
	Avg.	<b>6.58</b>	<b>6.27</b>	<b>6.46</b>	<b>6.48</b>	<b>6.45</b>	<b>6.48</b>

## Appendix 7.1 - SENDOUT® Marginal Cost Determination by Region - Annual

### Expected Case

Figures Include Transportation and Storage, Excludes Environmental Externalities - 2007\$/Dth

Year	Month	Klam Falls	La Grande	Medford	Roseburg	OR Total	WA/ID
2022	Nov	6.73	6.60	6.70	6.60	6.65	6.60
2022	Dec	7.07	4.73	5.94	7.19	6.23	6.99
2023	Jan	7.64	7.70	7.71	7.70	7.69	7.57
2023	Feb	7.63	7.50	7.60	7.50	7.55	7.49
2023	Mar	7.44	7.31	7.41	7.31	7.37	7.30
2023	Apr	6.27	5.84	6.08	5.84	6.00	5.58
2023	May	6.20	6.09	6.18	6.09	6.14	6.09
2023	Jun	5.98	5.89	5.96	5.89	5.93	6.05
2023	Jul	6.33	6.52	6.39	6.52	6.44	6.31
2023	Aug	6.38	6.32	6.37	6.32	6.35	6.37
2023	Sep	6.24	6.09	6.19	6.09	6.15	6.23
2023	Oct	6.47	6.34	6.44	6.34	6.40	6.34
	Avg.	<b>6.70</b>	<b>6.41</b>	<b>6.58</b>	<b>6.61</b>	<b>6.58</b>	<b>6.58</b>
2023	Nov	6.84	6.71	6.81	6.71	6.77	6.71
2023	Dec	7.18	5.06	6.16	9.97	7.09	7.11
2024	Jan	7.77	7.83	7.84	7.83	7.82	7.71
2024	Feb	7.75	7.62	7.72	7.62	7.68	7.62
2024	Mar	7.56	7.43	7.53	7.43	7.49	7.42
2024	Apr	6.38	5.94	6.19	5.94	6.11	5.72
2024	May	6.30	6.19	6.28	6.19	6.24	6.19
2024	Jun	6.09	6.00	6.07	6.00	6.04	6.15
2024	Jul	6.44	6.63	6.50	6.63	6.55	6.42
2024	Aug	6.48	6.42	6.48	6.42	6.45	6.47
2024	Sep	6.35	6.19	6.29	6.19	6.26	6.33
2024	Oct	6.59	6.45	6.55	6.45	6.51	6.45
	Avg.	<b>6.81</b>	<b>6.54</b>	<b>6.70</b>	<b>6.95</b>	<b>6.75</b>	<b>6.69</b>
2024	Nov	6.95	6.82	6.92	6.82	6.88	6.82
2024	Dec	7.31	5.40	6.39	10.30	7.35	7.23
2025	Jan	7.90	7.96	7.97	7.96	7.95	7.84
2025	Feb	7.88	7.75	7.85	7.75	7.81	7.75
2025	Mar	7.69	7.57	7.67	7.57	7.62	7.56
2025	Apr	6.51	6.06	6.32	6.06	6.24	5.84
2025	May	6.41	6.29	6.38	6.29	6.34	6.29
2025	Jun	6.20	6.10	6.17	6.10	6.14	6.26
2025	Jul	6.55	6.74	6.62	6.74	6.66	6.53
2025	Aug	6.59	6.54	6.59	6.54	6.56	6.58
2025	Sep	6.46	6.30	6.41	6.30	6.37	6.44
2025	Oct	6.70	6.56	6.66	6.56	6.62	6.57
	Avg.	<b>6.93</b>	<b>6.67</b>	<b>6.83</b>	<b>7.08</b>	<b>6.88</b>	<b>6.81</b>
2025	Nov	7.08	6.94	7.05	6.94	7.00	6.94
2025	Dec	7.43	6.17	6.84	11.06	7.87	7.36
2026	Jan	8.03	8.11	8.11	8.11	8.09	7.98
2026	Feb	8.02	7.89	8.00	7.89	7.95	7.89
2026	Mar	7.82	7.70	7.80	7.70	7.76	7.69
2026	Apr	6.62	6.17	6.43	6.17	6.35	5.95
2026	May	6.52	6.40	6.50	6.40	6.46	6.40
2026	Jun	6.30	6.21	6.28	6.21	6.25	6.37
2026	Jul	6.67	6.87	6.73	6.87	6.78	6.65
2026	Aug	6.71	6.65	6.70	6.65	6.68	6.69
2026	Sep	6.57	6.41	6.52	6.41	6.48	6.56
2026	Oct	6.82	6.70	6.79	6.70	6.75	6.70
	Avg.	<b>7.05</b>	<b>6.85</b>	<b>6.98</b>	<b>7.26</b>	<b>7.03</b>	<b>6.93</b>
2026	Nov	7.20	7.06	7.17	7.06	7.12	7.06
2026	Dec	7.56	6.56	7.08	13.87	8.77	7.52
2027	Jan	8.14	8.21	8.21	8.21	8.19	8.08
2027	Feb	8.12	8.01	8.10	8.01	8.06	8.00
2027	Mar	7.93	7.81	7.91	7.81	7.87	7.80
2027	Apr	6.71	6.25	6.51	6.25	6.43	6.03
2027	May	6.62	6.50	6.59	6.50	6.55	6.50
2027	Jun	6.39	6.30	6.37	6.30	6.34	6.46
2027	Jul	6.76	6.96	6.83	6.96	6.88	6.74
2027	Aug	6.80	6.74	6.80	6.74	6.77	6.78
2027	Sep	6.77	6.56	6.69	6.56	6.64	6.68
2027	Oct	6.91	6.79	6.89	6.79	6.85	6.79
	Avg.	<b>7.16</b>	<b>6.98</b>	<b>7.10</b>	<b>7.59</b>	<b>7.21</b>	<b>7.04</b>

## Appendix 7.1 - SENDOUT® Marginal Cost Determination by Region - Winter Expected Case

Figures Include Transportation and Storage, Excludes Environmental Externalities - 2007\$/Dth

Year	Month	Klam Falls	La Grande	Medford	Roseburg	OR Total	WA/ID
2007	Nov	6.65	6.48	6.53	6.48	6.54	6.46
2007	Dec	7.48	8.01	7.43	8.01	7.73	7.66
2008	Jan	8.73	8.58	8.54	8.58	8.61	8.53
2008	Feb	8.70	8.42	8.48	8.42	8.50	8.42
2008	Mar	8.39	8.20	8.26	8.20	8.26	8.20
	Avg.	<b>7.99</b>	<b>7.94</b>	<b>7.85</b>	<b>7.94</b>	<b>7.93</b>	<b>7.85</b>
2008	Nov	7.75	7.53	7.59	7.53	7.60	7.53
2008	Dec	8.23	7.53	7.79	7.53	7.77	8.04
2009	Jan	8.17	8.04	8.00	8.04	8.06	7.98
2009	Feb	8.15	7.85	7.91	7.85	7.94	7.85
2009	Mar	7.84	7.65	7.71	7.65	7.71	7.65
	Avg.	<b>8.03</b>	<b>7.72</b>	<b>7.80</b>	<b>7.72</b>	<b>7.82</b>	<b>7.81</b>
2009	Nov	7.26	7.03	7.10	7.03	7.11	7.03
2009	Dec	7.70	7.24	7.39	7.24	7.39	7.52
2010	Jan	7.63	7.51	7.47	7.51	7.53	7.45
2010	Feb	7.62	7.33	7.39	7.33	7.42	7.32
2010	Mar	7.33	7.14	7.20	7.14	7.20	7.14
	Avg.	<b>7.51</b>	<b>7.25</b>	<b>7.31</b>	<b>7.25</b>	<b>7.33</b>	<b>7.29</b>
2010	Nov	6.77	6.56	6.62	6.56	6.62	6.56
2010	Dec	7.18	6.98	7.00	6.98	7.03	7.03
2011	Jan	7.03	6.92	6.87	6.92	6.93	6.86
2011	Feb	7.02	6.74	6.80	6.74	6.82	6.74
2011	Mar	6.76	6.57	6.62	6.57	6.63	6.56
	Avg.	<b>6.95</b>	<b>6.75</b>	<b>6.78</b>	<b>6.75</b>	<b>6.81</b>	<b>6.75</b>
2011	Nov	6.13	6.02	6.08	6.02	6.06	6.02
2011	Dec	6.45	3.70	5.09	3.70	4.74	6.46
2012	Jan	6.58	6.62	6.58	6.62	6.60	6.56
2012	Feb	6.56	6.32	6.44	6.32	6.41	6.36
2012	Mar	6.39	6.29	6.34	6.29	6.33	6.28
	Avg.	<b>6.42</b>	<b>5.79</b>	<b>6.11</b>	<b>5.79</b>	<b>6.03</b>	<b>6.34</b>
2012	Nov	5.88	5.77	5.82	5.77	5.81	5.77
2012	Dec	6.18	1.85	4.02	1.85	3.47	6.14
2013	Jan	6.44	6.47	6.44	6.47	6.45	6.42
2013	Feb	6.42	6.16	6.29	6.16	6.25	6.20
2013	Mar	6.26	6.14	6.20	6.14	6.19	6.14
	Avg.	<b>6.24</b>	<b>5.28</b>	<b>5.75</b>	<b>5.28</b>	<b>5.64</b>	<b>6.13</b>
2013	Nov	5.75	5.63	5.72	5.63	5.68	5.63
2013	Dec	6.05	2.11	4.11	2.11	3.60	6.02
2014	Jan	6.56	6.61	6.62	6.61	6.60	6.55
2014	Feb	6.55	6.29	6.46	6.29	6.40	6.34
2014	Mar	6.40	6.28	6.37	6.28	6.33	6.28
	Avg.	<b>6.26</b>	<b>5.38</b>	<b>5.86</b>	<b>5.38</b>	<b>5.72</b>	<b>6.16</b>
2014	Nov	5.87	5.76	5.84	5.76	5.81	5.76
2014	Dec	6.18	2.29	4.27	2.29	3.76	6.15
2015	Jan	6.78	6.83	6.84	6.83	6.82	6.77
2015	Feb	6.77	6.51	6.67	6.51	6.62	6.55
2015	Mar	6.60	6.48	6.57	6.48	6.53	6.48
	Avg.	<b>6.44</b>	<b>5.57</b>	<b>6.04</b>	<b>5.57</b>	<b>5.91</b>	<b>6.34</b>
2015	Nov	6.07	5.95	6.04	5.95	6.00	5.95
2015	Dec	6.37	2.50	4.47	2.50	3.96	6.38
2016	Jan	6.82	6.87	6.88	6.87	6.86	6.81
2016	Feb	6.81	6.69	6.78	6.69	6.74	6.68
2016	Mar	6.63	6.51	6.61	6.51	6.57	6.51
	Avg.	<b>6.54</b>	<b>5.70</b>	<b>6.15</b>	<b>5.70</b>	<b>6.03</b>	<b>6.47</b>

## Appendix 7.1 - SENDOUT® Marginal Cost Determination by Region - Winter Expected Case

Figures Include Transportation and Storage, Excludes Environmental Externalities - 2007\$/Dth

Year	Month	Klam Falls	La Grande	Medford	Roseburg	OR Total	WA/ID
2016	Nov	6.10	5.98	6.07	5.98	6.03	5.98
2016	Dec	6.42	2.98	4.72	2.98	4.27	6.42
2017	Jan	6.85	6.90	6.91	6.90	6.89	6.84
2017	Feb	6.84	6.73	6.82	6.73	6.78	6.72
2017	Mar	6.67	6.54	6.64	6.54	6.60	6.54
	Avg.	<b>6.57</b>	<b>5.82</b>	<b>6.23</b>	<b>5.82</b>	<b>6.11</b>	<b>6.50</b>
2017	Nov	6.12	6.00	6.09	6.00	6.05	6.00
2017	Dec	6.45	3.01	4.76	3.01	4.30	6.45
2018	Jan	6.87	6.93	6.94	6.93	6.92	6.87
2018	Feb	6.86	6.75	6.84	6.75	6.80	6.74
2018	Mar	6.70	6.57	6.67	6.57	6.63	6.57
	Avg.	<b>6.60</b>	<b>5.85</b>	<b>6.26</b>	<b>5.85</b>	<b>6.14</b>	<b>6.53</b>
2018	Nov	6.15	6.03	6.12	6.03	6.08	6.03
2018	Dec	6.47	3.30	4.92	3.30	4.50	6.42
2019	Jan	7.06	7.11	7.12	7.11	7.10	7.04
2019	Feb	7.05	6.92	7.02	6.92	6.98	6.92
2019	Mar	6.87	6.74	6.84	6.74	6.80	6.74
	Avg.	<b>6.72</b>	<b>6.02</b>	<b>6.40</b>	<b>6.02</b>	<b>6.29</b>	<b>6.63</b>
2019	Nov	6.32	6.19	6.29	6.19	6.25	6.19
2019	Dec	6.64	3.47	5.09	3.47	4.67	6.60
2020	Jan	7.23	7.28	7.29	7.28	7.27	7.22
2020	Feb	7.21	7.08	7.18	7.08	7.14	7.08
2020	Mar	7.04	6.91	7.01	6.91	6.96	6.90
	Avg.	<b>6.89</b>	<b>6.19</b>	<b>6.57</b>	<b>6.19</b>	<b>6.46</b>	<b>6.80</b>
2020	Nov	6.46	6.33	6.43	6.33	6.39	6.33
2020	Dec	6.79	4.26	5.56	4.26	5.22	6.76
2021	Jan	7.39	7.44	7.45	7.44	7.43	7.38
2021	Feb	7.38	7.25	7.35	7.25	7.31	7.25
2021	Mar	7.19	7.06	7.16	7.06	7.12	7.06
	Avg.	<b>7.04</b>	<b>6.47</b>	<b>6.79</b>	<b>6.47</b>	<b>6.69</b>	<b>6.95</b>
2021	Nov	6.60	6.48	6.57	6.48	6.53	6.48
2021	Dec	6.95	4.45	5.73	6.90	6.01	6.95
2022	Jan	7.52	7.57	7.58	7.57	7.56	7.50
2022	Feb	7.50	7.38	7.47	7.38	7.43	7.37
2022	Mar	7.32	7.19	7.29	7.19	7.25	7.18
	Avg.	<b>7.18</b>	<b>6.61</b>	<b>6.93</b>	<b>7.10</b>	<b>6.96</b>	<b>7.10</b>
2022	Nov	6.73	6.60	6.70	6.60	6.65	6.60
2022	Dec	7.07	4.73	5.94	7.19	6.23	6.99
2023	Jan	7.64	7.70	7.71	7.70	7.69	7.57
2023	Feb	7.63	7.50	7.60	7.50	7.55	7.49
2023	Mar	7.44	7.31	7.41	7.31	7.37	7.30
	Avg.	<b>7.30</b>	<b>6.77</b>	<b>7.07</b>	<b>7.26</b>	<b>7.10</b>	<b>7.19</b>
2023	Nov	6.84	6.71	6.81	6.71	6.77	6.71
2023	Dec	7.18	5.06	6.16	9.97	7.09	7.11
2024	Jan	7.77	7.83	7.84	7.83	7.82	7.71
2024	Feb	7.75	7.62	7.72	7.62	7.68	7.62
2024	Mar	7.56	7.43	7.53	7.43	7.49	7.42
	Avg.	<b>7.42</b>	<b>6.93</b>	<b>7.21</b>	<b>7.91</b>	<b>7.37</b>	<b>7.31</b>
2024	Nov	6.95	6.82	6.92	6.82	6.88	6.82
2024	Dec	7.31	5.40	6.39	10.30	7.35	7.23
2025	Jan	7.90	7.96	7.97	7.96	7.95	7.84
2025	Feb	7.88	7.75	7.85	7.75	7.81	7.75
2025	Mar	7.69	7.57	7.67	7.57	7.62	7.56
	Avg.	<b>7.54</b>	<b>7.10</b>	<b>7.36</b>	<b>8.08</b>	<b>7.52</b>	<b>7.44</b>
2025	Nov	7.08	6.94	7.05	6.94	7.00	6.94
2025	Dec	7.43	6.17	6.84	11.06	7.87	7.36
2026	Jan	8.03	8.11	8.11	8.11	8.09	7.98
2026	Feb	8.02	7.89	8.00	7.89	7.95	7.89
2026	Mar	7.82	7.70	7.80	7.70	7.76	7.69
	Avg.	<b>7.67</b>	<b>7.36</b>	<b>7.56</b>	<b>8.34</b>	<b>7.73</b>	<b>7.57</b>

**Appendix 7.1 - SENDOUT® Marginal Cost Determination by Region - Winter  
Expected Case**

Figures Include Transportation and Storage, Excludes Environmental Externalities - 2007\$/Dth

Year	Month	Klam Falls	La Grande	Medford	Roseburg	OR Total	WA/ID
2026	Nov	7.20	7.06	7.17	7.06	7.12	7.06
2026	Dec	7.56	6.56	7.08	13.87	8.77	7.52
2027	Jan	8.14	8.21	8.21	8.21	8.19	8.08
2027	Feb	8.12	8.01	8.10	8.01	8.06	8.00
2027	Mar	7.93	7.81	7.91	7.81	7.87	7.80
	Avg.	<b>7.79</b>	<b>7.53</b>	<b>7.70</b>	<b>8.99</b>	<b>8.00</b>	<b>7.69</b>